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8 November, 2021
00547/21 /R /dr
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Application and Claim

1. Martin Kaiser, [redacted]
2. Roland Hipp, [redacted]
3. Clara Mayer, [redacted]

- Plaintiffs -

Legal representatives: Rechtsanwälte Günther, Mittelweg 150, 20148 Hamburg, Germany

a g a i n s t

the Volkswagen AG,
represented by the board of management,
Berliner Ring 2
38440 Wolfsburg

- Defendant –

for: **Injunctive relief and removal** of excessive CO_2 emissions from business activities

value of the claim: 250,000 Euro

Powers of attorney are attached.

In the name of and on behalf of the Plaintiffs, we bring this legal application and request that a date and time be set for the hearing, at which we will request that

the Defendant be ordered,

1. under threat of a coercive fine of up to EUR 250,000 (or, in the alternative, imprisonment) or coercive detention of up to six months

to cease and desist,

a) from delivering or distributing after the end of 2029 — this applies to both the Defendant and all fully consolidated subsidiaries — new passenger cars equipped with an internal combustion engine (motor vehicles designed and equipped for the transport of no more than nine persons including the driver) and light commercial vehicles (motor vehicles designed and equipped for the transport of persons or goods with a maximum permissible total weight of up to 3.5 tons), whether nongratuitously or gratuitously

b) from permitting any vehicles specified under a), which it produces or causes to be produced by any of its fully consolidated subsidiaries, to be distributed and/or delivered after the end of 2029, whether nongratuitously or gratuitously,

2. to implement appropriate measures to ensure

- with regard to the vehicle classes listed in petition 1) -

a) that annual aggregated CO_2 emissions (scopes 1, 2 and 3) resulting development, production and sale of passenger cars and light commercial vehicles, as well as passenger car services by the Defendant and its fully consolidated subsidiaries, are reduced by at least 65 percent by 2030 relative to 2018 levels, and that this reduction is maintained at least below this level, applying the accounting and reporting standards of the World Resources Institute — the Greenhouse Gas Protocol — or similar recognised scientific standards,

b) that across the group, i.e. across all fully consolidated subsidiaries and brands engaged in the development, production and sale of passenger cars and light commercial vehicles, as well as passenger car services, not more than 25 percent of all passenger cars and light commercial vehicles sold from 2021 to the end of 2029 are vehicles with internal combustion engines

3. to implement appropriate measures to ensure

- with regard to the vehicle classes listed in petition 1) -

a) that the Defendant exercise continuous legal and actual influence on its joint enterprises (joint ventures and unconsolidated subsidiaries) engaged in the development, production and sale of passenger cars and light commercial vehicles, as well as services related to these vehicles, in such a way that annual aggregated CO_2 emissions (scopes 1, 2 and 3) are reduced by 65 percent by 2030 relative to 2018 levels, and that this reduction is maintained at least below this level, using the reporting and accounting standards specified in petition 2. a), as well as generally recognised accounting principles for proving its influence,

b) that the Defendant exercise continuous legal and actual influence on its joint enterprises (joint ventures and unconsolidated subsidiaries), engaged in the development, production and sale of passenger cars and light commercial vehicles, as well as services related to these vehicles, to limit the sale and distribution of vehicles with internal combustion engines to the maximum number specified in motion 2. b) by the specified date,

c) that the Defendant exercise continuous legal and actual influence on its joint enterprises (joint ventures and unconsolidated subsidiaries), engaged in the development, production and sale of passenger cars and light commercial vehicles, as well as services related to these vehicles, to ensure that the distribution of new passenger cars and light commercial vehicles with internal combustion engines is completely refrained from by the end of 2029 at the latest, regardless of whether distributed by said joint enterprises or others.

The content of the statement of claim follows the

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Justification of the claim:

The Plaintiffs bring their claim against the Defendant to ensure that their essential legal interests, such as property and health, and their right to safeguard greenhouse gas-related freedom over time, are not violated in the future due to excessive CO_2 emissions attributable to the Defendant.

Climate change and its consequences already noticeably interfere with the Plaintiffs' above-mentioned rights and threaten to infringe upon these rights even more drastically in the future. The irreversibility of these consequences forces the Plaintiffs to act now.

The Defendant significantly contributes to climate change and its consequences through its CO_2 emissions. All CO_2 emissions of the VW Group are attributable to the Defendant. The VW Group's carbon footprint in 2018 was 582 million tons. This corresponds roughly to Australia's annual CO_2 emissions or one percent of global CO_2 emissions. The requested motions against the Defendant would result in savings of more than 2 Gt (gigatons) of CO2, which corresponds to about one third of Germany's remaining carbon budget. In short, the dimension of the Defendant's CO_2 emissions is comparable to that of a nation state; consequently, the Defendant carries a corresponding share of responsibility. This is the reason why the Plaintiffs bring their claim against the Defendant.

The Plaintiffs' petitions seek to ensure that the Defendant reduce its future CO_2 emissions in line with the International Energy Agency's (IEA) 'Net Zero by 2050 scenario, All-Electric Case' (NZE AEC scenario) and the carbon budget to which the Defendant is entitled.

The NZE AEC scenario establishes a particularly lenient reduction pathway for the Defendant compared to other CO_2 emitters because it takes into account on the one hand the scientific consensus on climate change and, in particular, the target of the Paris Agreement to limit global warming[1], and on the other hand the Defendant's considerable importance to the global economy and the cost of reducing CO_2 emissions. To the Plaintiffs' knowledge, there is no other comparably suitable scenario, and to date, the Defendant has not indicated any suitable scenario it follows. However, dispensing with the use of a scenario would be arbitrary.

Although the Defendant has publicly acknowledged its responsibility to substantially reduce its CO_2 emissions as quickly as possible, just as it has acknowledged the 1.5 °C target of the Paris Agreement, the Defendant to date fails to act on this responsibility, despite the explicit requests of the Plaintiffs.

The Plaintiffs are therefore forced to bring a civil action against the Defendant.

Specifically, the Plaintiffs request that the Defendant ensure that

• a maximum of 25 percent of the passenger cars and light commercial vehicles sold by the group are equipped with internal combustion engines from 2021 to the end of 2029, and that any such vehicles are completely discontinued from 2030 on; and that

• the VW Group reduce its CO_2 emissions by 65 percent by 2030 compared to 2018 levels.

[1] See Act of 28 September 2016 ratifying the Paris Agreement of 12 December 2015, BGBl II p. 1082, UNTS No. 54113, hereafter referred to as: Paris Agreement (PA)

The Plaintiffs' claims are admissible and well-founded under sections 1004 and 823 of the German Civil Code (BGB) (analogous).

The CO_2 emissions attributable to the Defendant impair or threaten the three above-mentioned legal interests of the Plaintiffs: their property (here in particular forest land and an agricultural holding), their health, and their right to safeguard greenhouse gas-related freedom over time. The existence and constitutional importance of this last-mentioned right was confirmed by the Federal Constitutional Court (BVerfG) in its decision on of 24 March 2021 on the Federal Climate Chance Act (KSG).[2] This right, as well as the other so-called framework rights recognized by the BVerfG, namely the general right of personality and the right to established and operating business, must also be protected in civil law relationships. This protection is mostly implemented in application of sections 823 and 1004 BGB.

In the above-mentioned decision, the BVerfG emphasized that protection against the consequences of climate change requires the earliest possible action:

> *Under certain conditions, the Basic Law imposes an obligation to safeguard fundamental freedom over time and to spread the opportunities associated with freedom proportionately across generations. (...) Respecting future freedom also requires initiating the transition to climate neutrality* ***in good time****. (...)*
>
> *This means that the relative mildness or severity of the restrictions on freedom depend on how much time still remains for transitioning to CO_2-free alternatives, how early this process is initiated, and how far the overall CO_2 emission levels have already been lowered."* [3]
> (Emphasis added)

The other criteria for the liability of the Defendant under sections 1004, 823 BGB (analogous) are also met. In particular, the Defendant is a disturber (*'Störer'*) as defined under section 1004 subsection 1 of the BGB as regards all CO_2 emissions of the VW Group. The attribution is based on the Defendant's violation of its duty of care ('*Verkehrssicherungspflicht'*) or on the established principles on disturbers by conduct (*'Handlungsstörer'*) or by state of an object ('*Zustandsstörer').*

The violation of such a duty of care was also the basis for the decision of the District Court of The Hague as the competent civil court of first instance, ordering the Royal Dutch Shell (RDS) oil company to reduce its CO_2 emissions. It ordered the group on the grounds of its duty of care,

> *'to limit or cause to be limited the aggregate annual volume of all CO_2 emissions into the atmosphere (Scope 1, 2 and 3) due to the business operations and sold energy-carrying products of the Shell Group to such an extent that this volume will have reduced*

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[2] BVerfG, order of 24 March 2021, 1 BvR 2656/18, 1 BvR 78/20, 1 BvR 96/20, 1 BvR 288/20, 2021. Official english translation available at: https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2021/03/rs20210324_1bvr265618en.html

[3] See footnote [**Fehler! Textmarke nicht definiert.**], headnote 4, para. 183, 121.

by at least net 45% at end 2030, relative to 2019 levels."[4]

Notwithstanding the differences between the tort law systems, the main findings of the Dutch civil court are also applicable here in connection with sections 1004, 823 BGB (analogous).

According to the established case-law of the Federal Court of Justice (BGH), the party who creates a situation of danger – regardless of its nature – is obligated to take necessary and reasonable measures to prevent damages to others to the extent possible.

The petitions brought forth by the Plaintiffs ensure precisely that.

[4] See The Hague District Court, Judgement of 26 May 2021 – C/09/571932 / HA ZA 19-379, **No. 5.3** (Tenor) and No. 4.4.1 et seq.; https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2021:5339 (accessed 7 July 2021). For a German summary, see Verheyen/Franke, *Deliktsrechtlich begründet CO2-Reduktionspflichten von Privatunternehmen – Zum 'Shell-Urteil' des Bezirksgericht The Hague*, ZUR 2021, forthcoming.

I. Facts

1. The Plaintiffs

The Plaintiffs presented in the following ([**a]** to [**d]**) and their legal interests are already affected by climate change impacts today and are threatened by further concrete impacts. The demonstration of the latter is provided under section 2. c).

a) Plaintiff 1)

[redacted]

The Plaintiff 1) has been one of the two executive directors of Greenpeace Germany since 1 July 2016. Greenpeace e.V. is an international environmental organization that advocates for the protection of the natural livelihoods of humans and nature.

In the present case, however, the first Plaintiff is asserting its own rights and interests as cause of action.

He is a qualified forestry engineer. [redacted]

b) Plaintiff 2)

The Plaintiff, born

[redacted] in (Baden-Württemberg)

has been the director of Greenpeace e.V. since 2002. However, like Plaintiff 1), he is acting in his own interest in the present case.

[redacted]

c) Plaintiff 3)

The third Plaintiff was [redacted] born [redacted]

She is also press spokeswoman of the Fridays for Future movement.

The Plaintiff already called on the Volkswagen AG to act in a climate-protective manner at Volkswagen AG's annual general meeting in 2019 because her future life will otherwise not be comparable to life today because of impacts of climate change and restrictions on freedom.

2. Climate change and its consequences

The existence of climate change can no longer be seriously disputed. The facts are obvious. The BVerfG has established its general regularities in a binding manner with its climate decision and recognized it as a constitutional reality that must be observed by all state authorities.[5]

In order to clarify the overall context, climate change and its consequences, which are already apparent today, will be briefly outlined again in the following, based on the findings of the BVerfG (see **a**).

Climate change will continue to have its typical consequences for the Plaintiffs in the future. This connection can also be scientifically substantiated. In particular, the Plaintiffs submit a scientific report (including attribution statements) (**b**).

[5] cf. BVerfG, [footnote, 2], para. 12, cf. also section 31 subsection 1 BVerfGG.

The specific adverse impacts to be expected for the Plaintiffs are described under **c**).

With its emissions, the Defendant has a considerable share in these consequences. This, too, cannot be seriously disputed by the Defendant, because this would mean negating its own reported business activity. The Defendant's share in the chain of causality presented under 2., is demonstrated under 3.

a) Climate change in general

The scientific fundamentals of climate change are part of the chain of causality between the actions or business operations of the Defendant and the impairment of the legal interests of the Plaintiffs.

(1) Background

With the industrial revolution in the late 18th century, a radical change in society began in many parts of the world. As a result of numerous technical inventions and discoveries, heavy industry became possible, and the railroad and the steamship formed the seed for modern globalization. In 1886, the first automobile using fossil fuels was placed on the market.

One of the essential foundations for this social transformation, which made a rapid increase in (material) wealth possible, was the utilization of fossil energy. The acceleration of the consumption of natural resources at this rate is the foundation for the world as we know it today and at the same time the cause of today's climate crisis. It is also the basis for the size and economic importance of the Defendant VW Group.

Knowledge of the dangerous consequences of the use of fossil fuels and climate change did not exist at the beginning of industrialization. In the meantime, however, the consequences of the emission of greenhouse gases (GHG) have been known for decades, also to the Defendant.

This year's Nobel Prize winner, Prof. Klaus Hasselmann, for example, published research as early as 1979 that showed the ‘footprint’ of mankind on the global climate in a calculable way. According to an order of the Higher Regional Court of Hamm (OLG Hamm)[6] , there has even been general knowledge of climate change caused by GHG emissions since 1958 based on the publications of the climate scientist Charles D. Keeling.

[6] cf. OLG Hamm, order of 30 November 2017 - I-5 U 15/17; ZUR 2018, 118.

Today's knowledge and years of inaction do not mean that, for instance, out of a sense of historical remorse, prosperity must be dismantled, and socio-economic development reversed. A prosperity-preserving transition is possible. But this is only possible if the scientifically required measures are taken *now.*

The aim of the action is not to harm the Defendant. The Plaintiffs do not intend to put the Defendant at a competitive disadvantage; on the contrary, they would rather like the Defendant to recognise the scientific requirements outlined here as the (only) opportunity for sustainable development of the group.

(2) Physical effect relationship

Based on the findings of the BVerfG, we submit the following description of climate change as the factual starting point of the claim. We expressly

Reference

the factual findings of the decision and make them directly subject of the subsequent statement of claim.[7]

According to this, the physical interdependency of climate change is to be understood as follows:

Deliberate human actions release so-called greenhouse gases (GHG), especially CO_2. The release is mainly caused by the consumption of fossil fuels and land use changes that result in the destruction of GHG sinks.[8]

The accelerated release of GHG since industrialization has led to an accumulation of these gases in the Earth's atmosphere, thus changing its chemical composition.[9]

Individual gases in the Earth's atmosphere reflect heat radiation from the Earth, whereby an increase in GHG leads to less heat being radiated into interplanetary space and more being reflected back to the earth than would be the case with a lower concentration of these gases. The result is an increase in temperature, among others in the atmosphere near the ground (troposphere).[10] The name greenhouse gases (GHG) comes from the comparable warming effect that takes place in a glass greenhouse under solar radiation.

[7] s. BVerfG, [fn. 2], para. 16-37

[8] cf. BVerfG, ibid. para. 19.

[9] s. BVerfG, ibid. para. 19.

[10] cf. BVerfG, ibid. para. 19.

The accumulation of GHG and thus global warming are almost linearly related to human-induced GHG emissions.[11]

This finding is based on the assessment of the Intergovernmental Panel on Climate Change (IPCC - see explanation below [4]), which confirmed this once again this year.

For the first time, anthropogenicity is no longer classified as probable, but as virtually certain:[12]

> *'It is unequivocal that human influence has warmed the atmosphere, ocean, and land surfaces."*[13]

With a probability level of '*very likely*', this also applies in particular to the warming of the troposphere since 1979.[14]

This connection is also impressively illustrated by the following IPCC graphic:

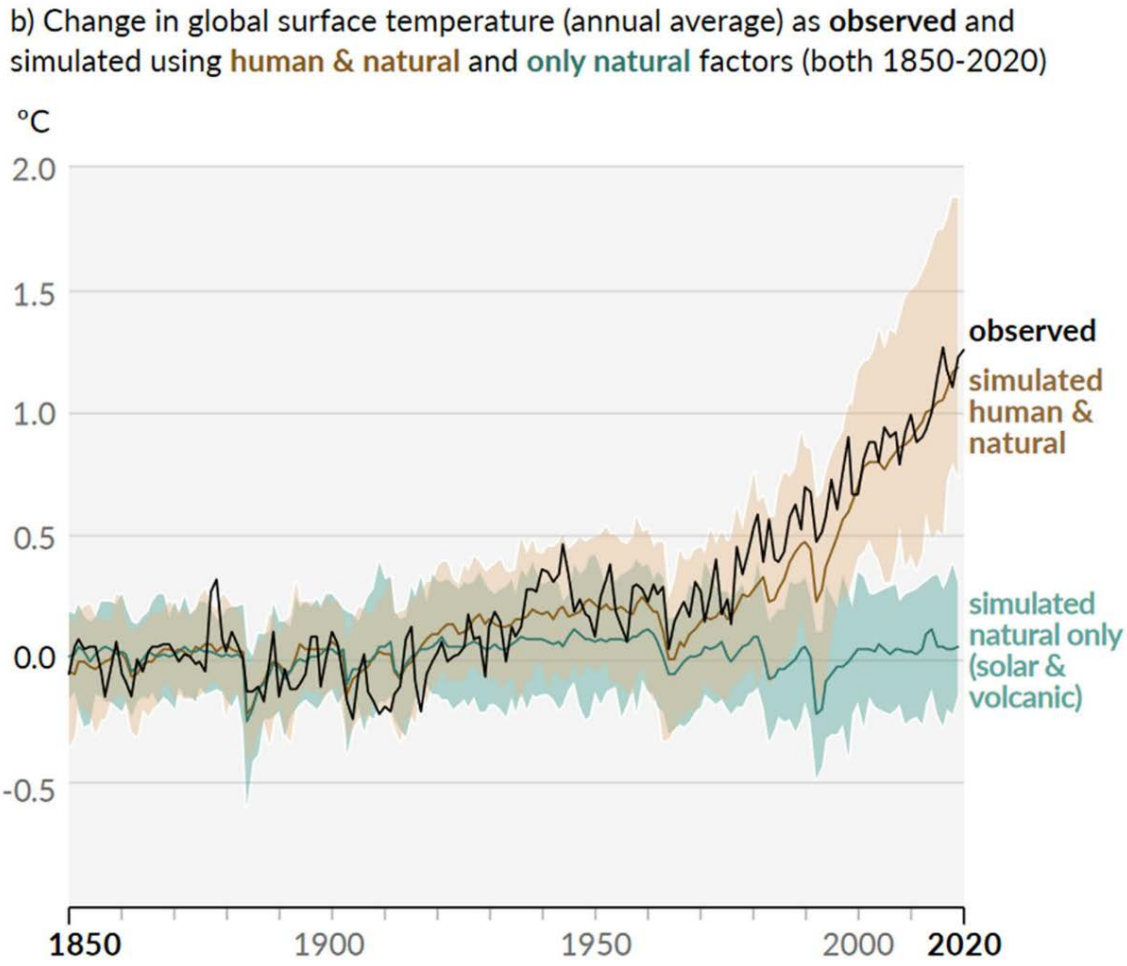
[11] cf. BVerfG, ibid. para. 19.

[12] The IPCC uses the following probability scale (selection) for its scientific assessments: findings are considered 'virtually certain' with a 99-100 per cent probability; 'very likely' - 90-100 per cent; 'likely' - 66-100 per cent; 'about as likely as not' - 33-66 per cent; 'unlikely' 0-33 per cent etc., see IPCC, 6th Assessment Report, Working Group I, Summary for Policy Makers, p. 14, fn. 4.

[13] IPCC, 6th Assessment Report, Working Group I, Summary for Policy Makers, p. 4, see also below (4).

[14] IPCC, 6th Assessment Report, Working Group I, Summary for Policy Makers, p. 6.

Fig. 1: Observed global surface temperature development (black line) vs. mean simulated global surface temperature development with human-induced emissions factored out (turquoise-green line)[15]



In the graphic, the coloured shading represents the respective '*very likely*' temperature paths according to the computational models, and the lines are the averages of the computational models, except for the black line, which represents the observed global surface temperature.

If there is no change in conduct compared to the stock in 2021, and consequently the increase in GHG concentration in the atmosphere continues, it is highly likely that temperatures will rise by more than 3°C in 2100.[16]

Even if the 1.5°C target is met, climate change and severe climate impacts will occur throughout the world.[17] These aggravate with each additional temperature increase. Because of the possible, but not yet precisely assessable, crossing of tipping points, apocalyptic conditions cannot be ruled out if the 1.5 °C threshold

[15] Source: IPCC, 6th Assessment Report, Working Group I, Summary for Policy Makers, p. 7.

[16] cf. BVerfG, [footnote 2] para. 19.

[17] IPCC, 6th Assessment Report, Working Group I, Summary for Policy Makers, p. 21 et seq.

is exceeded further, which would question the very survival of humankind as such - which is also stated by the BVerfG.[18]

Therefore, in summary, with each additional even slight further warming of the earth, the undesirable climate impacts continue to increase in frequency, duration and intensity. The unalterable scientific goal is therefore to prevent any further warming beyond this, which is the purpose of saving every tonne of CO_2.

(3) Consequences of climate change in general

Out of the general consequences of climate change, the BVerfG has highlighted the following in particular:[19]

• Recession of polar sea ice, melting of the continental ice sheets in Greenland and Antarctica, and the glacier retreat already visible worldwide today

• drastic rise in sea level of up to 77 cm on reaching the 1.5 °C target and 87 cm if the 2 °C target is achieved; according to the latest findings, a sea-level rise of 2 metres by 2100 and 5 metres by 2150 cannot be ruled out outside the assessment range 'probable' (i.e. with a probability of up to around 66 per cent)[20]

• exceptionally long-lasting major and extreme weather events such as heavy precipitation, floods, hurricanes, heat waves and droughts

• a non-excludability of cascading change of the *entire Earth system* due to the crossing of tipping points

According to the findings of the BVerfG, adverse impacts of climate change are already visible in Germany as well:[21]

• The annual mean temperature in Germany has already increased by 1.5 °C compared to pre-industrial times by 2018, with the consequence of, i.e. extreme heat days and persistent heat waves, which threaten human health in particular.

• All areas at the North Sea and Baltic Sea coasts that lie below 5 or 3 metres above sea level are already threatened by severe storm surges and will be increasingly so in the future, including the cities of Hamburg, Lübeck, Kiel and Bremen.

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[18] *IPCC*, 6th Assessment Report, Working Group I, Summary for Policy Makers, p. 35 under C.3.2; BVerfG, [fn. 2], para. 115.

[19] s. on the individual points BVerfG, ibid. para. 20 et seq

[20] s. IPCC, 6th Assessment Report, Working Group I, Summary for Policy Makers, p. 28 and 4.

[21] cf. on the individual points BVerfG [fn. 2], paras. 24 et seq.

• The additional evaporation lowers the groundwater level.

• The drying of soils leads to a decrease in photosynthetic performance and growth of plants.

The consequences of climate change in Germany have been impressively demonstrated by extreme heat in the summer of 2018 and in 2021 and by the flooding disaster in the region around the rivers Ahr and Erft. It is considered proven that these precipitations and floodings occurred also due to climate change. The two-day extreme weather event in 2021 was already 3 to 19 percent more likely to occur with a global temperature increase of currently 1.2 °C than with a pre-industrial global temperature. The probability of occurrence has also already increased by a factor of 1.2 to 9 compared to the pre-industrial period.

See: Annex K4

(Own translation of p. 1 of the *main findings* of the related study of the *German Weather Service* and *World Weather Attribution* on the flood in Germany)[22]

The effects of this extreme weather event caused 200 deaths.[23] The German government allocated a relief fund of 30 billion euros to repair the damage.[24]

(4) Sources of knowledge and agreements

In order to explain the above, we present the following overview of the main sources of knowledge and agreements:

Diplomatic efforts to control climate change began in 1992 with the UN Framework Convention on Climate Change in New York (UNFCCC), under which Germany also committed itself to prevent 'dangerous anthropogenic interference with the climate system' (Article 2 of the Convention). This obligation was concretised in 2015:

In the Paris Agreement mentioned before, the contracting states, including Germany, commit themselves to reduce global warming to well below 2°C, but if possible 1.5 °C, and to achieve greenhouse gas neutrality by the middle of the century.[25] The target is binding; the measures are largely left to the Parties after

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[22] The full study 'Rapid attribution of heavy rainfll events leading to the severe flooding in Western Europe during July 2021' (peer reviewed; hereafter referred to as: DWD 2021 study) is available at https://www.worldweatherattribution.org/wp-content/uploads/Scientific-report-Western-Europe-floods-2021-attribution.pdf (21 September 2021). A summary in German language can be found in the DWD's press release from 24 August 2021 https://www.dwd.de/DE/presse/pressemitteilungen/DE/2021/20210824_attributionsstudie_starkregen.pdf?__blob=publicationFile&v=4 (21 September, 2021).

[23] s. DWD 2021 study [fn. 22] p. 2 and 38.

[24] s. https://www.dw.com/de/hilfsfonds-f%C3%BCr-flutgebiete-beschlossen/a-58894770 (27 October 27, 2021).

[25] cf. in this regard BVerfG, footnote [2], para. 7 et seq.

failed negotiations in this regard.

The publications of the IPCC serve as the main source of knowledge on the scientific basis of climate change. As an internationally recognised intergovernmental body, it has been summarising the current state of scientific knowledge on climate change since 1988. The BVerfG has assessed its findings as reliable and conclusive.[26]

The IPCC publishes its findings in so-called *assessment reports*, which are published every five to six years. The assessment reports are regarded as scientific consensus positions. The order of the BVerfG was based on the fifth assessment report of 2013/2014 and the special report on 1.5°C of 2018[27]. The assessment reports themselves are divided into thematic sub-sections, based on the working groups that prepare them. The assessment reports also contain an official summary for policymakers (SMP).

According to the latest IPCC Special Report on 1.5°C (2018), the own commitments submitted by the contracting parties based on the Paris Agreement would lead to a temperature increase of 3°C by 2100, thus clearly exceeding the temperature threshold of the Paris Agreement.[28]

According to the UN Gap Report, an annual report published by the UN Environment Programme on existing state climate protection commitments and the gap to achieving the Paris climate targets,[29] this prediction is still correct even after the pandemic of 2020.

The first part of the *6th Assessment Report, Working Group I* (AR6 WG I[30]), which concerns the physical basis of climate change, has now been published. This report refines some essential statements from the Fifth Assessment Report by means of improved scientific methods, but above all also contains the statement that, according to the currently realistic scenarios, the 1.5 °C threshold could be exceeded as early as 2030, but that it will be exceeded by 2042 at the latest if no drastic improvements are made in climate protection.[31] The pressure to act has thus increased again compared to the scientific basis available to the BVerfG .

Annex K 5: German summary of the IPCC - AR6 WG I

[26] BVerfG, ibid. para. 16.

[27] The latter available at: https://www.ipcc.ch/sr15/ (10 October 2021).

[28] IPCC, Special Report, 1.5 °C Global Warming, Summary for Policymakers, 2018, p. 22, D1.1.

[29] UN Gap Report, UNEP 2020, https://www.unep.org/emissions-gap-report-2020 (15 September 2021).

[30] For all parts of the report in the original English language: https://www.ipcc.ch/report/sixth-assessment-report- working-group-i/; the full German translation is published here: https://www.de- ipcc.de/270.php#%C3%9Cbersetzungen%20zum%20AR6-WGI (Nov. 6, 2021).

[31] cf. IPCC, 6th Assessment Report, Working Group I, Summary for Policy Makers, p. 18.

According to the IPCC AR6, the global greenhouse gas budget recognized by the VG Berlin[32] and the BVerfG as the basis for impact projections and climate policy is approximately unchanged compared to the 2018 Special Report (taking into account emissions between 2015 and 2020).

In the meantime, the third part of the Assessment Report (AR6 WGIII) has also been disclosed to the public, the publication of which was not scheduled until next year. We are including this part, which deals with climate impact management, in the form of the SMP as an English version in

Annex K 6.

It should be noted that this cannot yet be treated as a final version. However, the scientific statements should not undergo any significant changes. The German translation can be provided later if indicated, but it might be advisable to wait for the official version.

Scientific findings, pressure from society as a whole and climate impacts that were already becoming apparent resulted in the Federal Climate Chance Act 2019 (KSG 2019), which, as is well known, was declared unconstitutional in significant parts by the BVerfG.

However, the reaction of the legislator by means of the KSG 2021 did not lead to a relief of the legislator from these specific constitutional obligations articulated by the BVerfG. For the amended KSG merely leads to the fact that instead of 96 percent of the national residual budget being used up by 2030, as was previously the case, 91 per cent of the budget will still be used up by 2030, and further drastic restrictions on fundamental rights are already constitutionally certain today, unless the KSG is amended for the third time in a particularly hurried short time.[33]

b) Attribution of concrete climate impacts

Beyond these general facts about climate change, it is also possible to estimate with scientific precision for individual regions, subjects or events what proportion climate change has in relation to specific consequences (observation perspective) or will have per additional unit of global warming (i.e. in °C) (forecast perspective). Such an attribution study has already been cited here for the severe weather events in summer 2021.[34]

The Plaintiffs have had a scientific report prepared by ‘Climate Analytics

[32] VG Berlin, judgment of 31 October 2019 - 10 K 412.18 - juris.

[33] see the statement of the undersigned on the KSG 2021within the legislative procedure, available at: https://www.bundestag.de/resource/blob/848338/aeb0eeaf9116ed112dcd664c1f9d52e0/Dr-Roda- Verheyen-Rechtsanwaelte-Guenther-Partnerschaftsges--data.pdf (20 October 2021).

[34] s. Fn. [22].

gGmbH' (CA) with regard to selected subjects, which presents and applies the scientific state regarding existing attribution to their legal positions. From this, concrete threats to their legal positions can be derived from the further climate change as of today, to which the Defendant contributes with its significant emissions (see **3.** below).

We attach the study as

Annex K7

see p. 10 on attribution research.

We refer to the specific passages at the appropriate places in the pleading.

c) Consequences for the Plaintiffs

In addition to the observed impairments of legal interests already described under 1., which can be attributed to climate change that has already occurred, concrete future consequences can be shown as climate change progresses and is accelerated and intensified proportionately by the Defendant. Particular personal consequences for the legal interests of the Plaintiffs are presented under (a) to (d), followed by the health consequences (e) as well as the threatening impairments of freedom presented by the BVerfG with judicial conviction (f).

(a) Plaintiff 1) [Martin Kaiser].

[redacted]

[redacted]

The forest will probably no longer be economically usable in the future (see **Annex K2**, p. 2).

This is already indicated by the damage that has occurred today, which has led to the almost complete destruction or deforestation of the usable woody stock. In addition to low resilience, they are due to exceptional droughts and bark beetle infestations, both of which are interrelated. Increased temperatures accelerate the development of bark beetle brood (especially in the case of unilateral or non-native species) and at the same time weaken the trees' defences against infestation.[35] This correlation has also been concretely observed in the high altitudes of the Bavarian Forest, a natural distribution area of spruce.[36] Further

[35] cf. **Annex K 7**, p. 30 f.

[36] **s. Annex K 7,** p. 31, quoted from Beudert et al. 2018.

increase in temperatures due to climate change, favour the spread of the bark beetle. It is thus clear that an occurrence as described above will repeat itself, which will once again cause widespread deforestation or destruction.

This can also be proven from a comparison with the Black Forest. It was found that due to climate change, a large proportion of spruce in low-lying areas is expected to die by 2060. In high-altitude areas, the combination of climate change and bark beetle would destroy 99 percent of spruce biomass by 2090, with 45 percent of this loss being due to the increased impact of the beetle due to climate change.[37]

Bark beetles were responsible for increased mortality rates on 50 percent of the trees surveyed at three different sites in northern Bavaria during the 2018 droughts. Bavaria will continue to be affected by droughts in the future: At least with regard to agricultural land, it can be assumed that an annual reduction of 20 litres/m^2 is imminent with a temperature increase of 3.0 °C (temperature path with current measures).

[redacted]

38 39 40

[redacted]

This small forest came relatively well through the dry spells. In the future, however, drought phases will increase. The connection between the large-scale death of beech trees and increasing sensitivity to drought has been proven.

[redacted]

s. **Annex K7**, p. 29 (CA study)

[37] **cf. Annex K 7**, p. 30 f.

[38] **cf. Annex K 7**, p. 20.

[39] **cf. Annex K 7**, p. 28

[40] **cf. Annex K 7**, p. 31

(2) Restrictions on freedom

Since the 1980s, one focus of Plaintiff 1)'s activities, in addition to his forestry and political activities, has been on sustainable energy, climate and forest protection.

41

(b) Plaintiff 2) [Roland Hipp]

(1) Bee colonies

Plaintiff 2)'s bee colonies will also be harmed by climate change in the future. Climate change leads to a phenological decoupling between plants and pollinators and changes their developmental stages, for example the first flowering of plants and the first emergence date of pollinators. This is also supported by modelling that has been able to show such a shift over the last 120 years. The decline in bee populations is thus the result of human activities; the main causes include climate change, changes in land use, competition with

41 cf. BVerfG, [fn., 2], para. 121, 37.

invasive species, pathogens and the use of agrochemicals, although these causes may be interdependent (greater need for agrochemicals due to climate change-induced non-resistance of plants),

s. **Annex K7**, p. 42 (CA).

(2) Restrictions of freedom

The Plaintiff to 2) experiences the change taking place both in the urban area and in the countryside.

One focus also of the private activities of Plaintiff 2) since the 1980s and already before his role as executive director of Greenpeace is the subject of sustainable energy. He was a relevant actor in the nuclear phase-out process, in particular in the German reaction to the nuclear disaster of Fukushima. As a driver of the public debate, he had brought into focus those German nuclear power plants that had the most serious safety deficiencies, and which were finally immediately shut down by the nuclear moratorium initiated by the German Chancellor.

His respected expertise in nuclear matters is based, inter alia, on his own studies and private investigations. Plaintiff 2) examined, for example, the nuclear reprocessing plants in La Hague and Sellafield. For this purpose, he made on-site observations and, with the aid of scientific methods and instruments, determined the radiation in the Atlantic Ocean or in the homes of nearby residents, which he subsequently published.

Plaintiff 2) will continue to monitor the nuclear phase-out until the last nuclear power plant in Germany is shut down. This is dictated by his personal conviction and is proven by his course of life. In addition, there is still a global need for action concerning nuclear phase-out processes. He will also continue to accompany these.

However, his radius of action in this respect is threatened by acute restrictions. Thus, not only Plaintiff 2) is restricted in his activities in his free time, but also the general public, which will not be able to benefit from his research results or publications in the future.

Low-lying sites, e.g. Sellafield, are already predicted to be inaccessible in the future due to climate-related sea-level rise and coastal erosion.[42] Samples in the

[42] According to media reports, the British government itself assumes this, cf. https://taz.de/Altlasten-in-Sellafield/!5043763/ (30 September 2021).

seas will be more difficult to reach due to increasingly harsh conditions caused by climate change; in addition, the corresponding motorisation of ships is unlikely to be available to private actors. Travel will become increasingly expensive due to CO_2 pricing and is threatened by further harsh government restrictions. Investigations such as those at sea are becoming more dangerous to life, limb and the health of Plaintiff 2) due to the heat radiation or the danger of sudden extreme weather events - which are increasingly difficult to predict. However, such examinations are only possible on site.

Evidence of the foregoing: Witnesses from the Plaintiff's entourage
to be named
Party hearing

(c) Plaintiff 3)

Plaintiff 3) alleges the following restrictions on her freedom:

As a volunteer press spokeswoman for *Fridays for Future,* Plaintiff 3) uses among others, the free services Instagram and WhatsApp for the organisation and information transfer, which are essential for the existence and networking of the decentralised movement. However, the Plaintiff also uses Instagram for private leisure purposes. The use of these services is associated with greenhouse gas emissions (as are those of all competitors). For example, one minute of scrolling through the Instagram feed consumes 1.459 grams of CO_2 equivalent, the equivalent of driving a light internal combustion car approximately 10 meters.[43] These services will also have to be limited or adapted in the future.

[43] cf. Statista https://www.statista.com/statistics/1177040/carbon-emissions-instagram-feature-usage- grams-co2-equivalent-france/ (10 October 2021).

(d) Health

Climate change contributes to the burden of disease and premature death in Europe across all age groups. It is clear that it poses a comprehensive risk to health, that the consequences will lead to injuries and that the risk of both communicable (e.g. dengue fever) and non-communicable diseases (heart attacks, asthma) will increase.

There are direct health risks due to conditions such as extreme heat, storms and floods, but there are also indirect and long-term risks, such as changes in the distribution of infectious diseases and allergens,

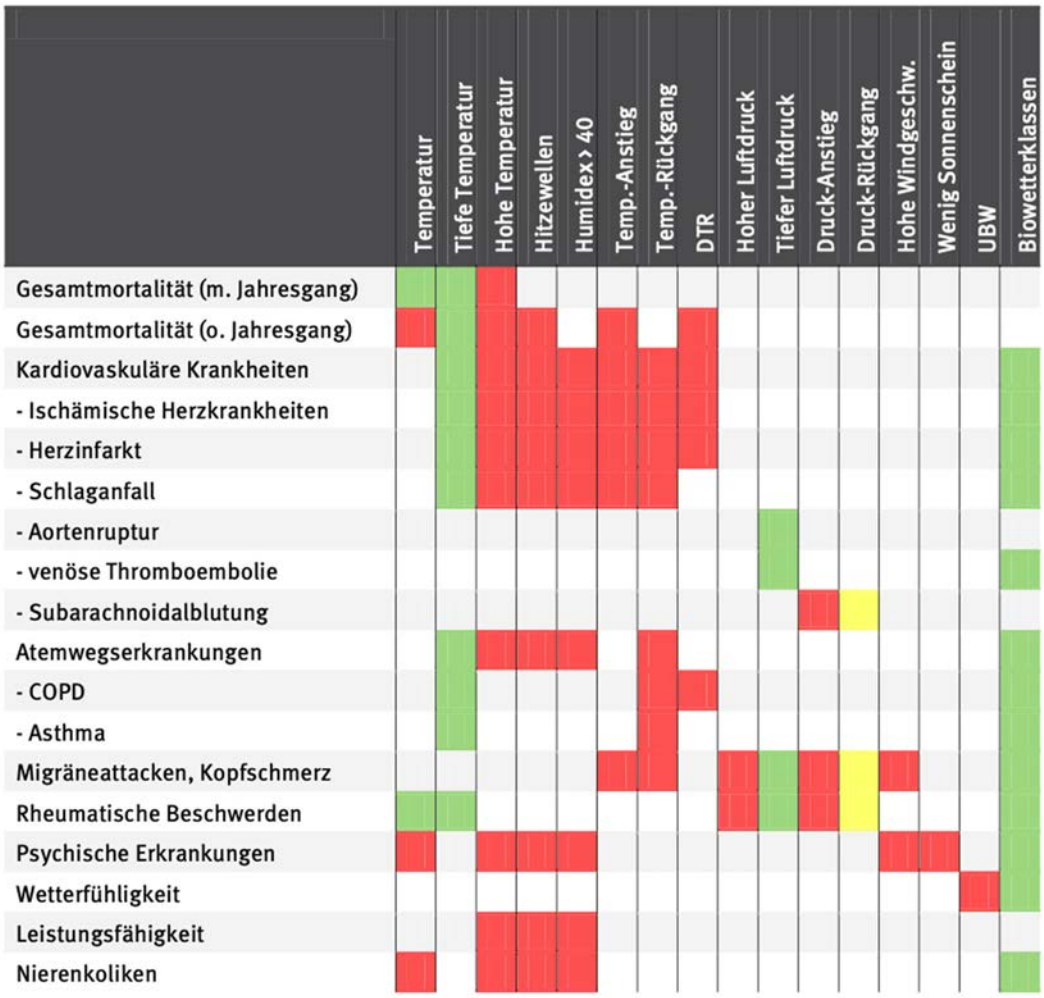
s. **Annex K 7**, p. 42 (CA).

It is not possible to predict specifically for a person that a specific health consequence will occur, neither for healthy nor for pre-exposed people. However, with regard to the effects of climate change on health, it is clear that the risk of suffering a climate change-related disease increases for everyone. Therefore, the younger a person is, the greater the cumulative burden over a lifetime,

s. **Annex K 7**, p. 42 (CA).

The following overview shows that the consequences of climate change are predominantly negative for health:

Fig. 2: Influence of climate change on weather biotrophy by 2069-2098 at 2.8 °C global warming[44]



The projected biotrophic development is shown with regard to the forms of disease considered (rows) and the meteorological parameters investigated (columns). Green means a favourable development, red an unfavourable development and yellow means no significantly changed development.

The observed impacts of climate change on health to date are:

Heat-related mortality (see **Annex K 7**, p. 43 f.):

- increasingly frequent heat waves in Germany
- impossibility of the 2018 heat wave without climate change
- significant increases in mortality due to heat waves, e.g. 7,000 additional deaths in August 2003

[44] **s. Annex K 7**, p. 43.

More frequent, intense and prolonged heat waves are projected for the future: Of the current EU population, around 176 million people will be exposed to heat stress and 52,182 people will die due to heat, with a global warming of (only) 2.0°C.

Urban heat island effect (**Annex K 7**, p. 45 f.):

- due to heat storage effects, even higher temperatures of up to 10°C in addition are observed in German cities, which means a particular burden and higher mortality for the 77 percent of the population living there
- the repercussion of hot days on hot nights, which shortens the recovery time during the night. In the urban area of Berlin, 70 percent of hot nights were found to be the result of a hot day in 2015-2018, compared to only 50 percent in rural areas

Productivity (**Annex K 7**, p. 46):

- predicted decrease in labour productivity due to increased temperature of 0.12 per cent in Germany by the end of the 21st century with a global warming of 2.6°C, whereby, with regard to the increased urban load shown, productivity is likely to decrease more strongly there

Vector-borne diseases (**Annex K 7**, p. 47 f.):

- already observed increase in vectors such as ticks transmitting Lyme disease and tick-borne encephalitis due to climate change in Europe
- increasing habitat suitability in Germany for vectors, for example in the future for the Asian tiger mosquito, which has not occurred so far and transmits dengue, chikungunya and Zika viruses, depending on the warming scenario up to 80 percent of the area of Germany by 2080

Air quality and respiratory illness (**Annex K 7**, p. 49 et seq.):

- among other things, observed increases in heat-related ground-level ozone pollution, which accounted for 19,400 deaths in Europe in 2018
- increased ozone-related pneumonia, lung tissue damage, asthma, heart attacks and other respiratory or cardiovascular diseases
- further increase of ground-level ozone concentrations in the 21st century and thus a particular health threat due to the combination of heat and ozone, especially in cities, such as shorter life spans, higher medical costs and further lower productivity

Pollen (**Annex K 7**, p. 52 et seq.):

- observed and predicted increase in allergenic species, e. g. due to changes

in timing, increased length of pollen season and increased pollen productivity
- increase in invasive pollen-producing species such as ragweed (*Ambrosia artemisiifolia*), which thrives on damaged soil and already accounts for about 50 percent of total pollen production in some parts of Europe; the largest European increase in ragweed sensitization is expected in Germany this century with global warming of 2.4°C.

Mental health (**Annex K 7**, p. 54 f.):

- already reported threats to mental health from climate change in the form of subclinical depressive feelings, despair and guilt
- medical plausibility of symptoms such as loss of appetite, insomnia and panic attacks due to climate change
- disproportionately high levels of *Environmental Anxiety* and the resulting psychological effects in young people aged 10-24 years at a particularly neuralgic point for physical and psychological development
- likelihood of increased rates of depression, anxiety, post-traumatic stress and mental health disorders as a result of natural disasters, including climate change-related disasters such as flooding.

The Plaintiffs 1) and 2) are particularly exposed to the threats described due to their age. With regard to subclinical, nevertheless legally relevant symptoms such as heat-related indisposition or decrease in performance, it can be said overall that one of these consequences will affect them with almost complete certainty. This is also proven by the past, in which the Plaintiffs have already had to deal with pronounced indisposition due to heat waves. This also affects their leisure activities in nature, which they can only pursue in an increasingly restricted manner as a result.

In addition, there is a higher threat of diseases to which old age makes people susceptible, such as heart attacks or COPD.

Plaintiff § will not be affected as severely as the other Plaintiffs by the health effects in the near future, even though she will feel subclinical impairments from excessive temperatures more strongly due to her urban residence. She also worries *daily* about whether and how humans will be able to cope with the health effects of the climate crisis in particular and feels psychologically burdened by this on a daily basis.

On the other hand, the effects will be even greater in the second half of her life with even higher global warming. Due to her life expectancy of 91 years, she will experience the effects for another 71 years (see **Annex K 7** p. 11 CA). Again, due to her life expectancy, it can be stated that one of the health impacts of climate change will certainly affect her and that these will be even more severe without additional measures.

(e) Restrictions on freedom found by the BVerfG which apply directly to the Plaintiffs

With regard to the legislator, the BVerfG has not found a breach of the duty to protect in factual terms at *present*, but has pronounced that the risk of unreasonable impairments of fundamental rights is nevertheless high.[45] A precondition for the state's duty to protect not being triggered, however, is that, e.g. technological progress, which the state could not achieve on its own,[46] must *now be* set in motion in 'in some cases lengthy developments on a large scale. These developments must begin soon in order to avoid future freedom being curtailed suddenly, radically and with no alternatives.'[47]

Without these developments, which include the restructuring of the passenger car and light commercial vehicle (LCV) sector - and thus the specific requested measures of the Defendant, as will be shown later -, 'practically all forms of freedom are potentially affected because virtually all aspects of human life involve the emission of greenhouse gases'.[48] According to the findings of the BVerfG, the Plaintiffs will therefore be personally and concretely restricted in the future in 'consuming fuel or electricity for heating, cooking, lighting, etc.'.[49] It also noted the resulting restrictions of numerous consumer goods due to their supply chains and use phase, such as explicitly the use of textiles for clothing (8 percent of global greenhouse gas emissions - for the Plaintiffs thus: additional cost burden and/or shortage of clothing goods) or the use of cement for building construction (for the Plaintiffs thus: restrictions on house construction and/or increased rental prices).[50]

The legislator's reaction to the BVerfG decision has not significantly changed this. This is because the amended KSG merely results in 91 percent of the national residual budget now being used up by 2030 instead of 96 percent as before.[51] However, this is to be classified as a legal fact for the present legal dispute, as the BVerfG has found: Accordingly, irrespective of the legislative efforts, an effort by society as a whole - thus also by the Defendant - is necessary, since the state cannot comprehensively regulate the necessary developments at all:

> *'However, the state itself has neither the capacity nor the sole responsibility for providing all the technological and social developments to replace and avoid greenhouse gas-intensive*

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[45] s. BVerfG, [Fn., 2], para. 245.

[46] s. BVerfG, ibid. para. 248.

[47] s. BVerfG, ibid. para. 253.

[48] s. BVerfG, ibid. para. 117.

[49] cf. BverfG, ibid. para. 37.

[50] cf. BVerfG, ibid. para. 37

[51] see the statement of the undersigned on the KSG 2021 within the legislative procedure, available at: https://www.bundestag.de/resource/blob/848338/aeb0eeaf9116ed112dcd664c1f9d52e0/Dr-Roda- Verheyen-Rechtsanwaelte-Guenther-Partnerschaftsges--data.pdf (20 October 2021).

> *processes and products, and for setting up the necessary infrastructure. Furthermore, the legislator would not realistically be capable of specifying all the required developments in statutory provisions. Constitutional law nevertheless obliges the legislator to create the underlying conditions and incentives that would allow these developments to occur'*[52]

3. Defendant's share of climate change

The Defendant's actions are a significant contribution to climate change, which would place it eighth in the world in a GHG country ranking (see **[a] [1]**). Its actual contribution to climate change is systematically higher than it indicates (**a][2]**). Its influence on the global climate is also controllable to a considerable extent: the delta between the emissions that would be required and those that actually occur is also of the scale of the total emissions of an industrialized state (**a][3]**). The individual controllable actions are divided into so-called scopes **[a][3]**).

Through the management decision of the group's top management - the Defendant's board of management - the CO_2 and climate policy were made a top-level issue. Thereby, it consciously controls its own share of climate change on a group-wide basis (see **b]**).

a) Total Group share and significance

(1) Significant share in total

The VW Group has a global share of the market for passenger cars and light commercial vehicles of currently approx. 12 percent. In this respect, light commercial vehicles are all vehicles intended for the transport of goods or merchandise, in particular vans with a permissible vehicle weight of up to 3.5 tonnes.

With this share of the global market, the Defendant, according to its own information, emitted approx. 435.3 million tonnes of CO_2 in 2018 across Scope 1-3 (see below) in its passenger cars and light commercial vehicles division.[53] If, on the other hand, one takes into account the *real* emissions in the use phase and does not assume official consumption figures as published in VW's external reporting and public communication (see on this point below at [2]), that are systematically too low, **the Defendant's carbon footprint in 2018 was 582 million tonnes.**[54]

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[52] BVerfG, [fn. 2], para. 248.

[53] s. Volkswagen AG Sustainability Report 2019, p. 70 f.

[54] cf. Greenpeace 2019, Crashing the Climate: How the car industry is driving the climate crisis. https://es.greenpeace.org/es/wp-content/uploads/sites/3/2019/09/gp_cleanairnow_carindustryreport_full_v5_0919_72ppi_0.pdf (20 July 2021).

This is equivalent to over 1 percent of annual global greenhouse gas emissions and exceeds the annual greenhouse gas emissions of Australia (527 million tonnes of CO_2e in the reference year 2018), the eighth largest greenhouse gas emitter in the world.[55] Germany emitted a total of around 837 million tonnes of GHG during the period.

(2) Contribution higher than communicated

One reason for the significant deviation of the real carbon footprint from the official data of the Defendant is the high share of CO_2 emissions during the use phase of the vehicles (see below **[4]**). This specific carbon footprint is based on CO_2 values per vehicle model in grams per kilometre. This is based on test cycles. However, these and the actual test conditions do not adequately reflect reality.

Part of this is also the practice of deliberately exploiting 'loopholes' in the test cycle to gloss over the values, e.g. by taping off the gaps of metal joints to decrease the wind resistance. These include measures that also take place below the threshold of breaking the law, such as in the so-called diesel scandal, and which were still practiced under the NEDC until recently.

We attach an illustration and further explanation of the regional testing cycles and their weaknesses as

Annex K8.

Until now, VW has based its fuel consumption figures on the test cycles used in the main markets, for Europe and China with the *New European Driving Cycle* (NEDC), which has very high deviations: in Europe on average 39 percent,

cf. Annex **K8**, p. 1.

From 2021 onwards, the Defendant will calculate the fleet emissions of its European vehicles according to the so-called *Worldwide Harmonized Light Duty Vehicle Test Procedure* (WLTP), according to its information in the 2019 Sustainability Report, which will increase the balanced fleet emissions in Europe by 20 percent.[56] However, even the WLTP still underestimates CO_2 emissions in real-world operation by around 14 percent,

s. Annex K8, p. 2,

and thus continues to favour the Defendant at the starting point, allowing it to emit 14 percent higher emissions than it actually does.

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[55] See UN data on Australia's greenhouse gas emissions in 2019 including LULUCF at https://di.unfccc.int/global_map (20 July 2021).

[56] s. Volkswagen AG, Sustainability Report 2019 [Non-financial report within the meaning of section 315b of the HGB], p. 12.

In order to ensure that the consumption figures remain comparable and due to the lack of sufficient real data, only WLTP figures are used in the following and corresponding conversions of older values are indicated. Based on WLTP, the carbon footprint of the Defendant is thus **510 million tons of CO_2**.

Any data values in this statement of claim are set out in detail in the table included in the document

Annex K 9 (Excel spreadsheet)

(in the case of the digitally filed motion by beA, this is submitted in the form of a PDF, the complete file including the formulae is sent by post on a DVD).

We submit the detailed underlying calculations as

Annex K 10 (Calculation method)

In the following, we refer to specific passages of these annexes where this is required.

The detailed account of the conversion of the Defendant's carbon footprint to the WLTP standard and thus the figure of 510 million tonnes of CO_2 just referred to can be found in Annex K 10, pp. 8 f., 17 et seq.

(3) Considerable difference between required reduction and Defendant's own target

The Defendant has reported widely varying values with respect to its own CO_2 reduction targets in the past. Assuming that the Defendant implements its most recent reduction targets, the carbon footprint of the VW Group in 2030 (calculated on the basis of the WLPT) would be as follows

- 430 million tonnes if the reduction targets published by the *Science Based Target Initiative* (SBTI)[57] are taken into account and thus with an actual **reduction compared to 2018 of only 16 per cent.**
- 400 million tonnes, based on Defendant's orally expressed reduction targets, and thus, with an actual **reduction compared to 2018 of only 22 percent**

Calculation see in detail
Annex K 11 (carbon footprint)
Annex K 9, Table III.B

[57] see https://sciencebasedtargets.org/companies-taking-action keyword 'Volkswagen AG' (Sep. 24, 2021). The Science Based Target Initiative (SBTI) is a private international organization that evaluates the climate efforts of private companies.

If the group were to actually develop along the lines of the IEA's NZE AEC climate scenario (see below), which is compatible with the 1.5 °C target, emissions from the passenger car and light commercial vehicle sector across Scope 1-3 would only amount to **178 million tonnes of CO_2** in 2030**.**

Evidence: Annex K 11, p. 5 f.
Expert opinion

The difference in 2030 between emissions without additional measures and the required reduced emissions is thus 222 or 252 million tonnes of CO_2, depending on whether the above oral or SBTI values are used. This significantly exceeds the annual greenhouse gas emissions of the Netherlands (185 million tonnes CO_2e).[58] How the adjustment to the IEA scenario mentioned above is to be made is explained below under 4.

The Volkswagen AG thus has an influence on the global climate like an industrialized state. The actions of the group in the status quo are thus just as obviously significant as the delta has shown, the achievement of which is in the hands of the Defendant.

(4) CO2-releasing actions

The emissions of the Defendant are caused by different actions.

To account for and categorize GHG emission, the *Greenhouse Gas Protocol* (GHG Protocol), mentioned above, is internationally and also in Germany generally accepted, the broadest classifications of which are:

- Scope 1 (direct own emissions - such as fossil combustion in company vehicles or own power plants),
- Scope 2 (indirect emissions from electricity use, e.g. generated by fossil combustion in power plants elsewhere) and
- Scope 3 (all other indirect emissions, such as those along the value chain; emissions at suppliers, use and recycling of the product, but also business travel).

See Annex K 12: Detailed presentation of GHG scope standards

In particular, the Defendant emits in Scope 1 through its own power plant in Wolfsburg, which is used for passenger car production.

The electricity it purchases externally at other sites is used, for example, to operate the sheet metal presses for car body construction, thus causing Scope 2 emissions.

[58] See; Greenhouse gas emissions of the Netherlands in 2019 including LULUCF at https://di.unfccc.int/global_map (21 July 2021).

Scope 3 emissions occur primarily when the vehicles or their combustion engines are used or disposed of as intended. Since the test cycle theoretically simulates the intended use, the Defendant has the greatest influence on this through the design of the vehicle, and the installed drivetrain, decisions regarding the efficiency of the vehicles or marketing strategies. A vehicle that is inefficiently designed from the factory regarding the intended use can no longer be used in the use phase in such a way that results in an efficient 'use' of CO_2 emissions.

A detailed presentation of the Defendant's emission levels across the three scopes can be found in

> **Annex K 9**, Table III.A,
> see also **Annex K 12**, p. 2.

Scope 3 emissions account for more than 98 percent of the Defendant's carbon footprint, 81 percent result from the use phase of the vehicles (cf. Annex K 11, p. 3). Avoidable CO_2 emissions are thus caused all over the world. We present the global distribution of the Defendant's carbon footprint in the

> **Annex K 13 (Global distribution).**

Only a fraction of these emissions is regulated by German or European sector-specific legislation.

b) Group structure and management by parent company

Through its group policy, the Defendant has taken responsibility for managing the overall carbon footprint of all parts of the group, has issued detailed and binding guidelines for this purpose which apply to all subsidiaries and major shareholdings, and has anchored this process institutionally within the group.

The Volkswagen Group consists of Volkswagen AG as the parent company, which itself directly manufactures vehicles under the 'Volkswagen' and 'Volkswagen Commercial Vehicles' brands.

The group also includes numerous fully consolidated subsidiaries that produce and distribute the vehicles of the other VW Group brands and provide passenger car and light commercial vehicle-related services. These other group brands include Audi, Seat, Skoda, Cupra, Jetta, Porsche, Bentley, Lamborghini and MAN. VW has a dominant influence in all these companies,

> **s. Annex volume K 14:** Fully consolidated subsidiaries of VW (14 a - all subsidiaries, 14 b - adjusted for passenger car and light commercial vehicle association according to the petitions).

Furthermore, there are joint ventures in which the Defendant does not have a dominant influence but is directly involved in the production, distribution and services of passenger cars and light commercial vehicles. This is particularly the case in the production facilities in China, see below.

s. Annex K 15: Joint ventures of the VW Group

As the parent company, Volkwagen AG executes the steering of CO_2 emissions throughout the entire group through the 'Nachhaltigkeit' (sustainability), 'CO_2', 'Umwelt und Energie' (Environment and Energy) steering committees set up for this purpose or directly by the board of management.[59] The legal means of its management powers are used for this purpose:

'*STEERING OF GROUP-WIDE CLIMATE PROTECTION ACTIVITIES*

The Group Steering Committee for Sustainability bears the main responsibility for climate protection as the highest body below the Board of Management. Product and portfolio topics are managed by the Group Steering Committee for CO2. The Group Board of Management is informed about Group- and product-related greenhouse gas emissions at least twice a year and makes key decisions on topics relevant to climate protection.
The program applies to the entire Group, to all brands and regions.'

'The management approaches described in this report (...) apply to all the Volkswagen Group's controlled companies. With our non-controlled companies, we work to the extent permitted by law toward implementation of the adjusted management approaches.'

- from the 'Sustainability Report' 2020[60]

We attach a detailed presentation of the management structure as

Annex K 16 (Management structure).

This also shows that in particular with regard to climate policy and electrification of the group, in deviation from the autonomy of the brands and companies stated in other respects, decisions are made by the Defendant's board of management as a 'group-wide interest' (cf. **Annex K 16** p. 3 f). The Defendant has institutionalized the control of this climate policy with the 'Project House Decarbonization' (see ibid., p. 5).

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[59] cf. Volkswagen AG, Sustainability Report 2020 [non-financial report within the meaning of Section 315 b of the German Commercial Code], pages 6, 10, 42, 48, 92, cf. also ECJ, judgement of 10 September 2009 - C-97/08 P, at para. 58 - Akzo Nobel.

[60] cf. Volkswagen AG, footnote [59], p. 48.

This corresponds to the public appearance: The ‘electrification strategy’ is announced for the entire group; the distribution of investments among topics or technologies is specified for the entire group (see ibid., p. 5).

In joint ventures, too, there is a de facto possibility of exercising decisive influence on the production, distribution and services of and for passenger cars and light commercial vehicles.[61] It must be assumed in this connection that shareholdings in companies are not undertaken without the objective of the Defendant's influence on the joint venture.

There is likely to be a gradient in the actual intensity of influence on the respective companies or the market through the shareholdings. This influence is not always reflected in the level of shareholding, but naturally carries more weight with higher provision of capital.

Especially in China, the largest market, there is no formally dominant share in the most important producing companies; nevertheless, the Defendant's models are produced there, which are to a large extent identical to the European models. The joint ventures use the same technical platforms for this purpose that the Defendant also uses in the fully consolidated subsidiaries, in particular the modular platforms MQB, MLB and MEB.[62]

In addition, the Defendant also sets specific production and sales targets for the Chinese market in which the joint ventures are active. The Volkswagen Passenger Cars brand, for example, announced in its most recent strategy presentation, ‘Accelerate’, that the proportion of electric cars in China will be 50 percent in 2030.[63] Such a target proclamation suggests that informal influence is dominant.

4. Required action by the Defendant

A group can only act in accordance with climate-related due diligence if it uses scientific principles for this purpose, that are aligned with the global greenhouse gas budget and properly takes into account contributions from other actors.

With the scenario described in detail here, the International Energy Agency (IEA) has presented a global scenario compatible with the Paris Agreement

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[61] see also the own statement of the Defendant in the Sustainability Report 2020 [fn. 59], p. 6.

[62] s. Volkswagen Group China, https://volkswagengroupchina.com.cn/en/partner/faw-volkswagen https://volkswagengroupchina.com.cn/en/partner/saicvolkswagen https://volkswagengroupchina.com.cn/en/partner/volkswagenanhui (both 6 November 2021).

[63] Volkswagen AG, https://www.volkswagen-newsroom.com/de/pressemitteilungen/volkswagen- accelerated-transformation-to-software-oriented-mobility-provider-6878 (7 November 2021).

against which globally active companies can and must align themselves without the need for agreements with other competitors. It will be shown that this scenario applies as the standard for lawful behaviour. In this scenario, the IEA describes the transformation in the energy sector that is necessary to achieve the 1.5 °C target with a 50 percent probability - i.e. the absolutely necessary transformation, not the most ambitious one. It takes into account the complex effects of individual actions, individual sectors and stakeholders; it is a highly comprehensive model. It also includes cost optimization.

For the alignment of a company along the temperature goal of the Paris Agreement, i.e. the global greenhouse gas budget, a recognized climate scenario must be used. Anything else would be arbitrary.

How such a scenario is designed and contributes to the achievement of the objective is set out below, as well as why the Defendant must align itself with it.

a) Derivation of concrete reduction targets in accordance with the Paris Agreement on the basis of scientifically recognised climate scenarios

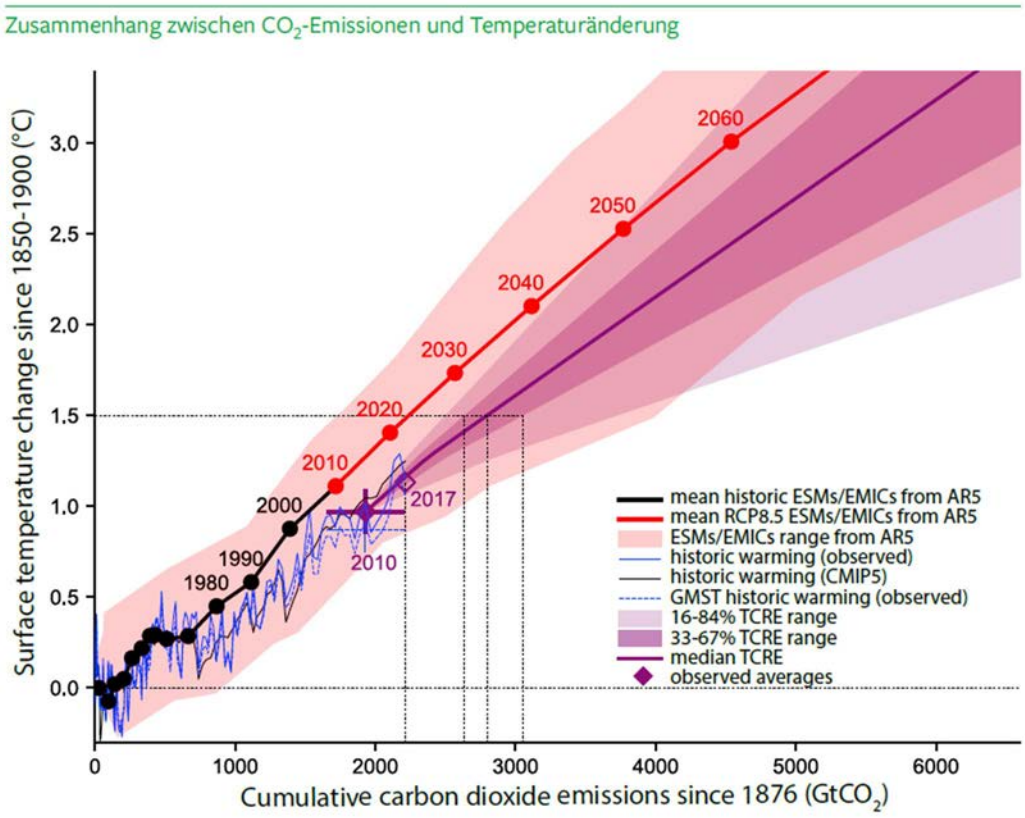
(1) Systematics of the scenarios

The basis of the common international understanding in the Paris Agreement is the temperature target of keeping global warming well below 2.0°C compared to the pre-industrial level, but, if possible, to keep it below the threshold of 1.5°C. The legislator has also enshrined this goal for Germany in the KSG, thereby providing a constitutionally relevant specification of Article 20a of the Basic Law (GG).

This goes hand in hand with the scientific consensus already mentioned and recognised by the BVerfG that there is an approximately linear relationship between global warming and the emission of GHG.[64]

[64] cf. BVerfG, [footnote 2], para. 19.

Fig. 3: Relationship between CO_2 emissions and global warming at ground level[65]



Auf der X-Achse sind die kumulativen CO_2-Emissionen in Gt CO_2 seit 1876 abgebildet, auf der Y-Achse die Veränderung der bodennahen Lufttemperatur (°C) seit dem Zeitraum 1850 – 1900. Die schwarze Linie zeigt die von Erdsystemmodellen berechnete Erwärmung auf Basis historischer Emissionen. Die rote Linie zeigt die projizierte Erwärmung auf Grundlage eines Business-as-usual-Szenarios. Beide Verläufe entstammen dem Fünften Sachstandsbericht des IPCC (AR5).

Quelle: IPCC 2018b, Kap. 2, S. 105

Similarly, with regard to the overall consequences of climate change, it can be stated that the more the earth heats up on average, the more serious the undesirable consequences of climate change will be. With regard to individual consequences, climate science indicates probability values that vary in severity depending on the level of global warming achieved.[66]

see also: Annex K 7 p. 4 et seq.

The consequence of this relationship is, on the one hand, that carbon emissions must end. However, it also follows with equal importance that there is a finite budget of GHGs to be emitted. In order to achieve the goals of Paris, both carbon neutrality and a reduction path on the way to achieving the goal are therefore necessary, which ensures that a certain carbon budget is not exceeded overall.

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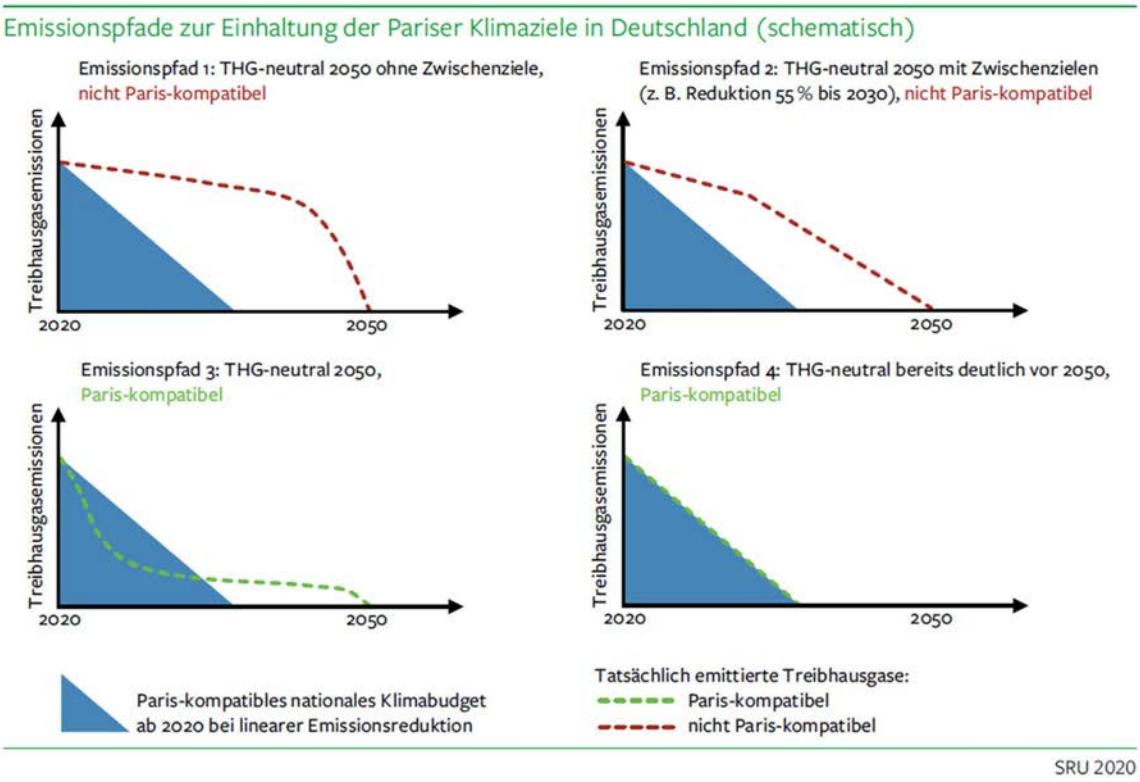
[65] Source: German Advisory Council on the Environment, Environmental Report 2020, p. 41, quoted from IPCC.

[66] cf. already above footnote [12].

This insight underlies the climate order of the BVerfG[67] and is essential to climate science as well as the IPCC's current Assessment Report (AR6).

Fig. 4: Illustration of the relationship between CO_2 neutrality and reduction pathways[68]



Climate scenarios describe how the Paris-compatible path can be taken in concrete terms. A distinction is made in climate scenarios between Earth system models and integrated assessment models.

Earth system models are strictly scientific and are based exclusively on the physical and biogeochemical interactions whose basic parameters have just been described. They do not take into account state borders, the historical GHG emissions of actors or societal and economic developments. Their primary purpose is to provide information on the absolute amount of remaining GHG emissions, to understand processes that influence the climate, and to identify climate impacts.

Integrated assessment models additionally incorporate economic calculations and valid behavioural assumptions and are thus able to design cost-optimised reduction paths. They take account of the fact that the economic effort required to achieve climate neutrality can be designed efficiently on a state- and sector-

[67] s. BVerfG, [footnote 2], para. 217, 244.

[68] Source: Environmental Report 2020 of the German Advisory Council on the Environment, p. 42.

specific basis and have the goal of preserving prosperity.[69]

Evidence: Expert opinion

A third group of assessment models are approaches in conformity with international law or human rights law, which take into account the legal implications of an unequal distribution of transition burdens at the global level (systematically, however, these can also be categorized as integrated assessment models).

Per-capita and per-nation budgets can be calculated from the Earth system models. A global reduction path can also be created, which could be deduced on the basis of the market share of the globally significant company Volkswagen AG. However, this does not take into account the development of behaviour.

Evidence: Expert opinion

It should also be considered that integrated assessment models, which are (also) directed at states, comparatively favour those with a high standard of living and a high level of technology, since the necessary transition is more cost-intensive in these countries, while an integrated benchmark is cost optimisation. CO_2 reductions are cheaper to achieve in countries where a lower standard of living prevails.

The result for the Defendant, which is dependent on high technology, is that its budget still to be consumed is comparatively higher when an integrated assessment model is applied than when calculations are made purely on the basis of an earth system model.

Evidence: Expert opinion

Therefore, in addition to favouring the Defendant with the starting points due to the WLTP values, the NZE AEC scenario provides for a cost-optimized reduction path that addresses its importance to the global economy and favours the Defendant.

The relevant approach for the Defendant (at least as minimum standard) is the global integrated assessment approach of the IEA with the aforementioned NZE AEC, which is discussed in detail below under b) to d).

An integrated assessment model must be applied here, if only because the Defendant is itself a multinational group. Per-nation or per-capita budgets can be applied to the Defendant, but this excludes far-reaching accompanying decisions.

[69] cf. Environmental Report 2020 of the German Advisory Council on the Environment, p. 44.

The cost optimization of the integrated assessment models, however, works in favour of the Defendant, which thus receives optimal conditions for further development.

The proposal that (global) actors must reduce their GHG emissions linear to the decreasing global carbon budget (Fig. 4, path 4) is already proving technically unfeasible in many sectors. Pure reductions based on the results of the Earth system models are therefore not feasible in the long term.

Air traffic, for example, cannot be designed climate-neutral by 2050. The logical consequence of a budget derived solely from Earth system models would therefore be the closure of those companies that operate in aviation and/or those that use it. This would result in serious damage to the global economy. The 45 percent reduction to be achieved worldwide by 2030 compared to 2010 according to the IPCC, with a probability of achieving the 1.5°C target of 50 percent[70], would in practice mean, if it were granted to VW's passenger car and light commercial vehicle division, that air traffic would have to be drastically reduced and many companies would have to be closed down.

In the event of further progress without timely cost-optimised measures, this would be one of the possible drastic state emergency measures required by the constitution.[71] In this respect, however, it would be more likely that the legislator would choose the measure of the official decommissioning of private passenger cars.

The concretely formulated 45 percent target - although with a probability of achieving 1,5°C of only 50 percent – which Royal Dutch Shell has been ordered to pursue in the Netherlands, takes these considerations into account. The court describes specifically:

> *'That being said, there is a widely endorsed consensus that in order to limit global warming to 1.5°C, reduction pathways that reduce CO2 emissions by net 45% in 2030, relative to 2010 levels, and by net 100% in 2050, should be chosen. The court includes this broad consensus in its interpretation of the unwritten standard of care. '*[72]

Climate science models scenarios such as that of the IEA in a scientifically interdisciplinary manner, in particular including technical developments and existing measures. The NZE AEC is based on the IPCC target mentioned above. The probability of only 50 percent of achieving the 1.5 °C target is a third

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[70] s. IPCC, Special Report 1.5 °C 2018, SMP, p. 16, https://www.ipcc.ch/site/assets/uploads/2020/07/SR1.5- SPM_en_barrier-free.pdf (17 September 2021), see also: Rechtbank The Hague, Judgement of 26 May 2021, C/09/571932 / HA ZA 19-379 ECLI:NL:RBDHA:2021:5339, 2021, para. 4.4.29, available in English language at: https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2021:5339 (17 September 2021).

[71] cf. BVerfG, [footnote 2], para. 120.

[72] Rechtbank The Hague, [fn. 70], para. 4.4.29.

advantage for the Defendant from applying the NZE scenario, because one could also demand a higher probability - especially from the perspective of environmental law, in which the precautionary principle is of central importance. In addition, it is difficult to speak of Paris compatibility if the achievement of the target is *predominantly unlikely.*

For actors affected by such reduction obligations, additional climate-positive behavioural assumptions have a particularly beneficial effect; for example, the IEA assumes in the NZE scenario a behavioural change in mobility including the far-reaching exclusion of combustion vehicles from major cities, as well as a global speed limit of 100 km/h.[73] By way of comparison, according to the IEA if the same level of emission reductions were to be achieved as in the NZE scenario without the behavioural changes contained therein, 100 percent of new cars sold would have to be BEVs or fuel cell-based vehicles as early as 2026.[74]

The IEA NZE AEC[75], as noted, is to be qualified as an integrated assessment model. Hence, the fourth advantage for the Defendant from application of the NZE scenario is that broad behavioural assumptions such as the one described are included.

Annex K 17: Influence of behavioural changes in the NZE

Deduced to the Defendant, which acts as a global, high-tech industry player and is of considerable importance for the world economy, it grants a particularly mild reduction path.

Evidence: Expert opinion

This reduction path is known to the Defendant as a partner of the IEA. The Defendant has participated in the development of the scenarios and has at its disposal data from the IEA that are not generally published and to which the Plaintiffs do not have access. However, the reduction path is ignored in the concrete planning and implementation of actions, which is concealed in the public with announcements of a different kind (see below with regard to the compensation of data gaps, p. 45 et seq., with regard to the announcements below p. 55 et seq.).

To date, the Defendant has not publicly cited any other equivalent scenario or absolute emission limits that it uses instead either.

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[73] s. IEA, Net Zero by 2050. A Roadmap for the Global Energy Sector, Special Report 2021, p. 87.

[74] IEA (2021): World Energy Outlook 2021, p.143 https://iea.blob.core.windows.net/assets/888004cf-1a38-4716-9e0c-3b0e3fdbf609/WorldEnergyOutlook2021.pdf (6 November 2021).

[75] cf. the results of the scenario for the transport sector: IEA, Net Zero by 2050. A Roadmap for the Global Energy Sector, Special Report 2021, p. 131 et seq.

Not using a scenario would be arbitrary. It is equally arbitrary, as still announced in 2019 in the sustainability report, to 'orient' oneself on the IEA's 2DS scenario of 2017, which has been completely outdated for a long time and which, contrary to the broad scientific consensus, does aim for greenhouse gas neutrality not until the year 2100.[76]

However, the need to use the NZE AEC scenario also arises from its unique actuality. There is no comparable global scenario for the energy sector with the status of that of the IEA, in particular with consideration of the IPCC's 1.5 °C report from 2018.

Evidence: Expert opinion

Compared to the alignment with the calculated per-capita or per-company budget from the global Earth system model, the present scenario is also superior because it takes into account that one gram of CO_2 can be attributed to several actors (the scope 1 emission of a steel mill can be a scope 3 emission of the Defendant). This cannot be directly extracted in a per capita approach. The NZE AEC is not dependent on reduction trends outside the energy sector but assumes equally adequate reductions.[77]

Evidence: Expert opinion

The following section explains the IEA, the scenario and the scientific need to use the scenario in more detail:

(2) The International Energy Agency and the NZE scenario

The IEA is an intergovernmental institution that was originally founded during the oil crisis in 1974 to facilitate coordinated responses to (fossil) energy commodity shortages. Germany is one of the member states of the institution. Since 1977, the IEA has published the so-called 'World Energy Outlook' annually. The *World Energy Outlook* (WEO) is a scientifically based, internationally recognized energy market analysis, now including the effects on environmental protection and economic development.

In the WEO 2020 report, the IEA published the aforementioned NZE. In the NZE, the IEA describes the transformation in the energy sector that is necessary to achieve the 1.5°C target with a 50 percent probability[78] - i.e. the absolutely necessary transformation path, not the most ambitious one. This is outlined specifically for the energy sector, including global transport.

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[76] Volkswagen AG, Sustainability Report 2019, p. 62, https://www.volkswagenag.com/presence/nachhaltigkeit/documents/sustainability-report/2019/Nonfinancial_Report_2019_e.pdf (1 October 2021).

[77] cf. IEA, Net Zero by 2050. A Roadmap for the Global Energy Sector, Special Report 2021, p. 48 (**Annex K 18**).

[78] s. IEA, fn. [77].

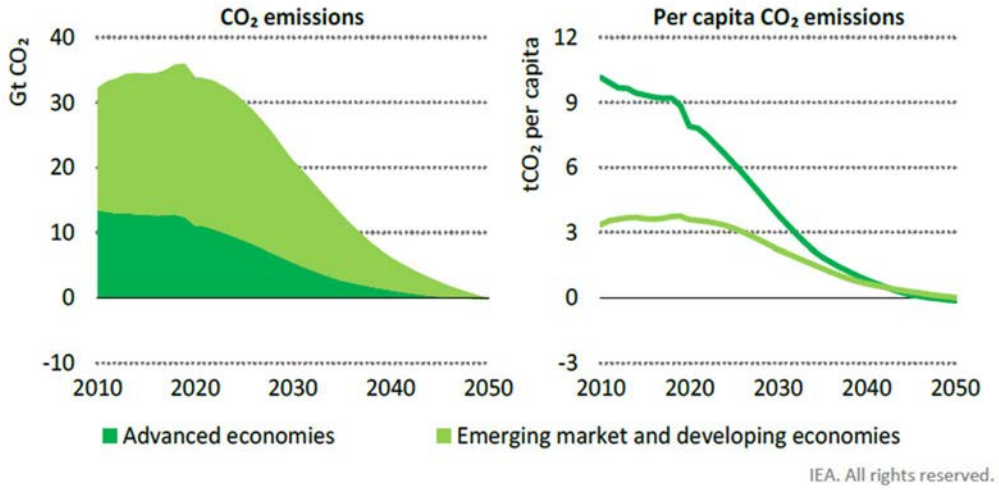
We attach the NZE AEC in the English original as

Annex K 18

A German translation can be submitted later, whereby the content, assumptions and calculation methods are available in detail in this lawsuit and the annexes in German.

The scenario assumes that the amount of greenhouse gas emissions still available globally in 2021 will be 500 gigatonnes of CO_2. The IEA's budget is thus in line with the IPCC's SR1.5 report - and thus also with the BVerfG 's climate decision - as well as with the current Sixth Assessment Report (AR6).[79] The following Figure 4 illustrates the assumed global budget over the period up to 2050:

Fig. 5: Global net CO2 emissions in the NZE scenario [80]



The IEA defines reduction paths for all energy-intensive sectors until 2050.

The rate of reduction varies from sector to sector: while the NZE assumes a CO_2 reduction of 60 percent for electricity generation by 2030 compared with 2020, the figure is 40 percent for the buildings sector and 20 percent for the industry as well as for the transport sector.

In differentiating the scenarios in detail, the IEA considers, inter alia, the availability, maturity and cost of technologies as well as the different framework conditions in different regions of the world.

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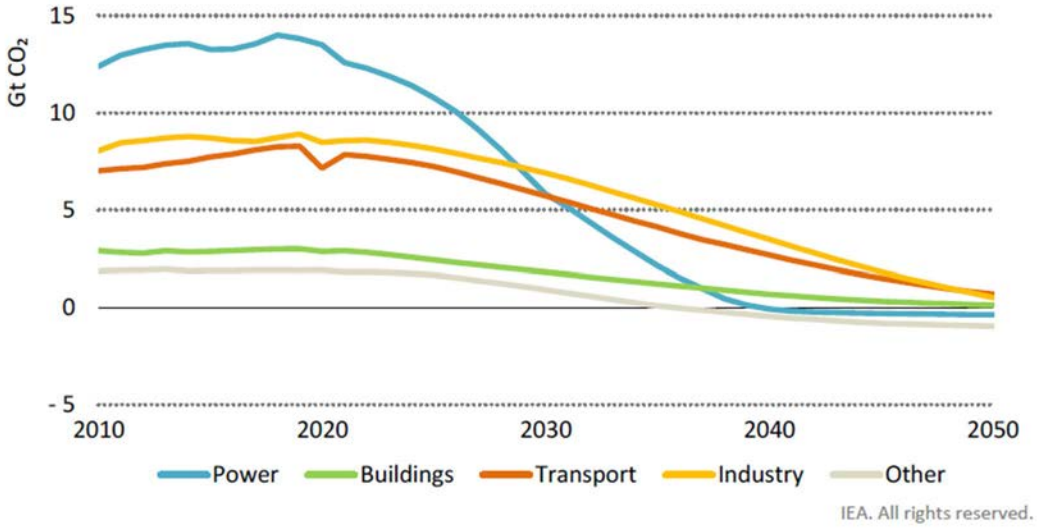
[79] *IEA*, fn. [77], p.54, *IPCC*, Climate Change 2021: The Physical Science Basis - Summary for Policymakers, p. 39

[80] IEA, fn. [77], p.53.

Fig. 6: Global CO_2 emissions by sector in the NZE scenario [81]



Taking into account technological feasibility and the availability of resources, these sectoral scenarios thus translate the existing global budget into a cost-efficient framework for action by states and companies, in which developments in other emission sectors do not have to be taken into account separately.

b) Necessary transformation of the transport sector to meet the Paris temperature target and scenario selection

Part of the NZE scenario is the assessment of traffic and transport development until 2050. Based on development research, specific requirements for this important sector are indicated, which describe the essential transformation while sparing global economic growth as much as possible.

In the NZE scenario, fossil fuels may accordingly still be used to a small extent in the transport sector in 2050 on the basis that their emissions are offset by CO_2 removal from the atmosphere (negative emissions). The assumption of the possibility of future *carbon dioxide removal* (CDR) is fraught with great uncertainty, as the technologies are currently neither scalable nor is their large-scale deployment in the near future certain. Their use should therefore be minimized as far as possible.[82]

Evidence: Expert opinion

Consequently, the IEA also only envisages this possibility where, in contrast to the sector of light commercial vehicles and passenger cars, there are no or only limited technical alternatives to the internal combustion engine (further examples are aviation and ocean-going shipping). According to the IEA's findings, it is not possible to extend the possibilities for the ‘use’ of negative emissions beyond these areas of application.[83]

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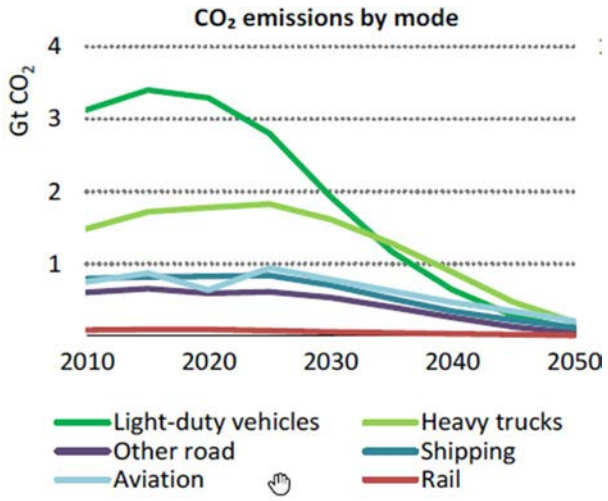
[81] *IEA*, fn. [77] p.100.

[82] cf. also BVerfG [footnote 2], para. 33.

[83] s. *IEA*, fn. [77] p. 78 et seq.: In 2050, a total negative emissions volume of 7.6 Gt is assumed and is only available to the areas shown there that have high transition hurdles.

Fig. 7 Global CO_2 emissions of the transport sector in the NZE scenario by transport mode[84]



For the traffic and transport sector, there are two sub-scenarios from the IEA: The standard scenario as well as the sub-scenario All-Electric Case (NZE AEC), among which the appropriate one has to be chosen.

In the former standard scenario, by 2050 a global vehicle fleet will consist not only of *battery electric vehicles* (BEVs) but also of *plug-in hybrid vehicles* (PHEVs), *fuel cell electric vehicles* (FCEVs) and vehicles with combustion engines that run on biofuels, in particular on so-called *advanced biofuels* (also second-generation biofuels*).*

Since the IEA itself considers the large scale use of biofuels and fuel cell vehicles assumed in the standard scenario to be uncertain, it has developed the NZE AEC sub-scenario. The NZE AEC[85] refrains from increasing biofuel production and, contrary to the standard scenario, does not envisage fuel cell drivetrains in road transport. For passenger cars and light commercial vehicles, the IEA relies solely on the use of battery electric vehicles (BEV).

Since an expansion of biofuel production as envisaged in the standard scenario is not only uncertain but extremely unlikely, the NZE AEC is to be regarded as the relevant and only scenario which, based on the current status, is sufficiently likely to achieve the Paris targets.

The choice of the NZE AEC already results from the Defendant's initiated strategic alignment of the VW Group **(1)**. Furthermore, accompanying scientific findings force the conclusion that the use of alternative fuels cannot achieve a Paris-compatible transition **(2)**. This has also been taken into account by the IEA during the development of the scenarios, which is why it presents this alternative scenario.

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[84] *IEA*, fn. [81], p.132.

[85] cf. for a description of the AEC scenario *IEA*, fn. [77], p. 140 f.

None of the assumptions and values of the IEA's scenarios are changed in the course of the application here, and auxiliary calculations are only made where the IEA has not published the data in detail and these values must (and can) be determined by calculation.

(1)

In 2017, the Defendant announced with its so-called 'Roadmap E' to 'electrify its entire model portfolio across the board.' The then Chairman of the Board of management, Mr Matthias Müller, further stated in this regard on the Defendant's homepage, still available today:

> *'We have understood, and we will deliver. This is not a non-binding declaration of intent, but a self-commitment by which we will be measured from today onwards. '*[86]

This was reiterated by Dr. Diess, the current Chairman of the Board of Management, in 2019:

> *'Technology openness is the wrong slogan now and only leads to postponing system change further into the future."*[87]
>
> *'To stop global warming, there is no way around the Paris climate targets. To achieve this, cars must become cleaner as quickly as possible and CO_2-free by 2050 at the latest. E-mobility is the only technology by which this is feasible from today's perspective.*
>
> *The system change towards emission-free mobility will not start in five or ten years, but now. We simply cannot afford to pursue multiple tracks.*
>
> *What is needed is for politicians, companies and society to focus their energy and resources on a lead technology for the future. Instead of pursuing many paths in parallel, we need a '**master plan electromobility'.** '*[88]

Dr. Diess is thus also addressing the so-called lock-in effect, whereby the gradual adaptation of outdated technologies (such as internal combustion engines) by so-called e-fuels or biofuels blocks market shares for genuinely advanced types of drivetrains and thus delays the transition (see below under 2).

Nevertheless, the Defendant wants to delay this transformation as much as possible. In an investor presentation it writes: 'ICEs provide the basis for a cash

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[86] s. Volkswagen AG, Press Release, 11.09.2017, https://www.volkswagenag.com/de/news/2017/09/Roadmap_E.html (10 October 2021). Original quote in German.

[87] electrive.net, quoting Herbert Diess at Defendant's Annual Press Conference, 12 March 2019, retrieved from: https://www.electrive.net/wp-content/uploads/2019/05/TdM-April2019-Auswertung.pdf (1 October 2021). Original Quote in German.

[88] see https://www.linkedin.com/pulse/leittechnologie-elektromobili%C3%A4t-warum-wir-uns-m%C3%BCssen-herbert-diess?trk=portfolio_article-card_title (6 November 2021). Original Quote in German.

flow optimized transformation' and puts the target share of electric vehicles in the stock of VW Group vehicles in 2030 at (only) 13 percent.[89] This means, inter alia, that the Defendant firmly plans to generate considerable revenues with the existing vehicles on the so-called after-sales market until at least the middle of the century, such as with its spare parts business.

(2)

The potential of biofuels, e-fuels, hydrogen-fuel-cell vehicles and PHEVs is generally overestimated. The IEA considers the assumptions to be uncertain and has therefore established the NZE AEC. There is sufficient evidence that the optimistic assumptions, especially with regard to biofuels, are not only uncertain but highly unlikely and insufficient for compatibility with the Paris Agreement. This forces the choice of the NZE AEC.

Evidence: **Annex K 19**
Annex K 20
Expert opinion

Biofuels

The IEA's standard NZE scenario assumes an almost fourfold increase in biofuel production,

s. **Annex K 19,** p. 2.[90]

According to the current state, this will *de facto* not be achieved. This is because biofuel production competes with food production and the steadily growing demand from industry for biogenic raw materials (especially the chemical and construction industries). The German Advisory Council on Global Change (WBGU) estimates that if the fuel requirements of air traffic were to be covered by biofuels alone in 2050, this alone would completely consume or even exceed the supply of sustainably available biogenic resources beyond food production.

S. **Annex K 19,** pp. 6 f.

Overestimation of the potential of biofuels in integrated assessment models is not uncommon, which is inherent in the structural design of these scenarios. In the scenarios, a distinction is made between land use and energy sectors and the emissions of biofuels are attributed to the land use sector, while zero emissions are assumed in the energy sector. This decouples the previously balanced value when scaling up the use in the energy sector,

see in detail Annex **K 19**, p. 3.

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[89] see https://www.volkswagenag.com/presence/investorrelation/publications/presentations/2021/03/2021-03-16_Deep_Dive_Dahlheim.pdf, p.11 (6 November 2021).

[90] See also *IEA*, footnote [77], p.106.

If indirect land use effects of biofuels are also taken into account, their reduction potential drops considerably and even turns negative for first-generation biofuels (not so-called advanced biofuels, i.e. those also obtained from food and feed).[91]

s. Annex **K 19,** p. 3 f.

A producer cannot guarantee that only second-generation biofuels will actually be used. However, as will be shown below, even the latter are unsuitable for a timely transition.

For example, obstacles to the scaled-up use of biofuels lie in unavoidable conflicts with food production, which are already leading to higher food prices in Germany as well.

s. Annex K 19, p. 5.

For the use of second-generation biofuels, it is envisaged in the IEA scenario that a quarter of the world's managed forests would have to be available for production, which is incompatible with the necessary use of wood as a building material as an alternative to CO_2-intensive cement and steel.

s. Annex K 19, pp. 5 f.

The potential for producible second-generation biofuel production is thus limited worldwide, so that the available quantities can only be used where there are no technical alternatives, e.g. in aviation.

PHEV usage

The standard NZE scenario is also still based on the use of plug-in hybrids. It has already been argued that the actual consumption of plug-in hybrids (in Scope 3) is many times higher than the official figures from the producers and that there is therefore no significant reduction potential compared to vehicles with conventional internal combustion engines. They are therefore to be treated like internal combustion engines.

See already: **Annex K 8**, p. 2[92]

This is another reason why the IEA drew up the AEC scenario. This is also why it is the preferable scenario.

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[91] cf. European Environment Agency 2020, Greenhouse gas emission intensity of fuels and biofuels for road transport in Europe, available at: https://www.eea.europa.eu/data-and-maps/indicators/greenhouse-gas-emissions-intensity-of/assessment (15 August 2021).

[92] see also: Frauenhofer ISI and ICCT, 2020, Real-world usage of plug-in hybrid electric vehicles: Fuel consumption, electric driving, and CO2 emissions. https://www.isi.fraunhofer.de/content/dam/isi/dokumente/cce/2020/PHEV_ICCT_FraunhoferISI_white_paper.pdf (22 July 2021).

E-fuels/hydrogen/fuel cell vehicles

The use of fuel-cell with green hydrogen or e-fuels (electricity-based fuels) in internal combustion engines are inefficient technologies for decarbonising passenger cars and light commercial vehicles and their use is therefore unlikely.

Green hydrogen is produced by electrolysis, which splits water into hydrogen and oxygen. If the electricity required for electrolysis is renewable, production and hydrogen are carbon neutral. For storage and transport of the hydrogen, high pressure or low temperatures are required, which entails additional energy demand.

S. **Annex K 20**, p. 1

The production of e-fuels is based on the generation of green hydrogen. This is processed together with carbon, using Fischer-Tropsch synthesis, to produce synthetic fuel (petrol, diesel, kerosene, etc.). This further conversion step requires additional energy.

s. **Annex K 20**, p. 1 f.

Depending on the fuel, studies estimate that the electricity required to generate e-fuels is four to seven times higher than the direct use of electricity in electric cars. Vehicles with fuel-cells still need twice as much electricity as battery electric vehicles.

s. **Annex K 20**. P. 2 f.

Due to their low efficiency and high electricity demand, e-fuels perform even worse than fossil fuels when the share of renewable electricity in their production is below about 85 percent. For hydrogen, this threshold is around 70 percent. Already when the share of renewable energy in the electricity mix is as low as 10-15 percent a battery-electric car performs better than an internal combustion engine car running on fossil fuels.

S. **Annex K 20**, p. 3

For 2025, even under optimistic assumptions, scientists expect a pre-tax production price of 3.20 euros per litre for synthetic petrol based on renewable electricity. Due to the high costs, e-fuels also in the long term will only be competitive with massive subsidies.

s. **Annex K 20**, p. 4

Here too, e-fuels must therefore be reserved for areas in which direct electrification will not be technically possible in this century, such as long-distance flights. For this alone, the demand is very high: for example, in order to replace the fossil kerosene refuelled in Germany in 2018 with e-kerosene, an amount of electricity equivalent to the total amount of wind power generated in

Germany in 2018 would be required for production.

S. **Annex K 20**, p. 5

Due to the slow transition of the electricity mix away from fossil production and the fact that the cost per litre will not fall until the middle of the 21st century, the usability of e-fuels for passenger cars and light commercial vehicles could only be considered when it is too late for their use.

Electricity-based fuels are thus obviously not a realistic option for the decarbonisation of passenger cars and light commercial vehicles due to their low efficiency.

s. **Annex K 20**, p. 6

In this respect, and also in order to avoid a lock-in effect, the switch to sustainable drivetrains is now imperative. All drivetrain technologies that do not rely on direct electricity conversion (such as BEVs) will, due to their physically set low efficiency,

see the graph in **Annex K 20**, p. 2,

not achieve significant market size and disappear from the market in the long term.

c) Concrete reduction path for passenger cars and light commercial vehicles based on NZE AEC

In addition to the requirements for the transport sector as a whole, the relevant NZE AEC scenario allows to determine concrete reduction paths for the sub-sector of passenger cars and light commercial vehicles. As an intermediate step, this is the basis for the petitions in this claim.

(1) Reduction path for passenger cars and light commercial vehicles

The fundamental insight is that in order to achieve the net GHG neutrality target in 2050, no more emissions may be caused globally by passenger cars and light commercial vehicles. This means not only that these vehicles may then no longer be produced and put into circulation, but also that the *stock of* passenger cars and light commercial vehicles used globally must perform emission-free.

Furthermore, according to the IEA, a timely, sparing phase-out of internal combustion vehicles is necessary and also modelled as such. Abrupt retirements are avoided, and the allocation of remaining CO_2 resources is shared across the sub-sectors of the energy sector.

According to the IEA, the transport sector may still emit a total of 0.7 Gt CO_2 in

2050,[93] which allows to achieve GHG neutrality in combination with the removal of CO_2 from the atmosphere. This follows from the IEA forecast, according to which, due to insurmountable technical transition hurdles in aviation, this sector must be allowed an indispensable share of further CO_2 emissions.[94]

With global transport CO_2 emissions of just under 8.5 gigatons (Gt) in 2019, the IEA's pathway runs through 2030 with a maximum of 5.5 Gt globally and arrives at the target in 2050 with only 0.7 Gt CO_2 from the stock of all vehicles, including air traffic. This leaves a scope for annual emissions from passenger cars and light commercial vehicles that is lower than these values. They fall to 3.3Gt in 2030 and towards zero in 2050.[95] These pathways take into account the energy needs of other sectors as well as the behavioural changes previously mentioned.

For the 2030 interim target, the IEA does not publish any concrete figures on how many conventional (fossil-fuelled internal combustion engine) vehicles may still be in the stock. However, it does give the total capacity of batteries that must be present in the passenger car and light commercial vehicle stock in 2030 (40.4 TWh)[96] as well as the total global vehicle stock of 1.75 billion passenger cars and light commercial vehicles in 2030.[97]

This, in conjunction with the average size of batteries used in all passenger cars and light commercial vehicles in the global vehicle stock in 2030, can also be used to calculate the number of vehicles in the stock. A conservative value of 65 kWh per vehicle should be assumed,

see in this regard **Annex K 10**, p. 2 f.

This results in the calculation

$$\frac{40{,}4\ TWh}{65kWh} = 622\ million$$

which means that for the entire passenger car and light commercial vehicle segment of the transport sector, there will probably be 622 million BEV in the stock in 2030.

With the assumption of this battery capacity, there is a fifth benefit to the Defendant, because this conservative assumption on battery capacity is higher

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[93] s. *IEA*, fn. [77], p. 131.

[94] s. *IEA*, fn. [77], p. 132, Fig. 3.21.

[95] s. *IEA*, fn. [77], p. 132.

[96] s. Fig. 3.26 on p. 141 in IEA, fn. [77]; data basis available at https://www.iea.org/data-and-statistics/data-product/net-zero-by-2050-scenario#figures-and-data-by-chapter (20 October 2021).

[97] cf. the data on the vehicle population in: IEA, fn. [77] p. 64, 134.

than the average battery size of new BEV cars registered in 2019.[98]

Using the global accumulated sales figure of 817 million passenger cars and light commercial vehicles for the years 2021 up to and including 2029, and taking into account BEVs that are already registered and will still be in operation in 2030 (7.2 million), it is possible to calculate in a further step how many of the vehicles that will be sold in this period must have a battery-electric drivetrain:

$$\frac{(622-7{,}2)}{817} = 0{,}75$$

see in detail **Annex K 10**, p. 3

Given this calculation for the passenger car and light commercial vehicle sector, this percentage figure also applies directly to the Defendant irrespective of the market share. The Defendant thus has a sales target of 75 percent BEVs or, conversely, a sales cap of internal combustion vehicles of 25 percent in the years 2021 up to and including 2029. This is achieved with the petitions under 2. b) and 3. b).

(2) Combustion engine phase-out date

In 2050, passenger cars and light commercial vehicles may no longer cause any gross CO_2-emissions. Since a large proportion of the emissions from these vehicles will be emitted over their entire lifetime, the emissions (Scope 3 - subcategories use phase, scrapping), the last possible time of placing these vehicles on the market can be determined on the basis of a backwards calculation.

In Germany, the Federal Climate Change Act (Bundesklimaschutzgesetz, KSG) must also be taken into account, as Section 3 (2) of the KSG stipulates that greenhouse gas neutrality must be achieved in this country by 2045.

There is no uniform recording of the service life of passenger cars and light commercial vehicles at global level. This complicates the problem that the stock of internal combustion vehicles must be phased out in good time (also in order to avoid state prohibitions or other interference in relation to privately operated passenger cars in the future). However, the date 2030 is also decisive here, as it is the most lenient phase-out date and takes into account the fact that, given the available *average* lifetimes, a considerable proportion of cars will still be in the stock after that period, and simultaneously sufficient time is guaranteed for the development new infrastructure and production processes.

It is possible to calculate a global average lifetime for cars based on various studies with different approaches. A problem with many older statistics is that

[98] If this figure were to be reduced, the number of battery electric vehicles in the 2030 stock would increase and the proportion of internal combustion vehicles still to be sold would decrease.

they are based exclusively on registration statistics of individual countries. This neglects the problem of interstate and intercontinental import-export business. A current modelling (for Europe) takes this into account and arrives at an average service life for passenger cars in the European states of 18.1 years in Western Europe and 28.4 years in Eastern Europe.[99]

For the rest of the world, there are numerous studies and evaluations that allow an estimate for individual markets and thus also an approximation or plausible lower limit of the service life globally.

In its report 'Net Zero by 2050', the IEA puts the average service life of passenger cars at 'around 17 years '[100]. This figure is also the basis for the calculations that are subject matter of the case. In a life cycle analysis of passenger cars, the ICCT assumes an average service life in important markets of 15 to 18 years: 18 years in Europe and the USA, 15 years in China and India.[101]The analysis is based on numerous sources.

Among other things, a study commissioned by the Federal Environment Agency (Umweltbundesamt, UBA) calculates an average service life of 18 years for passenger cars in Germany.[102] Another evaluation determines a service life of 19 years for passenger cars in France.[103] Naturally, all of these evaluations consider vehicles that were first registered almost twenty years ago. In order to estimate the service life of passenger cars registered today, the values would actually have to be corrected upwards, as a continuous increase in the average age of passenger cars can be observed.[104] A projection of the values into the future can therefore be regarded as a conservative estimation.

What all studies and model results have in common is that they operate with average values. An average value of 17 years, as quoted by the IEA, does not mean that after 17 years all passenger cars from the year of registration will have disappeared from the roads. In order to ensure global CO_2 neutrality in the transport sector by 2050, the registration of CO_2-emitting petrol and diesel vehicles must therefore be stopped well before 2033.

A phase-out earlier than 2030 would tend to overburden vehicle producers, as can be seen from the example calculation in

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[99] Held, Rosat, Georges et al. (2021): Lifespans of passenger cars in Europe: empirical modelling of fleet turnover dynamics. https://etrr.springeropen.com/articles/10.1186/s12544-020-00464-0 (2 November 2021)

[100] *IEA* fn. [77], p. 39.

[101] ICCT, A global comparison of the life-cycle greenhouse gas emissions of combustion engine and electric passenger cars, p.iii https://theicct.org/sites/default/files/publications/Global-LCA-passenger-cars-jul2021_0.pdf (2 November 2021).

[102] Federal Environment Agency, Evaluation and update of the methodology for determining end-of-life vehicle recycling rates by shredder tests under the EC End-of-Life Vehicles Directive 2000/53/EC, p.46 https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-01-20_texte_15- 2020_old_vehicle_monitoring.pdf (23 October 2021).

[103] Taszka, Domergue (2019): Prime à la conversion des véhicules particuliers en 2018. Une évaluation socio-économique ex post, p.7. https://www.act-uenvironnement.com/media/pdf/news-34355-prime-vehicule-2018.pdf (23 October 2021).

[104] *ACEA*, Vehicles in Use Europe 2019 https://www.acea.auto/uploads/publications/ACEA_Report_Vehicles_in_use-Europe_2019.pdf (23 October 2021).

Annex K 21, p. 2 f.

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Globally, therefore, with an average service life of passenger cars and light commercial vehicles conservatively estimated here by the IEA at 17 years on *average,* a significant proportion will still be in operation thereafter. A latest global phase-out date can thus just be set for 2030, taking into account the infrastructure expansion to be advanced by then - whereby also regulatory shutdowns - albeit not for the greater part – are being risked in 2050.

In Germany, this situation shifts by five years towards the present with the GHG neutrality target of the KSG in 2045. On the other hand, the lifetime of vehicles in Germany is shorter than the global average (14.2 years). Thus, with the same risk assessment as globally, 2030 must be set as the last justifiable phase-out date in order to avoid extensive regulatory usage prohibitions and thus far-reaching interferences with Article 14 subsection 1 GG in the future.

These facts are covered by the petition under 1. and 3. c).

d) Required specific measures to be taken by the Volkswagen Group to meet the Paris temperature target

These measures, which so far apply without exception to the entire passenger car and light commercial vehicle market - and which must therefore also be implemented by the Defendant - ensure compliance with the target of limiting warming to a maximum of 1.5 °C with a 50 percent probability. The reduction path for this sub-sector of the transport sector can also be expressed in terms of a reduction rate, which the IEA indicates as a 41 percent reduction in annual CO_2 emissions in 2030 compared to 2018.[105]

'Translated' in relation to the Defendant, this leads to a concrete reduction rate of 65 percent in 2030 compared to 2018 for passenger cars and light commercial vehicles.

The basis for this value is first the quotient of the carbon footprint of an average VW vehicle in 2018 (47.8 t CO_2) and the expected carbon footprint of an average VW vehicle in 2030 (13.6 t CO_2). While the former essentially represents an average VW internal combustion vehicle, the latter is a representation of the emissions of an average battery electric vehicle due to the phase-out date. This results in the following calculation (converted to a percentage result):

$$\frac{100}{47.8} \cdot 13.6 = 28.4$$

An average vehicle of the Defendant in 2030 thereafter produces 28.4 percent of the emissions of such a vehicle in 2018. Expressed inversely with

[105] s. *IEA*, footnote [77], p. 132; exact data can also be found in footnote [96].

$$100 - \left(\frac{100}{47.8} \cdot 13.6\right) = 71{,}6$$

this means a reduction of 71.6 percent per vehicle - and not 30 percent, as the Defendant states.

See **Annex K 10, p. 4 et seq.** for details of this calculation.

Part of this calculation is the determination of the specific carbon footprints of the average passenger car/light commercial vehicle of the Volkswagen Group in 2018 and 2030.

For 2018, it is essentially possible to base this on the information provided by the Defendant on the average VW vehicle, converting the data to the WLTP cycle for comparability. This is set out in detail in

Annex K 10, p. 6 et seq.

The calculation for 2030 is more complex. Among other things, the forecast of the IEA on the then existing electricity mix must be included in this regard. These battery electric vehicles will not generate any local emissions in the use phase but will cause them indirectly through electricity consumption. We describe this in detail in

Annex K 10, p. 9 et seq.

It should be noted that, as a sixth benefit for the Defendant, this is also conservatively based on the current level of carbon intensity of power generation technologies and excludes further improvements. Further, for batteries a 30 percent improvement in carbon intensity in battery production, well below the progress made over the past decade, was applied as the seventh favourable assumption.

However, the carbon footprint of Volkswagen AG's entire passenger car and light commercial vehicle division is determined not only by the carbon footprint of an average vehicle, but also by the total volume of vehicles sold.

For if the value, which is merely relative to an average vehicle, were to fall over the years, it cannot be ruled out, that with an increase in sales (number of units) the total emissions of the VW Group, on the other hand, would still increase.

Therefore, what must be considered is total vehicle sales until 2030, which are conservatively assumed here to be 12 million with a market share of the Defendant of 12 percent remaining constant until 2030 while total sales of all vehicles increase according to the IEA. Compared to the sales of 10.666 million vehicles in 2018, this is an increase of 12.5 percent.

see **Annex K 10** p. 4 f.

The above formula for the reduction rate must therefore be extended by the sales increase factor 1.125 with regard to the average vehicle in 2030:

$$1 - \left(\frac{100}{47{,}8} * (13{,}6 * 1{,}125)\right) = 68$$

Thus, a reduction commitment of 68 percent in 2030 compared to 2018 applies to the Defendant. Exclusively this rate is suitable to factually ensure that the Defendant is doing its appropriate share to limit global warming.

The reduction rate requested by the Plaintiffs is 65 per cent. In this there is a safety discount of about three per cent, which provides for the eighth benefit for the Defendant.

Compared to the measures of phasing out internal combustion vehicles and limiting sales of internal combustion vehicles, the implementation of this quota is additionally necessary, as it secures, inter alia, the target achievement, should, for example, the CO_2 emissions of the Defendant shift across the scopes. This petition also includes emission reductions that VW must achieve in the production of the vehicles (within the framework of what they have already set themselves for Scope 1 and 2); it also assumes a minimum level of efficiency for e-cars (average consumption no higher than 20 kWh per 100km, although this is also a very generous value).

This target is achieved by the petitions under 2. a) and 3. a).

5. Announced and implemented measures of Volkswagen AG

a) Announced measures

At the outset, it can already be seen that the Defendant's statements on climate change targets are contradictory. In the official non-financial reporting under sections 315c, 289 et seqq. of the German Commercial Code (HGB), the Defendant points out that it merely wants global warming to be limited to 2°C.[106] This means that the group's ambitions are above the upper limit of the Paris Agreement (‘*well* below 2 °C’).

A more concrete statement was included in the 2019 reporting: Here VW announced that it wanted to ‘orient’ itself along the long outdated 2DS scenario of the IEA from 2017, which, contrary to the Paris Agreement and broad scientific consensus, does not aim for greenhouse gas neutrality until the year 2100.[107]

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[106] s. Volkswagen AG Sustainability Report 2020, p. 10, 42, 48, 92.

[107] cf. Volkswagen AG, Sustainability Report 2019, p. 62, https://www.volkswagenag.com/presence/nachhaltigkeit/documents/sustainability-report/2019/Nonfinancial_Report_2019_e.pdf (1 October 2021).

It is not consistent with this that the Defendant states in a letter to the Plaintiffs' counsel that it has been 'committed' to the Paris Climate Agreement since 2018,

s. **Annex K 22** p. 1

In a correspondingly innocuous manner, the Defendant phrases its 'conviction' that 'humanity can stop anthropogenic climate change and achieve the 1.5 degree target',[108] which does not preclude that the Defendant is of the opinion that this will occur as a result of more than obligatory efforts by others, rather than an adequate contribution by itself.

In this respect, it must be stated that VW's target orientation does not correspond to the scientific-factual basis nor the corresponding adopted legal framework even in its basic approach. If the Defendant were to orientate itself on scientific standards, vague and contradictory formulations such as these would not be necessary.

Even the 'change of strategy' announced on 4 December 2018 at the Handelsblatt's Automotive Summit does not change this: with reference to climate protection and the findings of the IPCC, a so-called realignment of Volkswagen towards electromobility was presented.[109]

However, the statement made there that the group would bring the last vehicle with an internal combustion engine onto the market around 2040 is no longer communicated at present. Rather, the Defendant states that customers will switch to battery electric vehicles on their own if the conditions were right.[110]

For Scope 1 and 2 emissions, the Defendants' absolute reduction rates are certified as 'well below 2°C' by the Science Based Targets Initiative (SBTi), which is consistently referenced publicly by the Defendant. This is also repeated in the reply to the Plaintiffs

s. Annex K 22 p. 2.

However, this belies the fact that this is an almost negligible proportion of the group's total emissions. Scope 3 emissions account for over 98 percent of the total emissions of the Volkswagen Group's passenger car and light commercial vehicle divisions. However, the SBTI does not assess these emissions. Finally, statements of this kind are also questionable under competition law.

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[108] Speech by Dr. Diess at 7 September 2021, https://www.linkedin.com/pulse/dekarbonisierung-als-chance-herbert-diess/?trackingId=2Izact9iYapSjnGUbLNKNA%3D%3D (22 October 2021).

[109] cf. Handelsblatt 'Volkswagen kündigt das Ende des Verbrennungsmotors an' https://www.handelsblatt.com/unternehmen/industrie/auto-von-morgen/handelsblatt-autogipfel-volkswagen-kuendigt-das-ende-des-verbrennungsmotors-an/23715746.html?ticket=ST-4362374-crd2ArxztdPr6Yx9RxFS-cas01.example.org (1 July 2021).

[110] s. so VW is quoted by Köllner, in: Springer Professional, online article 'Verbrenner-Ausstieg: Die Pläne der Autohersteller', https://www.springerprofessional.de/antriebsstrang/verkehrswende/verbrenner-ausstieg--die-plaene-der-autohersteller/18906344 (9 September 2021).

This is also found in the official statements of SBTi:

> *'Volkswagen AG commits to reduce absolute scope 1 and 2 GHG emissions 30% by 2030 from a 2018 base year. Volkswagen AG further commits to reduce scope 3 GHG emissions from use of sold products of light duty vehicles 30% per vehicle km by 2030 from a 2018 base year. (...) The targets covering greenhouse gas emissions from company operations (**Scopes 1 and 2**) are consistent with reductions required to keep warming to Well-below 2°C. '*[111]
>
> (own emphasis)

For Scope 3 emissions, the SBTi does not offer a comparable certification. Moreover, the relevant targets are figured by VW with a so-called Decarbonisation Index (DKI), which represents an average value in CO_2 per vehicle, as shown above. In this context, too, it is misleading that the Defendant equates this relative reduction rate with the absolute values for Scopes 1 and 2 in the reporting, as also repeated in the reply letter on p. 2 (**Exhibit K 22**) -

> *The SBTi 'has reviewed our 2030 targets and confirmed that Volkswagen's climate goal meets the requirements for limiting global warming to 'well below 2 degrees Celsius'.'*
>
> (Own translation, original quote in German)

We have already shown above that the Defendant's chosen 30 percent reduction rate per vehicle for Scope 3 is unsuitable for to demonstrate progress in target achievement, because despite a relative reduction per vehicle, it is possible to increase total company emissions without contradicting this. Furthermore, this value only indicates the emissions during the use phase; the 'end of life treatment' or the supply chain, for example, are completely missing.[112]

There is thus a complete lack of a transparent and coherent approach to management observing climate-related due diligence, let alone an announced alignment of the group along the suitable integrated climate scenario.

The CO_2 reduction values announced by the Defendant correspond with this picture. This has already been shown above (under **II. 3. a) (3)**):

Meeting its own targets actually results in the reduction of only 16 to 22 percent in 2030 compared to 2018 levels.

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[111] see https://sciencebasedtargets.org/companies-taking-action keyword: Volkswagen AG (21 October 2021).

[112] s. VW, Press Release of 22 September 2020 at https://www.volkswagen-newsroom.com/en/press-releases/science-based-targets-initiative-confirms-climate-protection-goals-of-volkswagen-group-6434 (6 November 2021).

For the passenger car sector, the Defendant further states that the group targets a share of battery electric vehicles of approximately 20 percent of vehicles delivered in 2025, which shall gradually to approximately 50 percent by 2030, with that share being 60 percent in Europe.[113] A total of 26 million battery electric vehicles are planned to be sold by 2030.[114]

This means that the sales target for BEVs is 65 percent too low compared to the NZE AEC. Accordingly, 48 million too many vehicles with combustion engines would be sold.

s. Annex K 11, p. 5 et seq.

This means that based on the scientific standard set out by the NZE AEC scenario above, the necessary CO_2 target for 2030 is exceeded by emissions on the scale of a state such as the Netherlands. Moreover, what concrete steps will be taken after 2030 is not set out in any way.

The group is thus failing to meet the minimum scientific targets required to contribute to the achievement of the Paris Agreement's temperature target in a proportion of its fair share.

b) Active measures contrary to the objective

Since the early 1970s, VW's research department has consciously dealt with the problem of the contribution of combustion of diesel and petrol to climate change,

see in detail **Annex K 23**, p. 1.

To this end, the department developed strategies to reduce fuel consumption and cut CO_2 emissions. Since 1 February 1983, the connection between CO_2 and climate change as well as the fact that the group contributes to this with its vehicles to a very significant extent, have been documented to the group's board of management.

S. **Annex K 23**, p. 2

In a report intended for publication in the same year, the responsible head of research pointed out the scientific fundamentals of climate change that are now generally known (own emphasis):

> *'CO_2 is the only component of the atmosphere that has undergone significant global change: it has already increased by 15% against base levels and it continues to increase by 0.3% each*

[113] s. Press release at https://www.volkswagen-newsroom.com/de/publikationen/reden/reden-jahrespressekonferenz-2021-641/download, p.15 (5 November 2021).

[114] VW, Press Release of 13 November 2020, at https://www.volkswagen-newsroom.com/en/press-releases/volkswagen-konzern-erhoeht-investitionen-in- zukunftstechnologien-auf-73-milliarden-euro-6607 (5 November 2021).

> *year. The effects of this increase are not yet clear (climate changes), but for humanity it is **a process that can no longer be reversed**.'* (own translation)

s. **Annex K 23**, p. 2

Due to concerns about 'anti-car measures' such as speed limits or driving bans and contrary to the efforts of the research department to pursue a sustainable CO_2-saving group policy, the publication of this report was prevented.

s. **Annex K 23**, p. 2.

Thus, not only was the Defendant actively aware of climate change and its contribution since that point of time, but it fundamentally decided against adapting its group policy according to these insights, even then approving of the severe consequences.

This strategic decision is still being pursued today, for example through lobbying efforts and the withholding of fuel-efficient vehicles,

s. **Annex K 23**, p. 2.

Transportation is the only sector that failed to reduce its greenhouse gas emissions in the pre-Covid year of 2019 compared to 1990, despite extensive fleet limit value regulation in place. The Defendant is to a significant (though of course not solely) extent responsible for the fact that these do not have the intended effects,

s. **Annex K 24**, p. 6.

as the Defendant significantly exceeded the EU fleet limit of 95 g/km in 2020 with 156 g/km.

Furthermore, the Defendant's historic line of strategy also manifests itself in more specific decisions, of which the following should be highlighted here:

Already evidently contradicting the climate protection announcements are the goals of becoming the world leader in the sale of so-called sports utility vehicles (SUV) and that half of all vehicles sold should be SUVs by 2025.[115] According to calculations by the IEA, the additional consumption and emissions of an average SUV compared to an average mid-size car are 25 percent and therefore pose a

[115] s. Handelsblatt (2020): Volkswagen wants to greatly expand its SUV fleet https://www.handelsblatt.com/unternehmen/industrie/autobauer-volkswagen-will-seine-suv-flotte-stark- ausbauen/25382942-all.html, VW, press release of 25 October 2018 https://www.volkswagen-newsroom.com/en/press-releases/volkswagen-reckons-2025-with-50-percent-suv-share-4318, and the VW website 'SUV Offensive' https://www.volkswagenag.com/de/news/stories/2018/10/focusing-on-suvs.html# (21 July 2021).

problem of their own for the transition.[116]

The scientific consensus, however, is that the Paris Agreement's targets can only be achieved if *every* opportunity to increase the efficiency of drivetrains and energy use is implemented.

This contrasts with the SUV boom of the past decade, which has been one of the key drivers of the rise in global CO_2 emissions. The excess emissions caused by SUVs alone between 2010 and 2018 are higher than the additional emissions caused by heavy industry as a whole. Only the electricity sector as a whole had higher excess emissions than SUVs over the same period.[117]

An overview of the massive problem for transition that the Defendant is fuelling with non-state of the art vehicles such as SUVs can be found in

Annex K 25

shown there on p. 5.

6. Pre-litigation correspondence

By letter dated 2 September 2021, the Plaintiffs 1) to 3) drew the Defendant's attention to the facts presented and to the corresponding rights violations and requested it to take the necessary action or to cease and desist from action in accordance with the requests made.

s. **Annex K 26**

No cease-and-desist declaration was issued, or action taken in accordance with the request until the action was brought.

Instead, the Defendant rejected the Plaintiffs request, s.

Annex K 22, p. 2.

It was therefore required to bring action.

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[116] s. *IEA* World Energy Outlook 2019, p. 151.

[117] s. *IEA*, at https://www.iea.org/commentaries/growing-preference-for-suvs-challenges-emissions-reductions-in-passenger-car-market (20 July 2021).

II. Legal assessment

The admissible action is well-founded.

The Plaintiffs are entitled to the claims asserted. In order to avert the threatened impairment of their legal interests, they are entitled to demand that the Defendant take the requested measures to reduce group-wide CO_2 emissions, which must be done by implementing the NZE AEC scenario as legal consequence of the claim.

This follows from the claim for injunctive relief and removal pursuant to sections 1004 in conjunction with 823 subsection 1 BGB (analogous), which protects holders of absolute legal positions and framework rights.

Accordingly, a person entitled in this way (in this respect **1**) can demand that an interferer (**3)** ceases and desists or removes (**5)** the impairment of legal interests (**2**), provided that there is no obligation of toleration (**4**).

1. Legal interests

The Plaintiffs are entitled to claim under section 1004 subsection 1 BGB. The scope of application includes all legal interests protected by section 823 BGB.[118]

The Plaintiffs are asserting in the present case the legal interests of property (see **(a))**, health (**b**) and the framework right to safeguard greenhouse gas-related freedom (**c**).

In this section **1. a) to c),** the standard to be applied for the protection of the asserted legal interests which confer the capacity to bring an action is set out. In section **2.** the concrete impairment is subsumed under the respective standard.

a) Property

Every holder of the property right defined in section 903 BGB is entitled to claim. An impairment of property within the meaning of section 1004 BGB is any interference with the legal or actual powers of the owner that contradicts the content of the property right defined by section 903 BGB.[119]

Section 903 BGB allows the owner of a thing, to the extent that a statute or third-party rights do not conflict with this, to deal with the thing at his discretion and to exclude others from every influence.

Accordingly, the *utilization dimension* includes the utilization of a plot of forest for forestry purposes, as asserted by Plaintiff 1). Furthermore, the *material substance* of the plants firmly attached to the land is also included.

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[118] Herrler, in: Palandt, BGB Kommentar, 80th ed. 2021, section 1004, para. 4; Spohnheimer, in: BeckOGK BGB; status: 01 August 2021, section 1004, para. 13.

[119] BGH, Judgement of 1 March 2013, V ZR 14/12, NJW 2013, 1809, para. 14, ‚Preußische Gärten und Parkanlagen II‘.

Plaintiff 2) asserts his property of the 60 bee colonies, which are deemed to be possible objects of property in the sense of the German Civil Code pursuant to section 903 sentence 2 BGB.

In respect of all these objects, Plaintiffs 1) and 2) are entitled to exclude the things from the influence of third parties, in particular the improper indirect effects of heat and drought, floods and damage caused by pest infestation due to the weakening of the vitality of the stocks.

The particular constitutional significance of protection of property must also be taken into account here. The owner's powers under section 903 BGB guarantee the protection of the utilization and material substance of property not only in the present, but precisely also over the asserted period of time.

b) Health

An injury of health within the meaning of section 823 subsection 1 BGB, exists if a condition that deviates adversely from normal physical functions is caused, whereby abstinence from pain or profound changes in condition are irrelevant.[120]

Plaintiffs 1) to 3) can assert this legal position, because their age and physical condition provide sufficient grounds that they will be affected by the feared impairments in the future. Assuming their existence in 2050, they will at least have to deal with increasing heat waves with hot days and hot nights and the resulting effects on the cardiovascular system.

It should be noted here that health protection is at the same time protection of human dignity and also serves to protect other freedom rights. The threshold of severity is also of particular importance in a temporal dimension: If a young, healthy person's health is threatened from about 2030 onwards in such a way that active lifestyles learned today and still to be exercised in the future are called into question, this must be countered today.

c) Right to safeguard greenhouse gas-related freedom

Sections 1004, 823 BGB protect the Plaintiff’s exercise of their greenhouse gas-related freedom from excessive impairments caused by private parties.

(1) The carbon budget as a reality in constitutional and private law

The BVerfG has established that there is a finite carbon budget. Article 20a GG does not only demand climate protection as such or compliance with the Paris Agreement’s target as a temperature or ppm CO_2- specification (i.e. the threshold concentration of CO_2 molecules in the atmosphere), but by this directly prescribes a carbon budget that can still be used, as specified by the legislator by

[120] BGH, Judgement of 14 June 2005, VI ZR 179/04, NJW 2005, 2614, Informing the patient and his wife about the risk of HIV infection.

setting a temperature target.[121]

The remaining national carbon budget is therefore a physical limit to future GHG-related exercise of freedom and, since the BVerfG decision, of constitutional significance.[122]

The BVerfG describes the risks to the exercise of freedom in the future if the budget is already largely consumed today: The state would be obliged to resort to drastic restrictions of freedom in order to still be able to achieve the constitutional carbon budget objective.[123] Similarly, the state would have to proceed on the basis of its duties of protection if it can already be established today that the measures to combat climate change are unsuitable and ultimately also to protect against the extreme consequences of climate change even if the target is missed.[124]

Nearly every exercise of freedom today and in the near future still directly causes further consumption of the carbon budget.[125] However, since the available amount of CO_2 is finite, this CO_2-relevant exercise of freedom is also a finites scope. One-sided excessive use of the budget thus shortens its usability by others. This applies as a physical quantity regardless of whether the state takes measures or not, or whether private individuals emit through their actions.

From the state's point of view, these are interferences with fundamental rights and, in particular, definitions of the content and limits of property, which have not yet been the focus of legal discourse. For, as has been shown, an interference *must* take place at a certain point in time.

Through the indirect horizontal effect of freedom rights via the element ‘other rights’ pursuant to section 823 subsection 1 BGB, it is therefore imperative to take into account the advance interference-like effect (‘*eingriffsähnliche Vorwirkung’)* of these future state interferences, which would not be constitutionally justified in the context of a (civil) court decision, if the court decision enables the extensive consumption - or proportionate excessive consumption - of the budget already today.

The reducing budget as a whole thus also defines the limit of the sum of absolute and freedom rights. It is the role of private law to trace these real boundaries within the budget between the subjects of private law and to delimit the private spheres fairly among themselves.

With that said:

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[121] s. BVerfG, [footnote 2], para. 208

[122] s. BVerfG, ibid. para. 215.

[123] s. BVerfG, ibid. para. 117.

[124] cf. for example BVerfG, ibid. para. 148.

[125] cf. BVerfG, ibid. para. 37, 117.

The BVerfG's findings have implications for private individuals. The actions of private individuals can restrict a specific section of the future use of freedom of other private individuals because the overuse of the budget by single private individuals is at the expense of the development of freedom of others.

This aspect of future freedom can be concretely delimited, as it is strictly linked to the carbon budget, both in factual terms (the budget as a physical quantity) and in legal terms via Article 20a GG (the budget as a constitutional quantity). **This rule is a factual and legal fact that must be observed in legal relations.**

(2) Sufficient concreteness of the right

The coupling of the future use of freedom to the underlying physical quantity of the budget is certain, but it is uncertain how the *potential* freedom to be guaranteed from it will be realized. It is therefore difficult to assign the intertemporal threat to freedom posed by the consumption of the carbon budget to concrete absolute legal positions in each case.[126] Protection against these losses of freedom solely by means of the previously recognised absolute rights is therefore neither consistently possible nor sufficient.

However, in addition to the absolute legal rights specifically mentioned in section 823 subsection 1 BGB, the BGH also recognises broader framework rights which are also protected under tort law. Framework rights go beyond the protection of absolute rights and are based on judicial development of the law.[127] The ‘right to an established and operating business’ (ReaG) and the ‘general right of personality’ (APR) are recognised by the courts.

The common object of protection of these framework rights is the freedom of development of the person or the business,[128] i.e. the object-related guarantee of the potentiality of freedom. These rights are referred to as framework rights in each case because they ‘bundle’ a large number of different legal positions in one right.[129] It is precisely such a bundling of legal positions that the BVerfG also undertakes in its climate decision, when it subjects the greenhouse gas-associated exercise of freedom as a whole to intertemporal protection.

The tort law system can and must also take up this new constitutional dimension of the protection of fundamental rights by way of indirect horizontal effect. Already in light of the fundamental task of private law - the just delimitation of privately autonomous spheres of power - this appears to be necessary.

In view of the gap of protection that has arisen here with regard to the fundamental rights, it is also a constitutional duty of the civil courts to ensure an

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126 An exception in this respect is often property, which guarantees comprehensive use of power in relation to the object, the germ of the potential exercise of freedom is thus already set.

127 Spindler, in: BeckOGK BGB, Status: 1 May 2021, section 823, para. 160.

128 cf. BGHZ 107, 117 (122), BGH, NJW 2012, 3645 para. 12.

129 Brockmann/Künnen, JuS 2020, 910, (912, 914).

appropriate balance and to fill this gap.[130] Precisely this was also the decisive reason for the courts to create the 'right to an established and operating business' (ReaG) and the 'general right of personality' (APR) as civil law institutes.[131]

(3) Balancing requirement

The limits of the right to safeguard greenhouse gas-related exercise of freedom are constituted - as in the case of the general right of personality - only in balancing against other legal interests.

The future greenhouse gas-associated use of freedom to which everyone is equally entitled, in accordance with the principle of Article 3 subsection 1 GG, can theoretically be translated into an individual carbon budget. However, the limits of such a conceivable individual carbon budget for each citizen cannot always be calculated for practical reasons. In addition, there are conceivable scenarios in which a higher CO_2 consumption than the calculated one is required due to the individuality of the guarantee of freedom.[132]

In addition to the fulfilment of the other conditions of the bases for claim under tort law, a balancing of the relevant interests is required, in which the CO_2 intensity of the respective action is the decisive factor and must be brought into balance with the conflicting interests. The importance of the factor of CO_2 intensity is likely to remain unchanged until greenhouse gas neutrality is achieved, due to the *constant depletion* of the carbon budget, despite the *ever-expanding* possibilities for the CO_2 -free exercise of freedom.

The individual carbon budget is a figure that must be observed in absolute terms, but which cannot be calculated mathematically with precision for each individual and depends on evaluations.[133] In the civil law sense, therefore, the scope of this right - as in the case of the general right of personality - is determined by a balancing process.

CO_2-related freedom can also be protected by the general right of personality. However, the scope of application of that framework right is (becoming) narrower because of the CO_2 link and at the same time goes beyond the scope of application of the general right of personality with regard to activities that do not necessarily have to be personality-forming here.

For the interpretation of 'other rights', with regard to the indirect horizontal effect, the factual protection of fundamental rights through a claim such as the present one must also take into account the direct implications of such a right on decisions for third parties not involved in the lawsuit. A dismissive judgment

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[130] cf. BVerfGE 84, 212 (225 f.).

[131] cf. BVerfG, NJW 2006, 595; Jauernig, Kommentar zum BGB, 18th ed. 2021, before section 823, para. 65.

[132] Consequently, e.g. the right to guarantee fundamental rights conditions, which is included in the objective protection dimension of the individual fundamental rights, e.g. expressed by a right to a social subsistence minimum in accordance with Article 20 subsection 3 in conjunction with Article 1 subsection 1 GG, or the special equality requirement in Article 3 subsection 2 and subsection 3 GG, can demand that individual persons be entitled to larger shares.

[133] cf. BVerfG, [footnote 2], subsection 215.

would have the effect of consolidating the risk and CO_2 management of other companies in a way that cannot be scientifically justified and is contrary to the Paris Agreement. A positive judgment would at the same time co-protect other persons. Such an interpretation of civil law norms in conformity with state objectives is not alien to German law.[134] Insofar as this may be understood as having a general preventive character, it does not lack legitimacy, at least insofar as this is the 'side effect' of subjective rights.[135] This evaluation is all the more evident from numerous directly applicable standards of EU environmental law, which introduce preventive assessments into national private law (e.g. the free choice of law vis-à-vis the environmental damager in Article 7 of the Rome II Regulation).

(4) Systematic position in section 823 subsection 1 BGB

The right to safeguard greenhouse gas-related exercise of freedom is protected as an 'other right' within the meaning of section 823 subsection 1 BGB.

Sections 1004, 823 BGB analogously convey not only the protection of property (directly) and the absolute rights mentioned in section 823 subsection 1 BGB, but also the protection of the 'other rights' summarised there.

On the basis of the enumeration and the fundamental decisions of German tort law, the established interpretation is that these other rights can also only be 'absolute rights' in the sense of the long-standing case-law on the provisions mentioned.[136] The enumeration of specific rights, especially those that are exclusively absolute, results in a further restriction: a general liability clause in tort or a general claim for injunctive relief is foreign to German private law.[137]

This framework is taken into account here.

Like the general right of personality, which protects the free development of a person, and which must be observed by everyone in legal relations,[138] it is equally imperative that the right to exercise CO_2-associated freedom must in the future be observed legal relations.

The framework right asserted here protects a specific dimension of freedom that has a narrowly defined scope of use. Other legal subjects are also bound to this scope of use, which means that there is also an exclusion function in a horizontal delimitation.[139]

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[134] cf. Halfmeier, in: AcP 2016, 717, 731 f

[135] cf. e.g. MüKoBGB/Schwab, 8th ed. 2020, BGB section 817, para. 10.

[136] cf. MüKoBGB/Wagner, 8th ed. 2020, BGB section 823, para. 303.

[137] cf. MüKoBGB/Wagner, 8th ed. 2020, BGB section 823, para. 301.

[138] BVerfG, Decision of 14 February 1973, 1 BvR 112/65, NJW 1973, 1221, compensation for pain and suffering due to violation of the general right of personality.

[139] cf. on the recognised criteria for an absolute right MüKoBGB/Wagner, 8th ed. 2020, BGB section 823, para. 303.

The fact that this selectivity cannot always be demonstrated in reality, and the boundaries cannot be represented exactly is not detrimental to this. For on the one hand, this representability becomes more and more exact as time goes on. On the other hand it is only required to be shown in the present case that a restriction of the CO_2-relevant freedom exercise caused by the Defendant is imminent in a considerable proportion for the concrete Plaintiffs. The lacking possibility to calculate this exactly can be compensated for by taking it into account in the balancing process, as the BVerfG has found.[140]

In addition to the absolute nature of this right due to the constitutional concretization of Art. 20a GG to the Paris Agreement's target, it is also a position to be observed by everyone due to the material link to the absolute rights associated with it. Since at present, exercise of freedom is to a large extent still CO_2-related, the general personality right as well as further absolute legal positions are in their entirety a legal position contained in this framework right, which is equally being limited.

Some argue that it is required that an absolute right must already be protected outside tort law. This criterion is fulfilled since the order of the BVerfG: the distribution of CO_2-relevant freedom in a forward-looking manner is enshrined in Article 20a GG. The BVerfG has extended the fundamental rights incorporated in the Basic Law: 'In their subjective dimension, fundamental rights – as intertemporal guarantees of freedom – afford protection against the greenhouse gas reduction burdens imposed by Art. 20a of the Basic Law being unilaterally offloaded onto the future.'[141] This also applies with regard to the right to protection through civil courts.

Civil courts are both competent and obligated to ensure that the fundamental right to intertemporal guarantee of freedom recognized by the BVerfG becomes effective also in civil law:

Since civil law requires a fundamentally different approach than the relationship of subordination between the state and the citizen due to the horizontality of relations, the fair balancing of interests by way of the further development of the law by the civil courts has a special function here (cf. also II. 3. a) - duty of care). Accordingly, in the context of the disturber liability ('Störerhaftung') of internet intermediaries, the BGH established a complex system of duties to review and delete, precisely because no codified statutory basis existed.[142]

The BGH also refers to the constitutional mandate of civil courts to establish the required balancing of rights and interests by filling out general clauses in civil law provisions themselves. The disturber liability developed judicially by an analogy to section 1004 BGB, therefore provided a sufficient legal basis for assessing the liability of internet intermediaries.[143] Similar structures can be inferred from the case-law on industrial action, which is not codified in Germany.

[140] cf. BVerfG, [fn., 2], para. 215 et seq.

[141] BVerfG, headnote 4

[142] See for example Ohly, ZUM 2015, 308

[143] BGH, BeckRS 2016, 1908 para. 60 f.

The BVerfG has repeatedly demanded statutory regulation in this area, which subsequently did not materialize. The consequence of this is not a lack of rights, but the constitutional duty of the labour courts to design this central area of social dispute through their case-law.[144] The same applies in the area of contract law. Insofar as the legislator fails here to counteract obvious undesirable developments in constellations of disturbed contractual parity with special regulations, civil courts are obligated to enforce constitutional values[145] instead of applying a 'law of the strongest'.

This is also the case here in view of the absolute character of the CO_2-associated exercise of freedom: The valuation of the climate protection requirement in conjunction with the normative programme of section 1004 BGB results in its design as a subjective right under civil law.

The likewise partially demanded particular need for protection[146] of the legal positions as a precondition for an 'other right' is vividly illustrated in the present case: All of the Plaintiffs are exposed to the Defendant's use of CO_2; protection of the freedom to which they are entitled is not possible by other means, as has already been shown at various points.

This requires an order also in the private law relationship, a protection against usurpation of the individually entitled path of freedom into the future by mostly socially more powerful subjects of private law.

(5) Limitation of the scope of protection

The recognition of a fundamental right to safeguard greenhouse gas-related freedom does not lead to a boundless liability of 'all against all'.

Already because of the weight currently required to constitute a limitation of another person's CO_2-related-future to a demonstrable extent, the right cannot be asserted against everyone. Only impairments that have a scientifically tangible significance, as presented here, come into consideration.

Therefore, individual behavioural decisions such as a single long-distance flight, which regularly consumes the entire per capita carbon budget to which a single person is entitled annually, but is insignificant for the global consequences, are unsuitable.[147] It is precisely significance that can be scientifically assessed and thus safely delimited, as the IPCC's Sixth Assessment Report shows. No individual person needs to fear being exposed to private actions for everyday behaviours.

The corresponding objection was previously raised in the proceedings against the

[144] BVerfGE 84, 212 (225 f.).

[145] BVerfGE 81, 242 (255 f.).

[146] cf. Adam, in: JuS 2021, 109, 112.

[147] s. AR6 WGIII, **Annex K 6**, sub E3.

emitter RWE. With an emission volume of 0.47 percent of historically emitted CO_2 in the case of RWE, the Higher Regional Court of Hamm considered a trivial threshold for exceeded in any case.[148]

The limitation of the scope of protection follows in particular from two principles of the rule of law: The private action of natural persons is a socially adequate, permissible risk because of its insignificance. Furthermore, changes in behaviour would be disproportionate here within the meaning of Article 20 (3) GG, since the minor interest of other persons in this cannot outweigh the respective required actions.

The fact that a new framework law initially seems general clause-like is constitutionally unobjectionable and nothing new in case-law; rather, it is a necessary consequence of the reaction to new developments.

Likewise, the scope of the elements must be contoured in the course of time by case-law where indeterminate legal concepts are used.[149] Furthermore, it is precisely the recognised nature of framework rights that their scope of protection is defined by a balancing of goods and interests and that unlawfulness is not yet indicated by the injury of a legal interest.[150] Moreover, it is even desirable under constitutional law that such open elements exist in order to be able to cope with modern situations of danger to a legal interest.

2. Impairment of legal interests

According to the just outlined requirements for legal interests, the future impairments are defensible according to sections 1004, 823 BGB as described under **b)** et seq. below. The requirements for the connection of causality to be proven are presented under **a).**

a) Causality

The impairments of legal interests are part of a complex interrelationship of effects. However, the chain of causality from the actions of the Defendant to the concrete impairments of legal interests can be divided into the causal contribution of the Defendant to climate change - and climate change as the cause of the concrete impairments of legal interests.

The first thing to be established here is the existence of an impairment. In this respect, the element is only fulfilled if there is a causal connection between climate change and the concrete consequences for the Plaintiffs. Who caused the impairment is irrelevant at this level, the question of attributable causation is another prerequisite for the claim.[151]

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[148] s. OLG Hamm, order of 30 November 2017 - I-5 U 15/17; ZUR 2018, 118, No. I. 1. f.

[149] BVerfG, [fn.138], 1221, damages for pain and suffering due to violation of the general right of personality.

[150] cf. MüKoBGB/Wagner, 8th ed. 2020, BGB, section 823, para. 417.

[151] cf. BeckOK BGB/Fritzsche, 59th ed. 1.8.2021, BGB section 1004, para. 34.

The former chain of causality is set out in the following.

The fundamental mechanism of climate change as a global warming scenario is scientifically certain. The concrete consequences described are also very probable to almost certain potential consequences of climate change. Due to the lack of resolution of climate models, on the other hand, it is in part not possible to state concretely which person will be affected by the consequences with certainty at what point in time. However, it can be established that there is a considerable potential threat to concrete legal interests which, with the continued passage of time, will increase to the point of practical certainty of occurrence.

In the present case, this threat situation results, in relation to all individual legal interests affected, in a danger with the weight of threat scenarios that to date have also been recognised in the application of section 1004 BGB - the criterion of 'danger that is to be seriously feared' is exceeded here, because general climate change consequences are certain to occur. An imminent, tangible danger is admittedly difficult to demonstrate here with regard to the temporal perspective. However, this is compensated constitutionally by the extended time span to be considered in light of the required intertemporal consideration of fundamental rights and in addition by the certainty regarding the abstract interrelations of climate change.

The same applies if one considers the requirements of the BVerfG for the presentation of causality of future risks. It has determined that, with regard to such consequences that are *irreversibly* set in motion, both an affectedness and a material obligation to prevent already exist today, even if this causal chain is only probable to the extent that it possibly respectively within circumstances yet attached with uncertainty leads to not-inconsiderable threats.[152]

This is in line with the BVerfG's case-law on the CERN series of experiments, which specified the requirements for demonstrating the negative effects of technical devices, at the upper end of which the following applies:

> *'A threat to life or health that can only be derived theoretically can exceptionally be regarded as an interference with fundamental rights. The greater the risk potential, the lower the threshold of probability for the prognosis of the occurrence of damage, beyond which effective state protective measures are required. A damage event of apocalyptic proportions must be practically excluded as a possible consequence of a scientific project according to the state of the art in science and technology. '*[153]

Here, too, apocalyptic effects due to climate change cannot be ruled out, but this primarily influences the Defendant's best-efforts obligation (see below). For the presentation of causality, however, it can also generally be inferred from this that

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[152] cf. BVerfG, [fn., 2], para. 108, 130, 229.

[153] BVerfG, Decision of 18 February 2010, 2 BvR 2502/08, NVwZ 2010, 702, 'Black holes', own translation.

the more serious the effects are, the lower the requirements for the presentation of the concrete occurrence become. This is to be taken into account in the interpretation and application of the law by the competent Court.

b) Property

(1) Plaintiff 1)

The impairments described under I. 2. c) (a) (1) are to be expected for the forest plots of Plaintiff 1), in particular these are damages to the material substance. The periods of drought that can certainly be expected to continue damage the soil, if only by drying it out, killing beneficial organisms in the soil and, in any case, making it uninhabitable temporarily and for longer than without human influence. That this will occur in the near future can be assumed as certain by scientific standards, even if an exact year cannot be predicted. This damage intensifies with each increasing degree Celsius of climate change.

Further impairments result from the bark beetle infestations, which will also intensify with rising temperatures, and which will affect the forest plots. The expectation for the future that naturally regenerating plants will no longer thrive is also a state conflicting with the powers over the plot of land.

Due to the similar composition of the forest plots as in the presented threat scenario for the Black Forest (conifers), the high probability of the death of 99 percent of the spruce biomass there with a 45 percent share of the bark beetle can in principle also be transferred to the Plaintiff's forest plots. Here, too, it can be seen that the effects of the bark beetle intensify as the temperature rises (see p. 31, **Annex K 7**). This would possibly shift with (the planned) natural succession and thus more resilient species compositions but would remove the impairment. Again, it can be seen that, except for the exact time, the occurrence of impairments can be considered practically certain with a scenario, that is not Paris-compatible

Plaintiff 1) is therefore deprived of the actually intended use as a near-natural forest area, which would also have a protective function for the climate.

(2) Plaintiff 2)

The bee colonies of Plaintiff 2) are, analogous to the agricultural areas, not usable to the same extent as before due to the climate impact, since nutrition and development are disturbed, and the previous harvest times are shifted.

The continuation and reinforcement of this interrelation is a scientific fact.

c) Health

For all Plaintiffs it applies that in any case at least one of the numerous health impairments described will affect them with a high degree of probability.

For Plaintiffs 1) and 2), the risk that increased temperatures and heat waves will trigger cardiovascular disease that would not have manifested itself in the absence of climate change is increased due to their age. Disorders of well-being below the clinical threshold will reoccur in the near future for all Plaintiffs if heat waves persist.

In the case of Plaintiff 3), this is compounded by the psychological impairments caused by climate change that have already occurred in the past and will recur. There is a considerable risk that these will lead to a pathological condition requiring treatment.

The somatic risks for Plaintiff 3) are less likely in the near future as she has no pre-existing conditions. However, with her long further life expectancy of 71 years, the risk is in turn increased. She is virtually growing into the more severe extremes (depending on the scenario) and will be exposed to them throughout her life. In addition, subclinical somatic disorders such as heat-induced decrease in performance, malaise and avoidance behaviour will burden her significantly longer and this already occurs at a particularly sensitive point for personal development.

The Plaintiffs have to live with the risk of an increased mortality due to heat, especially as far as they are urban dwellers, particularly in Berlin. This is a consequential risk comparable to a chronic disease due to a tortious injury such as a traffic accident.

They experience comparable restrictions insofar as there is a high probability of serious viral diseases being caused by the Asian tiger mosquito in the future.

With regard to the causality to be demonstrated, it also applies that the health consequences of climate change can be proven in the abstract, as submitted, are recognized by the BVerfG, but cannot possibly be predicted in individual cases due to the complexity of the human organism.

With regard to the outstanding function of the protection of health under tort law for the dignified development of the Plaintiffs' lives and the inseparable connection of health risks and behavioural restrictions - which in themselves can also be described as health impairments - there is, in the overall view, a significant restriction of physical well-being to be expected that fulfils the element of the claim.

d) Right to safeguard greenhouse gas-related freedom

The scope of protection and the extent of the right to safeguard greenhouse gas-related freedom are to be determined by means of a balancing of the interests of the plaintiff and the defendant and are thus to be concretized in each individual case.

In the present case, the interest of the Defendant to continue its group orientation as currently practised, which is not in line with the Paris Agreement's global warming target, conflicts with the interest of the Plaintiffs in enjoying future freedom in accordance with the share of the residual greenhouse gas budget to which they are entitled.

In this respect, with regard to conceivable conflicts of interest, the facts of the present case can be abstracted as a constellation in which a global major emitter with an influence on the climate on the scale of states - i.e. a socially powerful legal subject - is confronted with individuals whose personal decisions cannot contribute to securing their future greenhouse gas-associated exercise of freedom, but who face existential threats. In such cases, the Plaintiffs' interest in being spared the consequences of excessive emissions regularly prevails, as the right to this specific share of future freedom would otherwise wither away.

In detail, it is to be taken into account on the side of the Defendant in its favour that it enjoys the protection of Article 12 subsection 1 GG and, potentially, Article 14 subsection 1 GG in the exercise of its activity. The order requested would be an interference with its freedom of occupation, which, however, as a regulation of the practice of its occupation, can already be justified on reasonable grounds in the public interest.[154] There can be no doubt about this in the present case in view of the significance of the contribution to climate change. However, it must also be taken into account that a protected trust in business activities that are incompatible with the Paris Agreement no longer exists. The reduction of CO_2 emissions is 'constitutionally inescapable.'[155]

This also applies to the concrete investments and plans of the Defendant within the current group structure. However, even this aspect is already comparatively minor when measured against its own actions since it basically agrees with the requested target of complete electrification. It has only been guided in its considerations so far not by scientific standards, but by supposedly self-interested considerations in order to delay the transition as long as possible. This is also evident from the fact that the Defendant plans to generate considerable revenues from the so-called *after-sales market* for combustion vehicles until the middle of the century (see above).

However, further acts of the Defendant work to its disadvantage. For example, it is generally established that one criterion for a company's obligation is the self-interested generation of revenue from its actions.[156] Furthermore, it must be taken into account as an aggravating factor that the Defendant has been aware at board level since the 1980s that climate change is a problem which it too must solve, but that it had already decided at that time to actively counteract it (see **Annex K 23**). This is in line with the fact that the Defendant, as a cooperation partner of the IEA, has possessed superior knowledge for a considerable period of time and yet decided against actively reshaping its group on the basis of this knowledge.

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[154] cf. Maunz/Dürig/Scholz, 94th delivery January 2021, GG Art. 12, para. 335.

[155] BVerfG, [fn., 2], para. 194, own translation. Official translation: 'necessary to alleviate the losses of freedom'.

[156] cf. BGH, NJW 1985, 620 (621); Spindler, in: BeckOGK BGB, status: 1 May 2021, section 823, para. 407; Förster, in: BeckOK BGB, status: 1 August 2021, section 823, para. 349.

With regard to the present group situation, the Defendant is thus substantially at fault, also in relation to the Plaintiffs, as concerns the causation of emissions.

The fact that the Defendant causes a particularly significant contribution to climate change must be included in the balancing as an element weighing against the Defendant. The difference between its planned and the required measures is also particularly significant, i.e. its controllable share is particularly high. Due to the lack of legal national and effective regulation, it must also be noted here that the Defendant thus has special societal power.

In favour of the Plaintiffs, from an abstract point of view, it must first be stated that their concern is subjectively protected by all fundamental rights as an intertemporal safeguarding of freedom from a unilateral shifting of the greenhouse gas reduction burden into the future, which must be observed in the present case due to the indirect horizontal effect. Within this aspect of freedom, too, a *far-reaching* part of their existence is affected in the future. In addition, the contribution of the emissions to this existential threat in its entirety is not only probable, but certain.

In addition, they can demonstrate that other specific legal interests, protected both by tort and by constitutional law, such as property and health, are threatened by the Defendant’s actions.

For Plaintiffs 1) and 2), the frustrated expenses as well as the loss in value of tangible objects are also to be considered, which are relevant even if they are not used for business purposes.

For Plaintiff 3), it must be taken into account that she will experience particularly severe consequences of climate change over a particularly long period of time and towards the middle and end of the century. The weight of this aspect is also particularly significant, since the Defendant will potentially set in motion significantly more severe, irreversible causal chains (including, inter alia, the crossing of tipping points, which will become more likely over a longer period of time, and a possible cascade-like collapse of the Earth system). This particularly high risk compels even greater care and corresponding weight to be given to their legal position.

On the basis of the concrete losses of freedom of the Plaintiffs 1) to 3) described under I. 2. c), a specific loss of freedom can also be demonstrated. The exercises of freedom described are laid out at the outset for the future through many years of practice, the life courses or consolidated lifestyle and offer sufficient guarantee that these will also be made use of in the future. This freedom potential is significantly reduced on a pro rata basis by the Defendant.

In the light of the foregoing, it must be held that the interest of the Plaintiffs far outweighs and precludes the Defendant's CO_2-intensive business activities as established.

3. Disturber

The Defendant is a disturber within the meaning of section 1004 subsection 1 BGB.

This applies to the person who either directly or indirectly caused the impairment or who can influence the impairing situation by an act of will.

According to the case-law of the BGH, the question as to whether a person can be held liable as a disturber ('Störer') cannot be clarified conceptually but can only be answered in an evaluative consideration on a case-by-case basis.[157] The decisive factor is whether, according to the circumstances of the individual case, there are factual reasons for imposing responsibility for the occurrence on the person who could be considered the disturber.

Such factual reasons exist in any case wherever a duty of care is violated.[158] Apart from that, liability depends on an evaluative consideration which takes into account recognised criteria such as, in particular, the inducement and beneficiary use of the source of danger.

According to this, the entire conduct complained of here is to be attributed to the Defendant as a disturber due to such a breach of its duty of care (see **[a]**). Moreover, the attributability results from the further general principles in relation to section 1004 BGB, in particular there are sufficient factual reasons for an attribution (see **[b]**).

a) Breach of a duty of care

It follows from the established case-law of the BGH that a breach of a duty of care is a sufficient condition to constitute the status of disturber.[159] Furthermore, there is a claim under section 1004 subsection 1 BGB for compliance with it, insofar as the duty of care extends.[160]

In the present case, the factual and legal situation has been condensed according to general tort principles into a duty of care demanding business conduct observing climate-related due diligence.

According to the established case-law of the BGH, which has become customary

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[157] cf. BGH, Judgement of 5 July 2019, V ZR 96/18, NZM 2019, 893 (2897), Regress of the building insurer; BGH, Judgement of 14 November 2014, V ZR 118/13, NJW 2014, 2027 (14), change of plan in the purchaser's wish, demand for reconstruction and 'sacrifice limit'.

[158] BGH, Judgement of 16 February 2001, V ZR 422/99, NJW-RR 2001, 1208 (1208), mildew; BGH, Judgement of 20 September 2001, V ZR 422/99, NJW-RR 2001, 1208 (1208), mildew.
2019, V ZR 218/18, NJW 2019, 607 (607), Natural Immissions, subsection 9; BGH, Judgement of 9 February 2018, V ZR 311/16, NJW 2018, 1542 (1542), disturber liability of the owner for consequences of a fire at the neiighbour's house, subsection 7. See also: Armbrüster, Eigentumsschutz durch den Beseitigungsanspruch nach § 1004 I 1 BGB und durch Deliktsrecht, NJW 2003, 3087 (3088).

[159] Jurisprudence as above.

[160] cf. MüKoBGB, BGB before section 823, para. 42.

law, the person who creates a danger situation - of whatever kind - is in principle obliged to take the necessary and reasonable precautions to prevent harm to others as far as possible. The legally indicated duty of care includes those measures which a prudent and reasonable person, exercising caution within reasonable limits, would consider necessary and sufficient to protect others from harm (due diligence or social expectation ('Verkehrserwartung')).[161] Sufficient measures are deemed to have been taken if, as a result, the degree of safety is achieved which the prevailing area-specific due diligence expectation considers to be necessary.[162]

The creation or maintenance of a source of danger required for the existence of a duty of care is given in the present case (see **[1]**).

In the section relevant here, the due diligence expectation is expressed in an expectation of budget-compatible economic activity **(2)**.

The obligation to comply with this duty of care is also reasonable for the Defendant according to the result of a comprehensive balancing of interests **(3)**.

(1) Source of danger

The prerequisite for the existence of a duty of care is the creation or maintenance of a tortiously relevant source of danger. This first requires the causal impairment of legal interests protected by tort law. This has already been set out above under II.1. and 2.

It is also necessary that the obliged person is capable of influencing the danger. This is explained under **(a).** Further, a general predictability of the danger is required and given in the present case **(b).** The situation of danger thus attributable is not called into question by the fact that state regulation is deficient or lacking **(c)**. The scope 3 emissions of the upstream and downstream supply chain are thus also materially attributable to the Defendant (**d).**

A source of danger, which can trigger a duty of care, is therefore present.

(a) Capability of influencing the danger

Only those who have the legal and factual capability of influencing the danger can be subject to a duty of care. Otherwise, an obligation to change behaviour would be pointless from the outset.[163]

The Defendant maintains a self-controllable source of danger for the legal interests described by promoting the described risk of climate change for the

[161] See only BGH NJW 2014, 2104 (2105) with further references.

[162] BGH, NJW 2008, 3775, para. 9; Sprau in Palandt, BGB, 80th ed. 2021, section 823, para. 45 et seq. with further references.

[163] Cf. Förster, in: BeckOK BGB, section 823, para. 305.

specific impairments through a substantial contribution by way of inducing greenhouse gas emissions.

There is a considerable delta between the CO_2 emissions emitted and the CO_2 emissions still permissible according to the current state of scientific knowledge. This leads to a considerable share of the climate change impacts, which manifest themselves concretely in the demonstrated threats to the Plaintiffs.

The central underlying capability of influence is the climate strategy overseen by the Defendant's board of management. This strategy prescribes to both the formally controlled and the informally controlled or significantly influenced parts of the group the conception, production, distribution and marketing of vehicles which contribute to a considerable delta in relation to a climate-friendly orientation of the group. The fundamental decision of the Defendant as the parent company regarding its current climate strategy applies to all relevant parts of the group.

The capability of influence is at the same time a limiting criterion, so that the conceivable objection that this duty could also lead to legal action against private car drivers is to be rejected. It has already been shown that individual behavioural decisions regularly do not have any climatic significance. Minimal contributions to causation are below a trivial threshold or can at best be classified as a legally permissible risk. The same applies to most national companies. A duty of care can therefore only affect (legal) persons whose influence on the climate is significant.

However, this is certainly the case for internationally operating large emitters such as the Defendant, whose induced and controllable emissions (Scope 1, 2 and 3) are in the range of those of states. At any rate, there is a relevant contribution to climate change and the depletion of the carbon budget in this case. This was also confirmed by the Higher Regional Court of Hamm in the proceedings against the operator of coal-fired power plants RWE.[164]

(b) **Predictability**

Furthermore, a duty of care is only conceivable if the effects of the conduct are *generally* predictable.

According to an order of the OLG Hamm from this year, an optimal observer knows since 1958 through the publications of the climate scientist Charles D. Keeling of global warming and related climate change impacts caused by CO_2 emissions triggered by the consumption of fossil fuels. An optimal observer is also aware that fossil fuels are used for the production of vehicles as well as for the operation of combustion vehicles.

[164] cf. OLG Hamm, fn [6].

We are submitting the aforementioned order - since it has not been published to date - in the relevant excerpts as

Annex K 27 (see there p. 6).

The inspection of the Defendant's archives also showed, as explained above, that knowledge of climate change had been recorded at board level at least since the 1980s and that strategic decisions had been taken in this respect (against adaptation in favour of, for example, less heavy cars or electric mobility).

Since claims under Section 1004 BGB are regularly directed into the future and fault (of the negative value of the success) is precisely irrelevant, the predictability of the adverse effect - i.e. the concrete climate change consequences - does not have to be included in the predictability.[165] A general probability is sufficient. This results from **Annex K 7**.

An optimal observer has knowledge of possible violations of legal interests such as those described, since this has also been common knowledge for decades, at the latest since the first IPCC Assessment Report of 1990.

The Defendant has also contributed to the IEA's climate scenarios, which model the very temperature target that is being violated here. It therefore has access to climate model data that the Plaintiffs and the general public do not have and can more accurately articulate its own reduction path. Predictability of climate change and its effects in relation to the Defendant with its special knowledge cannot be disputed.

(c) Independence of the duty of care of state regulation

Relief from the containment of a danger is not afforded by the fact that state regulation is deficient or non-existent.

Duties of care exist independently of state regulation. In accordance with the case-law of both the BVerfG and the BGH, it is in fact constitutionally imperative in areas that are relevant to fundamental rights, such as the present one, that civil courts establish a system of obligations.[166]

Accordingly, jurisprudence has developed the entire legal institution of duty of care itself.[167] Duties of care are necessary in order to establish and delimit spheres of legal responsibility, particularly in the context of complex and indirect interrelations. The institute has meanwhile become customary law.[168]

As already mentioned above, the BGH has taken up this case-law in the context of *disturber liability of internet intermediaries* to, despite the lack of statutory

[165] so also OLG Hamm, Decision of 1 July 2021, **Annex K 27.**

[166] s. BGH, BeckRS 2016, 1908, para. 60 f.

[167] For more details on the historical discussion about the legitimacy of duties of care, see Wagner, in: MüKo BGB, section 823, para. 434 et seq.

[168] Spindler, in: BeckOGK BGB, Status: 1 May 2021, section 823, para. 96 with further references.

provisions, establish a complex system of review and deletion obligations in this area.[169]

In the present case, too, this requires complex balancing processes concerning fundamental rights. However, this does not lead to the fact either that the civil court determination of a duty of care or other institutes of judicial law under general tort law would be unlawful. In particular, this cannot be derived from the so-called 'essential matters doctrine' ('Wesentlichkeitstheorie') of the BVerfG[170] This only applies to the state-citizen relationship, but not to the civil law relationship between citizens, as the BVerfG has also expressly ruled.[171]

With reference to the BVerfG decision just cited, the BGH also rejects an application of the 'essential matters doctrine' and instead refers to the constitutional mandate of the civil courts to establish the required balancing of rights and interests themselves by filling in general civil law provisions. The disturber liability judicially developed based on an analogy to section 1004 BGB therefore constitutes a sufficient legal basis for the assessment of liability.[172]

The potentially far-reaching consequences of climate-related duties of care do not argue against the possibility of their existence either. Of course, the effects on those affected must be taken into account as part of the necessary balancing of fundamental rights. However, if this balancing leads to the existence of a duty of care, its compliance is legally required. In this respect, active obligations to take action can also be pronounced on the basis of the claim for injunctive relief under section 1004 subsection 1 sentence 2 BGB and even a complete cessation of operations can be demanded until these duties are fulfilled.[173]

Duties of care therefore exist independently of regulation by the legislator. Private-law defence claims also exist independently of public-law regulation.[174] An exclusion of private rights or obligations that go beyond the requirements of public (administrative) law only apply where it is expressly stipulated.[175] Such an exclusion is found, for example, in section 14 sentence 1 BimSchG (Federal Immission Control Act), according to which the operation of an installation approved under immission control law cannot be prohibited on the basis of private rights. Even in this case, however, it remains possible to demand preventive measures that exclude an impairment (section 14 sentence 1 half-sentence 2 BImSchG). Thus, an affected party can demand from the operator of an installation approved under immission control law before the civil courts that the emissions of the installation be reduced to the level permissible under private law, e.g. by installing filters, even if this obligation has precisely not been pronounced by the authorities.[176]

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169 See for example Ohly, ZUM 2015, 308.

170 Established case-law, see for example BVerfGE 49, 89.

171 BVerfGE 84, 212 (226 f.).

172 BGH, BeckRS 2016, 1908, para. 60 f.

173 BGH, NJW 1977, 146.

174 Halfmeier, AcP 217 (2017), 727 (756).

175 Halfmeier, AcP 217 (2017), 727 (757).

176 Jarass, BImSchG, 13th ed. 2020, section 14, para. 17 f.

This illustrates that private law liability independent of public law remains even where certain private claims are excluded. In the absence of such a statutory (partial) exclusion, private law obligations thus remain fully applicable. They exist independently of any public law regulation and can go beyond its requirements. The scope of duty of care under tort law is to be determined independently.

(d) **Attributability of (Scope 3) emissions along the supply chain**

The Scope 3 emissions during the use phase and the scrapping of the vehicles are subject to the duty of care, as they are imputable to the Defendant as the subject of obligations.

This results from attributability criteria that are also recognised in the area of other duties of care. The imputation of the emissions associated with the intended use of the vehicles placed on the market follows in particular from the benefit derived from the source of danger, the proximity of the Defendant to it and its controllability. The latter is based on the fact that it is only the 'handing out' of the product that leads to the dangers.

This is precisely the approach of the producer's tort liability ('deliktische Produzentenhaftung'), which is also based on unwritten duties of care.[177] When designing his products, the producer is generally obliged to take the safety measures that are possible and reasonable according to the state of the art in science and technology in order to avoid dangers to legal interests protected by tort law.[178] This standard goes beyond the safety precautions customary in the industry.[179]

This also applies here. The Defendant has the power to reduce emissions or to cause additional emissions through the design of the vehicles. With its market share, it additionally has a particular market power and can significantly influence the market.

The principle also applies to climate-related dangers caused by CO_2 emissions resulting from the intended use of products distributed by a producer. The duty of care that the producer liability is based on also covers protection against environmental dangers that may affect protected legal interests.[180] The situation is also not comparable with the distribution of products whose intended use is dangerous only or at least primarily for the users, such as sweets and cigarettes. Here, users can avoid the generally known dangers by abstaining.[181] This is not

[177] Producer liability is a general liability under tort law according to section 823 subsection 1 BGB, whereas product liability is regulated by special law in the ProdHaftG

[178] BGH, NJW 2009, 2952 (para. 15 f.).

[179] BGH, ibid.

[180] BGH, NJW 1976, 46, there on industrial waste produced in the course of production. This must apply all the more to environmental hazards caused by the intended use of the products sold.

[181] For cigarettes OLG Hamm, NJW 2005, 295.

possible in the case of climate change, however; refraining from using a car with an internal combustion engine does not in any way protect against the climate-related dangers posed by the distribution of such cars.

Furthermore, Scope 3 emissions are imputable to the Defendant's upstream supply chain. For companies dominated by it due to its buying power - i.e. those whose main customer it is - this also results from the reasons just outlined regarding the controllability of the risks. In this respect, the Defendant is subject to a duty to organise and monitor the controllable risks.

However, with regard to these and other companies, attributability already results from a kind of 'state of the art' concerning the role of companies in society.

This is set out in the *United Nations Guiding Principles on Business and Human Rights* (UNGP), which place requirements on companies that every market participant considers necessary and which are internationally recognised by states and courts. The standard is to be regarded as a consensus regarding this state of corporate policy. This also applies to the Defendant, which, in its own words, ‘aligns’ its group policy with the UNGP.[182] These are also the basis of numerous corporate codes and frameworks such as the OECD Guidelines.

Accordingly, it is the self-chosen task of companies to respect human rights (in Germany thus at the same time: fundamental rights) and to

• prevent their business activities from causing or contributing to adverse human rights impacts and to remove such impacts when they occur;

• make their best-efforts to prevent or mitigate adverse human rights impacts directly associated with their activities, even if they are not the direct perpetrator of those impacts.[183]

Accordingly, it is irrelevant that the UNGPs are *soft law*; likewise, it is not relevant that VW actually commits to these targets in the sense of a voluntary commitment. Rather, it is precisely the purpose of *soft law* to express the common expectation of the community of interests. According to this, they can serve as a benchmark for legally required behaviour in the same way as other non-legal standards, such as technical regulations like DIN standards.

(2) Due diligence expectation

As already defined, the level of safety to be provided is that which a prudent and reasonable person, exercising reasonable caution, would consider necessary and sufficient to protect others from harm.

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[182] s. https://www.volkswagenag.com/de/sustainability/business-and-human-rights.html (5 October 2021).

[183] cf. UNGP Principle No. 13, https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf (5 October 2021).

In the present case, the relevant due diligence expectation is predefined by constitutional law (**a**). Specifically, it is directed towards compliance with a reduction path that is compatible with the goals of the Paris Agreement and the carbon budget that can be derived from it. This constitutionally determined due diligence expectation is concretized sector- and company-specifically with the IEA NZE AEC scenario (**b**). Furthermore, obligations of success and best-efforts obligations can be derived from the due diligence expectation, taking into account the respective possibilities for action and evaluations of reasonableness (**c**).

(a) Due diligence expectation constitutionally determined

The due diligence expectation is determined by the values of the fundamental rights and of Art. 20a GG in the sense of a 'constitutional expectation' towards the business activities of large issuers.

Through the indirect horizontal effect of fundamental rights, both the dangers that result from climate change itself for fundamental rights positions (in particular Article 14 (1) GG, Article 2 (2) GG) and the dangers to future freedom through overuse of the remaining budget in the present, which entails future interferences by the state, must be taken into account. This is supported by the climate protection requirement of Article 20a GG, from which the binding nature of a carbon budget follows for the civil courts.

It has already been explained that it is part of the mandate of the civil courts to help enforce the constitutionally required protection in private law relationships, especially if specific regulation is lacking. This also applies to the unregulated area of the alignment of companies in accordance with climate-related due diligence.

The permeating impact of fundamental rights on private law results from the fact that civil courts, as part of the state power, are bound by the constitution (Article 1 (3) GG) and must also enforce the Basic Law as an 'objective order of constitutional values' in legal relationships under private law. According to the decisions of the BVerfG, this can intensify for the Defendant to a further-reaching, state-like binding of fundamental rights,[184] if particularly powerful private parties pose the threat.[185] This is invoked in particular through the criteria 'inevitable consequences resulting from certain situations, the disparity between opposing parties, the importance attached to certain services in society, or the social position of power held by one of the parties.'[186]

Here, this requires an intensive impact of fundamental rights on climate-related duties of care of large emitters such as the Defendant. There is no doubt that the Plaintiffs are inescapably exposed to the emissions of large emitters and the

[184] cf. Kischel, in: BeckOK GG, status: 15 August 2021, Art. 3, para. 93a.

[185] cf. BVerfG, NJW 2018, 1667 (para. 32 et seq.).

[186] BVerfG, NJW 2018, 1667 (para. 33). Official translation available at: https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2018/04/rs20180411_1bvr308009en.html

resulting threats to their asserted legal interests. A change of their own consumption behaviour is not in the least suitable to counteract them. At the same time, the Defendant's conduct determines to a considerable (state-like) extent the future freedom of all persons.

All affected fundamental rights are to be included, regardless of whether they are directly protected under tort law or are asserted in a specific proceeding. This is because the duty of care exists (even if it is asserted individually) vis-à-vis the general public and is therefore to be determined abstractly.[187]

The indirect horizontal effect of fundamental rights is concretized and reinforced by Article 20a GG and its interpretation by the BVerfG. In its order, the BVerfG structurally linked the climate protection requirement of Article 20a GG with the carbon budget.[188] As objective constitutional law, the norm obliges the German state (mediated by the Paris Agreement and the adoption of its targets into the German legal order) to comply with the Paris Agreement's target.

Since there is an almost linear relationship between global warming and greenhouse gas emissions, the temperature target can be translated into a carbon budget. The available remaining budget, which is part of the climate protection requirement of Article 20a of GG, sets an *absolute limit* to the actions of the German state.

It is also the task of the civil courts to comply with this absolute limit. This follows directly from the wording of Article 20a subsection 1 GG, according to which the state's mandate to protect is also directed at 'judicial action'. In any case, the remarks on the indirect horizontal effect of fundamental rights apply equally to the area of the state objective provisions, even if they do not contain subjective rights of the individual.[189]

The state objective of Article 20a GG must therefore also be observed when deciding disputes under private law. It obliges the courts to take account of the effects of private action on the natural foundations of life in the context of interpretation and balancing processes - such as the determination of a duty of care - and to give effect to Article 20a GG even and especially where statutory provisions are lacking or constitutionally insufficient.[190] In other areas, Article 20a GG, like the principle of the social state (Article 20 (1) GG), is highly indeterminate in terms of content, so that in most cases no clear legal requirements can be derived from it.[191] However, the situation is different in climate protection law: By recognizing compliance with the carbon budget as the limit of lawful action, the BVerfG has concretized the content of Article 20a GG in a binding manner for all state bodies.

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[187] cf. BGH, BeckRS 2016, 1908, (headnote 1 and para. 44).

[188] BVerfG, para. 196 ff, esp. para. 215 ff; in this respect Calliess, ZUR 2021, 355 et seq. speaks of a 'structural coupling of climate science and law'.

[189] See Halfmeier, AcP 217 (2017), 727 (730).

[190] Halfmeier, AcP 217 (2017), 727 (730) with further references.

[191] See Halfmeier, AcP 217 (2017), 727 (732).

(b) Concretisation of the due diligence expectation in relation to the Defendant

It should be repeated that sufficient measures have been taken when the level of safety is reached that is considered necessary by the prevailing public opinion in the relevant area.[192] The justified (as just explained) safety expectations of the public are decisive.[193] Duties of care - as well as the climate protection requirement - require a dynamic orientation towards the state of the art and scientific knowledge.[194]

The state of the art in terms of tort obligations is reflected here by the NZE AEC scenario presented. It is the only current global integrated assessment model that takes into account the requirements of the automotive industry in particular. It is applicable independently of state decisions. The use of technical regulations as a 'good point of reference' corresponds to the traditional approach to determining duties of care.[195] Like DIN standards, for example, the indications of the NZE AEC specify the minimum standard for a person subject to the duty of care, although this does exclude that the requirements can be even higher.[196]

The choice of this scenario also takes account of the fact that the allocation of residual emission quantities requires decisions that include repercussions to countless other areas of life. It takes up technical expertise in a way that is manageable in practice. The scenario accomplishes this through balancing, behavioural assumptions, and complex calculations that are *peer reviewed* and generally accepted. It also follows from this that it would be arbitrary not to use a scenario as a general standard. For even if the allocation of residual CO_2 resources within the transport sector alone could be simplified without considering the effects on other industries and sectors, this would result in an unmanageable pluralism among competitors, with the result that the achievement of the target would depend on chance.

The perspective of the due diligence expectation follows from the objective viewpoint of those affected by the consequences of climate change. They see themselves exposed to existential consequences on which they have no relevant influence; whereas the Defendant, through its global market power and distributed products, does. In this respect, it can be expected as a minimum due diligence expectation that actors with a particular impact on the climate will prevent avoidable excess emissions with sufficient certainty. In this respect, sufficient certainty can only mean effectiveness of the measures, i.e. science-based measures.

This due diligence expectation is also reflected in the UNGPs already mentioned, which describe the corporate consensus with regard to obligations to take action

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[192] cf. BGH, NJW 2008, 3775 para. 9; Sprau in Palandt, BGB, 80th ed. 2021, section 823, para. 45 et seq. with further references.

[193] cf. BGH NJW 1985, 1076, 1077.

[194] cf. for example OLG Düsseldorf, NJW 1997, 2333; Wagner, in: MüKo-BGB, section 823, para. 440, as well as Callies, fn. [188].

[195] see the overview in BeckOK BGB/Förster, 59th Ed. 1 August 2021, BGB section 823, para. 345 and 346.

[196] cf. ibid.

in connection with human rights.[197] They emphasize the need for effectiveness of the measures in general.

This thus *justified* due diligence expectation also requires a global model here. This is already because the emissions have a global impact, and the Defendant operates globally. From the nature of the matter also arises a requirement of economy with the handling of residual resources since the budget is finite and coupled with constitutional maximum values. This also results from Article 20a GG, which also establishes an *international* climate protection requirement.[198] As shown, the latter also expects measures to be scientific.

In addition, with reference to the judgment of the District Court of The Hague (**Annex K 1**), it should be added that in the judgment there, only an emission reduction of 45 percent in 2030 compared to 2019 without a concrete calculation on the basis of a scenario was requested and accordingly ordered in the fulfilment of the duty of care. The court was only prompted to adopt a Shell-specific reduction *target* via the differentiated distribution of reduction quantities on the basis of considerations of fairness, for which, however, it saw no sufficient factual basis (para. 4.4.35). Here, this is not being requested in this sense, as already stated in the facts of the case under I. 4. Such an order would, moreover, likely have been significantly higher than that sought before the Dutch court because of the Shell Group's enormous historical emissions. The court therefore found that the global 45 per cent reduction target was not as such transferable to each actor and could only be applied as an overall target, as already from a technical point of view the contributions of major emitters have a different significance for the public.

Here, a scientific solution of the distribution of emission quantities is being requested, taking into account the technical and societal interconnections and importance of the actors in the energy sector. With regard to the global reduction target, however, the duty of care asserted here is consistent with the findings of the Dutch court, because it is based on the global reduction target, which is based on the findings of the IPCC. This is the requirement to be observed above all in the public.

(3) Balancing of interests and reasonableness

A comprehensive balancing of interests is decisive for the existence and scope of the duty of care. In this context, inter alia, the typified criteria mentioned under (a) and (b) are to be taken into account – in an aggravating sense because of their high intensity.[199] Furthermore, the general and abstract requirements of the affected sector of the public beyond the specific interests of the parties must be taken into account in the balancing process, for the purpose of the duty of care is to protect the general public.[200]

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[197] s. Fn. [183].

[198] see only BVerfG, [fn. 2], Ls. 2 c].

[199] Spindler, in: BeckOGK BGB, status: 1 May 2021, section 823, para. 392.

[200] cf. BGH, BeckRS 2016, 1908, (headnote 1 and para. 44).

Duties of care are also limited by the criterion of reasonableness for the person subject to a duty of care, which is also included in the balancing of interests.[201]

As far as the concrete interests and the reasonableness are concerned, reference can be made at this point to the balancing under II.2. d), which in this respect depicts this particular part of interests from the - also - general balancing.

However, with regard to economic reasonableness, it should be emphasised here that economic cost considerations are by no means the decisive criterion for the legally required safety measures.[202] They are to be determined in relation to the dangers to be averted. Such measures may be required that are in a reasonable and appropriate relationship to the threatened damage to a legal interest. The criterion serves above all to exclude excessive safety expectations demanding the defence against improbable or rare dangers.[203] As already mentioned, it has already been recognised by the jurisprudence of the Federal Court of Justice that this can require fundamental restructuring of business activities and even their complete discontinuation.[204] The outstanding importance of the threatened legal interests has been set out in detail and in itself already justifies what has been requested.

In addition, according to Volkswagen's own statements, a restructuring of the Defendant's group towards complete electrification is intended anyway; all that is requested in the present case is that it be achieved within a reasonable period of time. In terms of operational costs, this means that necessary investments will have to be made in any case. Further postponement additionally increases the switching costs and does not reflect the lock-in effect described above.

However and additionally, the Defendant's interest in continued excessive emissions of CO_2 is not a position worthy of protection, since the general public must pay for the costs associated with the avoidable emission of GHG. Thus, the Defendant, with its profit from a business model in breach of climate-related due diligence, burdens not only the Plaintiffs, but in fact the economy of the Federal Republic of Germany:

The determination of the costs and the assessment of the economic impacts of climate change are complex - not only because of the temporal element. However, since the so-called *Stern Report* of 2007[205], model-based estimates have been available to a considerable extent, e.g. outputting damages as a share of the gross domestic product or in absolute figures at a specific point of time.[206]

Consequential climate costs would have to be borne by the public sector insofar

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[201] See, for example, BGH, NJW 2007, 762 (para. 11); BGH, NJW-RR 2013, 1490.

[202] Förster, in: BeckOK BGB, status: 1 August 2021, section 823, para. 349.

[203] Förster, in: BeckOK BGB, status: 1 August 2021, section 823, para. 349.

[204] Cf. BGH, NJW 1977, 146.

[205] s. Stern, The Economics of Climate Change, Cambridge University Press, 2007.

[206] Cf. comprehensively for Germany: Klepper et.al, 25. costs of climate change and impacts on the economy, in: Brasseur/ Jacob /Schuck-Zöller (eds.) Klimawandel in Deutschland, Springer 2017.

as and as long as no solely private property is affected and are thus relevant to the question of the general public interest. The BVerfG acknowledges significant costs of climate change in principle, and the Federal Environment Agency quantifies them as follows on the basis of an updated methodology convention:

> *'We recommend applying a cost rate of €195/t CO_{2eq} for 2020 on the basis of a higher weighting of the welfare of current versus future generations, and a cost rate of €680/t CO_{2eq} on the basis of an equal weighting of the welfare of current and future generations. ''*[207]

Since the climate decision of the BVerfG of 24 March 2021, the value of 680 Euro/t alone is decisive in this context, since the burdens of climate change must be distributed over time in a way that safeguards fundamental rights.

In addition, however, the outstanding general public interest in reducing the Defendant's CO_2 emissions is an aggravating factor here. The Defendant has a significant share in a process that affects global society. It impacts maximum values that follow from constitutional and human rights. The difference alone between the Defendant's projected emissions and the required action based on the state of the science as requested here means over 2 Gt of CO_2 emissions, which is about one-third of the emissions that Germany as a whole is still entitled to in the global budget. Thus, if the Defendant were not obliged as requested, additional emissions on this scale would be caused and would ultimately (with emissions from other actors) lead to the Paris Agreement's temperature target being precisely unattainable.

With regard to the effects on forests and soils, the consequences of emitting GHG are disadvantageous in even two senses: forests and soils play an important role in achieving the goal of climate neutrality, which has constitutional status. This can only be achieved by securing 'negative' emissions, which the legislator has now also standardised in section 3a KSG. The functions of forests as well as their current state are described in **Annex 7** at p. 55 et seq. in detail. If the Defendant were allowed to continue its previous behaviour, the budget as a whole would be overused, and higher global temperatures would be accepted. This would further damage the forest in Germany and globally - and thus lead to a cascade-like further reduction of the chance of securing greenhouse gas neutrality (at some point), because the sink functions of the forest and soil would be weakened. In this light, besides the private interest of Plaintiff 1), there is thus also an outstanding general public interest in a behaviour observing climate-related due diligence that supports the Plaintiff's demand.

It also follows from this that the freedom of all persons enjoying subjective fundamental rights is at stake and thus part of the balancing. The legal interests are ubiquitously threatened and affected certainly, particularly drastically and inescapably: For either the actions of the Defendants result in even stronger

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[207] s. UBA 2020, Methodological Convention Cost Approaches, Chapter 1.1 Chapter 1.1. https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-12-21_methodenkonvention_3_1_kostensaetze.pdf (7 November 2021), own translation.

direct climate change impacts, or if the legislator complies with its constitutional obligation in economic difficulties, but in any case - and this cannot seriously be doubted - in extensive and numerous statutory definitions of the content and limits of private property in the form of forced decommissioning of private motor vehicles through the authorities.

The result of the balancing is therefore that the Defendant is subject to a duty of care with (at least) the content described.

(4) Obligations to take action and best-efforts obligations

As shown, civil courts are constitutionally bound by the carbon budget. This budget has an international dimension. It is irrelevant in the context of the endangerment of the rights protected by the duty of care where emissions are caused. Therefore, the duty of care concerns the global controllable emissions of a company, which are mostly indirect actions.

In this respect, civil courts have more extensive protection possibilities in comparison to administrative courts or authorities. The legislator only has the possibility to regulate the issue on a national level. Civil courts with their specific private law perspective can obligate companies more effectively in this context and also influence emissions outside the national inventories. Here, the independence and intrinsic value of private law in the context of climate change becomes particularly clear.

Against the background of this and the fact that rapid and effective climate protection is required, and a global reduction pathway is available for the transport sector - and in conjunction with UNGP Guideline No. 13, which reflects the due diligence expectation, the following expectation to take action clearly follows from the duty of care:

Companies must prevent greenhouse gas emissions as effectively as possible by adapting their actions to the state of scientific knowledge, taking into account their options and impact intensity. With regard to their own actions, these must not cause any climate-related dangers beyond the Paris Agreement’s target. In relation to those actions, which they can influence, but which are not in their sole control, the idea of effectiveness - the budget is a finite quantity - leads to a best-efforts obligation, i.e. that they must make a serious and effective effort.[208]

This is also expressed in the legal consequences reflected in the petitions. At the level of attributability, however, this means, above all with regard to the vertical group organization, that all available legal and factual possibilities must be exhausted in order to bring the group onto the IEA NZE AEC path: Only the Defendant as the parent company is in a position to do so.

[208] cf. fn. [183]

If this is not done, the emissions will still be attributed based on the breach of the best-efforts obligation. The design and development of vehicles must also be adapted to a climate-friendly path in horizontal terms, as this determines their intended use.

The best-efforts obligation also imposes requirements on vehicle designs, because, as has already been explained, the target can only be achieved if all realistic possibilities for efficiency gains are exhausted.

Designing vehicles with essentially the same practical features in the form of an SUV in an inefficient manner is therefore unallowable. The same applies to plug-in hybrids whose design is faulty in the same way, which in some cases exceed the emissions of combustion equivalents in road operation, but in any case, on average emit two to four times as much as stated. Because of the scarcity of electricity, SUVs or vehicles other than pure electric vehicles that require an unaccountable amount of electricity to operate are also in breach of the duty of care.

The obligations which are directly directed at the Defendant are thus determined by the duty of care. These are formulated in the petitions 1. and 2. The best-efforts obligations in relation to joint ventures are expressed by the claims for influence which are asserted in petition 3.

b) General principles under section 1004 BGB

Insofar as the Court should be of the opinion that the Defendant is not subject to a general duty of care as shown, a disturber liability still results from the general principles established in relation to section 1004 BGB.

Accordingly, the Defendant is also a disturber (‘Störer’) (disruptor) with regard to the entire behaviour complained of. Insofar as it acts itself, it is a direct disturber by conduct (‘Handlungstörer’) (see **[1]**) or a disturber by state of an object (‘Zustandsstörer’) **(2)**, insofar as it acts through other legal entities such as subsidiaries and holdings, as can be seen in the petitions, it is an indirect disturber by conduct and also a disturber by state of an object **(3)**. The Scope 3 emissions are imputable to different group levels, but attributable to the group in their entirety **(4)**. Due to the plurality of CO_2 emitters, there is a plurality of interferers, which is, however, harmless for the present substantiation of the claim **(5)**.

(1) Disturber by conduct

The Defendant in its capacity as direct developer, producer and distributor of passenger cars and light commercial vehicles - group brands Volkswagen and Volkswagen Commercial Vehicles - is a direct disturber by conduct with regard to the violations of legal interests presented. This is generally the case if the party against whom a claim is asserted causes the impairment itself in an adequately causal manner through its actions.[209]

[209] BGH, Judgement of 1 December 2006, V ZR 112/06, NJW 2006, 432 (9), Rückbauduldung.

The adequacy serves the problem of the equivalence of all causes which is to be solved legally and is to be affirmed if a fact is generally suitable to cause the specific success - and not only under particularly peculiar, improbable and after the usual course of events to be disregarded circumstances. In this context, the elements of risk increase and predictability are linked.

These criteria are fulfilled here with regard to the Defendant itself as (also) producing parent company. Through the above-mentioned activities, it causes GHG emissions that lead to the above-mentioned impairments of legal interests in an adequately causal manner.

All of the above actions, first and foremost the use of the developed and sold vehicles, cause and emit GHG. This is inextricably linked to the production (Scope 1 and 2) of vehicles. But also the development of specific CO_2 (intensive) vehicles and the distribution of these vehicles, which result in a use associated with CO_2-emissions (Scope 3), is neither far from any experience and probability of life nor based on particularly peculiar circumstances.

Rather, the construction of GHG-emitting vehicles is undertaken in the certain knowledge of its harmfulness to the climate; the purchase for use of motor vehicles is virtually deliberate.

Furthermore, CO_2 emissions lead adequately-causally to global warming and thus to the general climate impacts, as described in the statement of facts.

Climate impacts in general lead with sufficient probability to all the specific impairments of legal interest through climate impacts described in the statement of facts - and by the BVerfG and IPCC.

This entire chain of causality, which increased the risk of the following link with each intermediate step described with scientifically ascertainable (sufficient) probability and therefore constituted a concrete threat of the violation of legal interests from the initial act, was foreseeable.

With regard to the risk increase, regular limiting factors to be taken into account - but here to be expanded by the special knowledge of the Defendant due to the partnership with the IEA - are:

• all circumstances recognizable to an optimal observer at the time of the occurrence of the event

• the circumstances beyond that known to the person responsible for the condition[210]

[210] Established case-law since BGH, Judgement of 23 October 1951, I ZR 31/51, 1951.

According to the aforementioned decision of the Higher Regional Court of Hamm[211], an optimal observer has been aware of global warming and the associated consequences of climate change caused by CO_2 emissions triggered by the consumption of fossil fuels since 1958, through the publications of the climate scientist Charles D. Keeling. An optimal observer is aware that fossil fuels are used for the production of vehicles and must necessarily be used for the operation of combustion vehicles.

Since claims under section 1004 BGB are regularly directed into the future and it is do precisely not require fault, the predictability of the – even not yet fully developed - success of this chain of causality does not have to be included,

> cf. in this connection **Annex K 27**, p. 5 f.

It is enough that these consequences are generally sufficiently probable to satisfy the risk increase doctrine. An optimal observer has long been aware of this.

It is not detrimental to this assessment that there are *some* causal intermediate steps between the impairment of legal interests and the acts of development, production and sales - such as global warming driven by CO_2 emissions. On the one hand, such intermediate steps are not uncommon in disputes under section 1004 BGB, for even emissions to be averted, such as in typical neighbour disputes, lead to the disturbance of health damage via some linking intermediate steps, whose mechanisms are partly not exactly scientifically traceable (such as, for example, the influence of noise on the psyche).

Due to the equivalence of the causal contributions, the number of intermediate steps cannot be decisive. Rather, a value-based assessment within the framework of adequacy is relevant. The direct act of emitting CO_2, the causal course of which towards the threatened damage to the substance of the property or the other asserted legal interests is compelling and describable, is therefore a direct disturbance by conduct.

According to the jurisprudence of the BGH, something else can only apply,

> ‘if the second cause has changed the course of events in such a way that the damage, within a value-based assessment, is only 'externally' and, as it were, 'accidentally' related to the dangerous situation created by the first cause. If, on the other hand, the particular dangers that were created by the first cause continue to have an effect on the damage, the attributability connection under liability-law cannot be denied.’[212]

This is precisely the case here. Accordingly, insofar as emitting CO_2 is the act of disturbance, this is a direct act of disturbance with regard to the asserted

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[211] s. **Annex K 27**, p. 6.

[212] BGH, Decision of 25 January 2018, VII ZR 74/15, NJW 2018, 944 (945), Causality between work defect and water damage in case of prolonged absence, own translation.

impairments of legal interests, because the set cause continues to have an effect that can be scientifically and forensically proven.

However, insofar as this is evaluated differently by the Court, the following remarks on the indirect disturber by conduct or the disturber by state of an object (master of the condition of natural effects) apply accordingly, because even according to this the Defendant remains an adequate-causal and wilful participant in the disturbance.[213]

(2) Disturber by state of an object

A disturber by conduct is a person who triggers adverse effects on nature or property through his or her conduct.[214] Particularly in the case of immissions, the concept of natural effects is conceivably broadly extendable: While, for example, noise immissions can easily be subsumed here, these are not only considered to be a natural effect, but also as a direct disturbance (see under [a]). A precise classification can be left open here, because even an interpretation of climate change impacts as natural effects would not exempt the Defendant from its quality as a disturber (also specifically as a disturber by state of an object):

The adequate causality of the CO_2 chain of causality has just been described. In addition, the further characteristics of the disturber by state of an object are also fulfilled, as set out below. Under the premise that the climate change impacts were not directly caused by the Defendant's own conduct, the necessary decisive will to maintain this impairing condition is also present. Nor is there any lack of removal capability (of its own global climate change impact contribution of >1 percent annually).[215]

(i) Removal capability

The Defendant has the power to redesign its business strategy in such a way that no more vehicles with combustion engines are sold after the end of 2029, at least with regard to its own production under the VW brand and the fully consolidated subsidiaries. Furthermore, it also has the power of action to structure the business purpose in such a way that the reduction quota requested is achieved. As far as influenced joint ventures are concerned, the standard of action under (c) applies.

(ii) Will to maintain

This will is continuously manifested by the Defendant's continued omission to align the group with the requirements of the relevant scenario or the Paris Agreement’s global warming target, as set out in the facts. Furthermore, external

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213 The traditional classification is increasingly criticised in the literature, also due to the problem of terminology, cf. MüKoBGB/Raff, 8th ed. 2020, BGB section 1004, para. 157.

214 Palandt, section 1004, para. 18.

215 BGH, [Fn., 218], 432 (12), Rückbauduldung; BGH, Decision of 24 January 2003, V ZR 175/02, NJW-RR 2003, 953 (955), claim for removal of district heating lines that have become inoperable.

(non-financial) accounting must also be taken into account, which cannot certify Paris-compliant business management. Moreover, it is the Defendant's declared will not to commit itself to a fixed target for the phase-out of internal combustion engines: The phase-out should take place when customers demand it. This illustrates the will to maintain.

In contrast to what is being pursued with the petitions, namely to operate in line with the relevant carbon budget, is the goal of selling as many vehicles as possible, especially fuel-intensive vehicles, where the top priority in external accounting is the cash flow-oriented transition - and not, for example, an R&D-oriented or climate damage capping transition - or, for example, the further goal of selling the most SUVs worldwide, which have a particularly poor efficiency and large carbon footprint.

The development of sales figures in recent years, in conjunction with the other announced sales targets, also show that it is precisely the Defendant's will to maintain this state of excessive CO_2 emissions.

(iii) Attributability

The attributability of the natural events to the Defendant can result from the violation of its duty of care or from other factual reasons. Both conditions are present. These result accordingly from the following considerations: if the influence of the fully consolidated subsidiaries on the natural events or their actions can be attributed to the Defendant as indirect disturber by state of an object, then this applies a fortiori to its own actions, which in this respect should in any case be factually indistinguishable in light of the group-wide management competence for CO_2 issues. In order to avoid repetitions, we refer to the following explanations, in particular under (c) below.

(3) Indirect disturber by conduct

Insofar as the Defendant does not act itself, but through fully consolidated subsidiaries (see **[a]**) or through influence on joint ventures (see **[b]**), respectively both groups of companies in turn through the state of an object,[216] it is an indirect disturber by conduct, since it causes the interference by another in an adequate manner through its exercise of will and is in a position to prevent the disturbance that occurs.[217]

This assessment is also shared by the Higher Regional Court of Hamm in the insofar comparable case in the reference decision of 1 July 2021,

s. **Annex K 27**, p. 6 f.

[216] cf. Palandt 2018, section 1004, para. 18.

[217] BGH, [Fn., 170], 2027 (2028), change of plan in purchaser's wish, request for deconstruction and ‘Sacrifice Boundary.’

(a) Fully consolidated subsidiaries

The other brands besides the Volkswagen brand (or VW Commercial Vehicles), which are generally attributed to the Defendant, are fully consolidated subsidiaries. Above all, for example, the developing and producing companies Audi AG or Dr. ing. hc. F. Porsche AG are named. They are equally adequately-causally responsible for the CO_2 emissions and the resulting disturbances of legal interests protected under tort law.

Here, the capability to remove the source of interference arises from the Defendant's dominant position as the parent company.

Like the element of controllability, this also implies the disturbance caused by the Defendant's own will exercise (by the Defendant's group board of management), since the Defendant states in its external accounting that it is exhausting the legal means to implement the CO_2 policy throughout the group (see [I.3.b]).[218]

Thus, this imputability of the subsidiary is not precluded either by the principle of separation under corporate law or by the objection that there is, moreover, no legal obligation to extend influence to subsidiaries to the greatest possible extent (section 17 AktG). This is because Volkswagen is already exercising the management as the relevant legal context in this context.

The actions of the subsidiaries are thus directly imputable to the parent company unless the parent company itself is already to be regarded as the disturber by virtue of the de facto influence.[219]

In concrete terms, at the level of the subsidiaries, the actions of the legal representatives are in turn to be imputed to the respective companies, which in turn concretely cause the actions of interest here (section 31 BGB analogously).[220] These structures are, by their very nature, internal. No further inquiries are conceivable that would reasonably contribute to a further exposition of the facts. Irrespective of this, the Plaintiffs fulfil the procedural burden of producing evidence (‘Darlegungslast’) by demonstrating the de facto control of the entire group by the board of management and its chairman. The Defendant may make this indisputable - if one takes it at its word in its public announcements - or else

present

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[218] cf. also Volkswagen AG Sustainability Report 2020 (non-financial reporting within the meaning of sections 289b (3) and 315b (3) of the HGB), p. 10, 42, **48**, 92; cf. also ECJ, Judgement of 10 September 2009 - C-97/08 P, No. 58 - Akzo Nobel on liability by virtue of actual takeover

[219] cf. on group-wide strategy decisions BGH, Decisoin of 25 May 2020, VI ZR 252/19, NJW 2020, 1962, ‘Schadensersatz wegen arglistiger Täuschung im ‘Dieselskandal’’ para. 29 et seq. as well as BGH, Judgement of 8 March 2021, VI ZR 505/19, NJW 2021, 1669, ‚Haftung juristischer Personen und sekundäre Darlegungslast in Diesel-Fällen‘.

[220] BGH, Judgement of 10 May 1957, I ZR 234/55, GRUR 1957, 494 (498), Spätheimkehrer.

the internal facts in accordance with its secondary burden of producing evidence.

If there is a lack of legally appointed representatives with organ or organ-like power, and if this is not compensated for by instructions from the board of management, the attribution results from this organisational deficiency.[221] For it is generally recognised that a circumvention of conditions of attributability cannot take effect solely on the basis of the formal organisational structure.[222] Accordingly, a liability segmentation by group formation analogous to this is also not possible.

(b) Joint ventures

In line with the Defendant's extrajudicial statements, the company also has an effect on its holdings. This, too, must be expanded to include sufficient CO_2 targets.[223]

This is possible through legal influence - rights of co-determination under corporate law, depending on the type of company in question - as well as through factual influence, the latter e.g. through persuasion or the possible means of exerting pressure by withdrawing the capital provided.

The extent to which this is already being done is a fact within the Defendant’s sphere, who should also

present

this, insofar as the objection of incapability is raised.

(4) Other factual reasons

The question of whether someone can be held liable as a disturber cannot – as already mentioned – be clarified conceptually but can only be answered by a value-based assessment on a case-by-case basis.[224] According to the BGH, the decisive factor is whether there are factual reasons for assigning responsibility for an event on someone and therefore classifying him as a disturber.[225]

This would not be the case here if this was the result of a natural event beyond anyone's control.

In the present case, however, it is a matter of control. The risk of being affected in the legal interests as described above, is not a general risk but a genuinely man-made risk. The Defendant has a measurable and significant share in it,

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[221] cf. ibid.

[222] cf. BGH GRUR 1957, 494, 498.

[223] cf. [fn. 218].

[224] cf. BGH, [Fn., 170], 893 (2897), regress of the building insurer; BGH, [Fn., 170], 2027 (14), change of plan in the purchaser's wish, request for reconstruction and ‘sacrifice limit’.

[225] BGH, [footnote 209], 432 (131), Rückbauduldung.

which demonstrably leads in any case to an amplification of the respective violations of legal interests. It is not a risk which, like a single lightning strike for example, can just as well materialize on everyone without human influence on the climate, whereby the effects would have to be borne by the respective affected person itself.[226]

The potential, exercised and significant impact on the global climate, that at the same time cannot be conclusively regulated by the state, is a significant risk increase. It is within the Defendant's power to remove the disturbing contribution of the entire VW Group. This in itself is a sufficient factual reason to impose tortious liability on the Defendant within the meaning of section 1004 BGB.[227]

Furthermore, it must be taken into account that the Defendant draws its profit precisely from the CO_2-relevant activities. In this respect, the active opposition to climate protection through its strategy in the past must also be taken into account, because the CO_2 molecules emitted at that time also reduce the current budget.

(5) Scope 3 attributability

The imputation of emissions caused by the intended use of products in the downstream supply chain is not specifically problematic here. These are primarily emissions caused by vehicle drivers, as already shown above.

Each party is equally responsible for the removal of the danger and cannot argue that recourse to a third party would be more effective or more appropriate; rather, each obligated party must take the necessary and reasonable measures on its own initiative.[228] The interest of the general public in averting danger as quickly as possible has priority over a ‘fair’ distribution of obligations within the internal relationship of those responsible and the existence of several potential responsible parties must not be to the detriment of the injured party.[229] However, the limits of the respective spheres of influence and competence must be observed.[230] Here, one must recognise the Defendant’s socially and competitively powerful position as a position including a particular responsibility, especially with regard to the fact that precisely Scope 3 use phase emissions are the basis for its revenue collection. This idea has also become applicable law in the recently enacted Supply Chain Act (Lieferkettengesetz) with the codified obligations to break business ties, for cases in which the business ties lead to human rights violations.

Against this background, climate-related obligations also extend to emissions in the upstream supply chain. The question is therefore not *whether* such obligations can exist (in addition to any obligations of suppliers), but *what their*

[226] BGH, Decision of 11 June 1999, V ZR 377-98, NJW 1999, 2896 (2897), Waiver of recourse by fire insurers.

[227] See also OLG Hamm regarding the controlling influence, **Annex K 27** (Order of 1 July 2021)

[228] Spindler, fn. [199]; Förster, in: BeckOK BGB, section 823, para. 307.

[229] Förster, ibid. para. 308.

[230] Förster, ibid. para. 309; Cf. generally Spindler, ibid.

content is.

However, this is described unobjectionably and even without cross-industry overlaps for the passenger car and light commercial vehicle sectors by the NZE AEC scenario. The multiple attribution possibility of one gram of CO_2 is 'factored out' in this scenario.

Furthermore, the Defendant is also responsible here for the GHG emissions caused by use because the producer is also obliged in principle to warn the users of the product of those dangers impending in the case of intended use or predictable misuse and which are not part of the general knowledge of dangers of the group of users.[231] Furthermore, users must be enabled to counteract the dangers as far as possible. No instructions of this kind were given.

The Defendant is the only organization that has sufficient influence on the Scope 3 emissions of its vehicles worldwide. This is the case with many globally operating, emission-intensive companies. That the companies are under obligation is also shown by AR6 WG III: Individual behavioural changes are insignificant.

4. Plurality of disturbers

The Defendant with its contribution to global warming is undoubtedly one disturber among several. However, the claim exists against any disturber regardless of whether it is a direct or indirect disturber by conduct or disturber by state of an object.[232]

First of all, in that regard, the Plaintiffs reject the obvious argument that other passenger car producers would immediately fill a possible gap in the market in the internal combustion segment by the withdrawal of the Defendant's car models or - in essence, the same argument - that, compared with the Defendant's output, they emit even more CO_2 emissions. This does not alter the Defendant's own obligation according to its market share.

This is because the climate obligation according to the asserted scenario, like the budget to which Germany as a state is entitled, is based on the assumption that other actors also only use the budget to which they are entitled. If the assumption of overuse by others is taken as a basis, the efforts of the Defendant would have to be even more intensive.[233] Article 20a GG also imposes obligations here in the horizontal relationship between private parties irrespective of the actual conduct, because an assumption of climate efforts is inherent in Article 20a GG. In this regard, the BVerfG has stated:

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231 BGH NJW 2009, 2952, 2952.

232 BGH, Decision of 27 May 1986, VI ZR 169/85, NJW 1986, 2503 (2504), injunctive relief for publication of defamatory statements by third parties; Palandt, 2018, section 1004, para. 26.

233 cf. BVerfG, [footnote 2], para. 203 on the idea of a reduced transitional obligation due to the assumption of the lawful actions of others, furthermore para. 201.

> *'Moreover, Art. 20a GG also makes it obligatory to take national climate action even in cases where it proves impossible for international cooperation to be legally formalised in an agreement. '*[234]

The climate-related fundamental rights are just as vulnerable to the actions of the Defendants as they are to the actions of the Federal Republic. Art. 20a GG must also be taken into account here in the horizontal relationship between private parties. For them, just as for the Federal Republic, there is an own reduction path.

5. Requirements for the degree of risk to legal interests lowered due to constitutional interpretation of the concept of disturber

Remaining uncertainties are harmless for the adequate-causal risk connection along the entire disturbance chain. This is not required more strictly than has been substantiated in the present case.

The BVerfG stated:

> *'Even if it is impossible – given the multiple uncertainties regarding how large the remaining CO2 budget will actually be in future (see para. 220 ff. below) – to definitively ascertain whether or not losses of freedom considered unreasonable from today's perspective are bound to occur, measures may nevertheless be required today that at least minimise the risk. '*[235]

Further:

> *'Rather, if there is scientific uncertainty regarding causal relationships of environmental relevance, Art. 20a GG places constraints on the legislator's decisions – especially those with irreversible consequences for the environment – and imposes a special duty of care on the legislator, including a responsibility for future generations. […] This special duty of care finds expression in the fact that the legislator must even take account of mere indications pointing to the possibility of serious or irreversible impairments, as long as these indications are sufficiently reliable'.*[236]

The evaluations made in these statements also apply here through the objective dimension of Article 20a GG. In the judicial evaluation and interpretation, the risk of serious and irreversible damage must also be taken into account, as the legislator must do when enacting ordinary law.

In view of the quantity of emissions to be emitted by the Defendant, the situation of danger is comparable to that of a state, and thus comparable to the emissions considered in the decision of the BVerfG. Not only can the competent court take this into account, but because of this grave danger it is virtually required by the

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[234] BVerfG, ibid. Rn. 201.

[235] BVerfG, ibid. para. 194.

[236] BVerfG, ibid. para. 229.

constitution to make a decision in the light of Article 20a GG and to protect the Plaintiff from the excessive emissions of the Defendant. This role of the courts has also already been determined by the BVerfG:

> *'In the case of insufficient statutory provisions, the courts must derive the material law by means of the recognised methods of the finding of justice from the general legal bases which are decisive for the legal relationship in question. This also applies where a statutory regulation would be necessary, for example because of a constitutional duty to protect (see BVerfGE 81, 242 (256) = NJW 1990, 1469 (1470) = NZA 1990, 389). Only in this way can the courts fulfil the duty imposed on them by the Basic Law to decide each legal dispute brought before them in an appropriate manner.'*[237]

The essential-matters-doctrine does not apply in private-law relationships.[238] It is precisely for this reason that it is the mandate of the courts to ensure protection of fundamental rights by way of indirect horizontal effect. It is the very task of the specialised courts to ensure an initial constitutional review.[239]

Consequently, excessive requirements for the presentation of the risk, i.e. the strict presentation of an imminent, concrete danger for the respective legal interests in a uniform form cannot be necessary. The presented, scientifically substantiated, danger to be expected is sufficient because of the requirement of consideration of climate protection, which is also relevant here.[240] This also follows from the fact that it is not only the violation of the legal interests that is the connecting factor for an action to be prohibited by tort law, but already the immediate endangerment of the legal interest that triggers liability under section 823 subsection 1 BGB. Section 1004 subsection 1 BGB already structurally protects against endangerment-related unlawfulness and is decoupled from concrete violations.[241]

6. No exclusion, section 1004 subsection 2 BGB

The claim is not excluded.

The Defendant's conduct is unlawful within the meaning of section 1004 BGB. This is already indicated by the impairment of the legal interests and corroborated by the intensity of the violation of the duty of care.

Legalising authorisations or obligations to tolerate, with regard to the impairments are not apparent and would, moreover, be irrelevant with regard to the challenged (imminent) state since it is not the unlawfulness of the action but

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[237] BVerfG NZA 1991, 809, 810. Own translation, original in German.

[238] cf. BVerfG ibid.

[239] BVerfG, Decision of 17 January 2006, 1 BvR 541/02 et al., NVwZ 2006, 922 (923), exhaustion of legal remedies by declaratory action against statutory instrument.

[240] The lowered degree of prognosis of the occurrence of damage follows independently of this also because of the danger of apocalyptic conditions, which cannot be ruled out, according to the 'black holes' decision of the BVerfG, cf. the BVerfG, decision of 18 February 2010 - 2 BvR 2502/08, NVwZ 2010, 702, 704

[241] cf. MüKoBGB/Wagner, 8th ed. 2020, BGB section 823, para. 7.

the unlawfulness of the impairment that is relevant.[242]

Overall, it is also not persuasive to assume that the type approval of passenger cars and light commercial vehicles on the basis of, inter alia, the specified EU fleet limits would lead to a fundamental exclusion of liability. For then these would have to be interpreted as a comprehensive concession to the impairment of legal interests. This cannot be the case either, because the special statutory provisions themselves do not yet meet the standard for safeguarding the remaining greenhouse gas budget established by the BVerfG. On the other hand, however, duties of care under civil law cannot be equated with product approval regulations under public law. This has already been established by the Higher Regional Court of Hamm:

> ‘It is consistent with the statutory scheme that even one who acts lawfully must be liable for property damage he causes.‘[243]

It is structurally alien to the German legal system that material obligations to take action are completely overridden by formal regulation. In this respect, it is not guaranteed that even with extensive state regulation, CO_2-intensive behaviour would, possibly undetected, not continue in breach of such regulation.

This has already been proven by the Defendant, which succeeded in circumventing binding emission limits for diesel vehicles through predominant behaviour. The facts are known to the Court. This risk remains even in the case of state regulatory intervention with regard to the CO_2 limits.

This danger is unacceptable in view of the importance of the threat, because in this respect there is no second chance for reduction. This requires genuine material obligations.

Ultimately, national regulations cannot adequately capture the global scope of the Defendant's activities either. A regulation of social life in order to still control climate change exclusively by the state would suffer from a global law-making and enforcement problem.

Not only are there serious deficiencies in the state structure, such as widespread corruption, that prevent effective regulation in numerous countries of the world, i.e. Germany's strong rule of law cannot easily be generalized. Non-state actors such as the Defendant, which are globally active, are therefore of particular importance.

But also, the law enforcement problem itself arises from the multinational nature of the group's activities. There is no effective global regulatory and enforcement body. Individual national provisions would only cover the marginal contribution

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[242] Established case-law, cf. e.g. BGH, Judgement of 4 December 1970, ref. no. V ZR 79/68.

[243] Wagner completely fails to recognise this in ‘Klimahaftung vor Gericht’ (Case Study 2021 p. 79f.) when he argues that socially adequate behaviour can be seen above all in specialist law. Own translation, original in German.

of a group's headquarters. Effectively ensuring the compliance of the Defendant as an entire group with its targets is only possible under civil law before the competent Court (e.g. in Japan in the case of Toyota).

Thus, in addition to the direct influence on the climate, the problem already identified with regard to an effective jurisdiction (**Annexes K 23, 24**) applies, namely that global groups such as Volkswagen have an influence on society that is equal to - or in some cases greater than - that of states.

Moreover, the petitions filed here do not contradict previous technical law. If the petitions are granted, the Defendant will be in a better position to comply with, for example, EU requirements on fleet efficiency. Nor is there any conflict with the German climate change law (KSG). Annex 2 of the KSG contains a sector-specific reduction path for Germany, also in the transport sector, which the Defendant would also have to comply with. Insofar as emissions occur in Germany, the civil court would therefore ultimately support the overall achievement of the interim targets set by ordinary law and the goal of greenhouse gas neutrality.

7. Legal consequences

As regards the legal consequences, suitable measures are to be taken as a matter of principle, irrespective of whether the claim is for injunctive relief or removal. There must be secured knowledge that the measures chosen are effective.[244] The measures must therefore be based on the state of science.[245] The state of scientific knowledge is - as already shown above - currently represented with regard to the automotive industry by the IEA standard NZE AEC.

The claim moreover covers s*pecific* measures as requested, as these are the only measures apart from the cessation of business operations[246] that are suitable to achieve the respective minimum targets required by the duty of care.[247]

Additionally, even from the outset, the recognised legal consequence of the violation of a duty of care is that the duty of care must be complied with.[248] The actio quasi negatoria is transformed in the event of a sufficiently concrete danger and sufficiently precise requirements from the duty of care into a claim for adaptation to the duty of care.

Regardless of its qualification as a duty of care, however, this also results from

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[244] cf. BGH NJW 2004, 1035, 1037, NJW 2005, 1366, 1367.

[245] cf. *Callies*, in: ZUR 2021, 355 f.

[246] cf. BGH, Judgement of 22 October 1976 - V ZR 36/75 as well as BGH NJW 2004, 1035, 1036. This would be a threatening consequence if the Defendant did not implement the obligations in time in the current operation and is a 'plus' to the applications made which is not required here.

[247] st. Since BGH NJW 1959, 936, 938: In principle, only suitable measures are owed; if, in exceptional cases, only one (minimum) measure is conceivable, specific conduct can also be demanded with regard to the measures.

[248] s. MüKoBGB, BGB before section 823, para. 42

section 1004 BGB, under which effective measures to remove the source of interference are covered by the claim. The IEA NZE AEC scenario is the only valid scenario applicable to the Defendant. Also in light of the due diligence expectation, the special knowledge of the Defendant as well as the complete orientation towards electrification, it is appropriate to use this scenario.

Moreover, it is possible from a definitional point of view to regard the legal consequences applied for either as a claim for injunctive relief or as a claim for removal. In the case of complex contexts of disturbances, a strict distinction is often conceptually not possible, e.g. the active removal of sources of risk may also be required to effectively comply with an injunctive relief. However, if there is a risk of commission, this is not important in the final analysis.[249] In all cases, the requirements for the legal consequences are met:

a) Injunctive relief dimension

In particular, petition 1) can be substantively qualified as a claim for injunctive relief. However, what is owed in this respect is also not just a simple omission, but behaviour that prevents the occurrence of the imminent impairment.[250]

(1) Concretisation of legal consequences: Group-wide sales stop

The impairment from placing internal combustion engine vehicles on the market after 2029 can be derived here from the high risk that these vehicles will also be used. This should be an obvious fact and therefore does not require any further proof. It would be completely absurd to advertise and distribute internal combustion engine vehicles such as those of the Defendant in the expectation that they would be voluntarily decommissioned in their entirety by the relevant date.

Insofar as the Defendant will refer to its ‘waiting’ for an official decommissioning, such a measure would have to occur on this point in time and, moreover, would not be practical, as this would probably be equal to the cessation of sales, since it seems questionable who would buy a vehicle that he would have to decommission at the end of 2029.

In order to be able to comply with the legal and scientifically derived requirements - no internal combustion vehicles in the global stock in 2050 or, due to Section 3 subsection 2 KSG, already in 2045 in Germany - it is therefore necessary to take timely precautions to stop sales at the time specified in the petition. This requires an organisational lead time, because the legally independent sellers will otherwise continue to sell a (possibly stockpiled) inventory. However, this can be met with the time available in accordance with the claim.

[249] MüKoBGB/Raff, 8th ed. 2020, BGB section 1004, para. 303

[250] cf. Palandt, 2018, section 1004, para. 33.

(2) Imminent impairment

An objective serious concern of (a first) infringement based on facts is required for a claim for preventive injunctive relief.[251] The imminent act of infringement must be so tangible from a factual point of view that a reliable assessment is possible from a legal point of view. There must be circumstances which indicate that the person concerned has already taken the decision to infringe and that the occurrence of the infringement depends exclusively on this person.[252]

In contrast, a danger of repetition is necessary if the infringement has already occurred once. In this respect, there is a regular factual presumption of repetition after a first infringement.[253]

It is of note here that, under tort law, it is not only the accomplished violation of a legal interest that is prohibited, but already the direct endangerment of an absolute right or legal interest is sufficient. In the case of indirect actions, this applies if there is also a breach of a duty of care.[254] In the case of section 1004 subsection 1 BGB, in this respect, the relevant perspective is not retrograde in relation to past events. Instead, the infringing act complained of is to be hypothetically assumed for the assessment.[255]

It has already been demonstrated that the recognition of the advance effect of future state interferences as well as the duty of intertemporal protection of fundamental rights must also be considered in the interpretation of indeterminate legal concepts in tort law. This also applies here, with the consequence that the requirement of temporal and tangible proximity cannot be consistently upheld in relation to the process of climate change as a long term development which, however, gives rise to concerns of drastic impairments as a result. The requirement of ‘tangibility’ and an objective and concrete danger must be applied with regard to the physical chain of effects.

Because of the drastic consequences that the BVerfG has determined and established as the absolute action limit binding the state, the probability requirement must also rather be lowered. This is required not only by the indirect horizontal effect of fundamental rights, but also follows from section 31 subsection 1 of the BVerfGG, according to which the decisions of the BVerfG bind all courts, which, beyond section 31 subsection 2 of the BVerfG, includes the essential reasons and evaluations of the decision.

Accordingly, the risk of commission is fulfilled in the present case.

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[251] cf. BGH, Judgement of 19 June 1951 - I ZR 77/50, BeckRS 1951, 101873; BGH, Judgement of 17 September 2004 - V ZR 230/03

[252] s. BGH, Judgement of 25 February 1992 - X ZR 41/90, NJW 1992, 2292 (2293), ‚Unzulässiger Vertrieb von Vermehrungsgut‘.

[253] BGH, Decision of 30 October 1998, V ZR 64-98, NJW 1998, 356 (358), injunctive relief against odour nuisance caused by pig fattening.

[254] s. MüKoBGB/Wagner, 8th ed. 2020, BGB section 823, para. 7.

[255] s. MüKoBGB/Wagner, 8th ed. 2020, BGB section 823, para. 16.

(a) Physical chain of effects, starting from emitting CO_2

Under I. 2. a), the general impacts of climate change were described, which, according to the IPCC reports, have a probability of occurrence of 66 percent to practically 100 percent. According to the BVerfG, these threats must prompt the legislature to implement prevention and adaption measures. This must thus also be granted to private individuals who want to safeguard their freedom and health and keep businesses viable.

The concrete consequences for the land plots of Plaintiff 1) were specified in annex K 7. The right of use is already directly affected, because accordingly, corresponding operational measures are necessary and measures to secure natural succession will be required.

Since only a concrete endangerment of the legal interests is required for the violation of legal interests in the tortious sense, this would already be sufficient for an impairment. In conjunction with the necessary temporal spreading shown above, the endangerment criterion of section 1004 BGB is fulfilled.

(b) **Actions up to and including emitting of CO2**

In this context, depending on the point of view, on the one hand the development, production and sale of inadequately equipped vehicles as a bundle of activities can be focused on. For even today, the Defendant is already above the emissions to which the company is entitled according to a Paris Agreement-compatible path.

Then the factual presumption of a danger of repetition would apply. It is not possible to imagine a seriously possible alternative course of events on the basis of the existing announcements, which would not be an assertion in the dark.

On the other hand, the maintenance of a fleet as a bundle of activities can be focused on, which, in accordance with fleet consumption and sales targets, is already not suitable today for ensuring that the Defendant's share of internal combustion vehicles still permissibly to be sold is not exceeded.

From this perspective, the Defendant’s activities would constitute a persistent disturbance.

However, it is also conceivable to focus on the disturbance that is repeatedly renewed through the development and sale of individual vehicles. In this respect, the connecting factor would be the group strategy ‘Roadmap E’, which represents the decision taken by the Defendant. The implementation of the strategy, in the absence of intervention by the state, depends exclusively on the will of the Defendant. Thus, with regard to the date of the necessary phase-out of internal combustion engines and the planned sale of vehicles that are no longer acceptable from the point of view of climate science as of 1 January 2030, the

said activities would be first infringements in this sense.

In all cases, therefore, there is the constitutionally shaped, concrete danger of the respective infringement. In the statement of facts, it was demonstrated that the Defendant does not want to commit itself to an internal combustion engine phase-out date but, on the contrary, plans to discontinue production, sales and development of such vehicles only when customers would demand this.

No contrary explanations can be found in external accounting or non-financial reporting either. Nor is a state decommissioning of all internal combustion vehicles by 2045 to be expected as far as the German market is concerned; even more so as concerns the global market.

The Defendant has also not submitted a sufficiently punishable cease-and-desist declaration despite a pre-trial request to do so. We would respectfully point out that such a declaration would only exclude the claim if it was sufficiently punishable, unconditional and not issued only under the pressure of the trial.[256]

b) Claims for removal

(1) Own area of control - petitions 1) and 2)

The claims pursued with the petitions under 2) represent the reduction path for the Defendant resulting from climate science requirements.

Accordingly, as part of the transport sector, the Defendant can only achieve its necessary contribution through a reduction path that complies with a 65 percent reduction in attributable emissions immediately by the end of 2029 compared to 2018. In the case of the Defendant, this is to be achieved essentially with the drastic reduction of Scope 3 emissions, which account for 97.9 per cent of the emissions of the group's passenger car and light commercial vehicle division.

The target will be achieved if the petition under 2. a) is fulfilled. An increase of production after the achievement of this target is prevented by the half sentence 'is maintained at least below this level'. For the further reduction curve, it can be assumed that if the group is set up to meet this target, the remaining residual budget between 2030 and 2045 or 2050 will be met.

In addition, in order not to permit an overuse of the global carbon budget and the budget to which the Defendant is entitled on the path to this goal,[257] it is required to set a maximum of 25 percent with regard to the sales of internal combustion vehicles in the years 2021 through the end of 2029, as requested in petition 2(b).

Any breach of these limits would still constitute an unlawful disturbance and

[256] cf. Palandt, 2018, section 1004, para. 32.

[257] cf. I.4.c), Fig. 4.

impair the asserted legal interests.

As already shown, these specific measures can be demanded as a legal consequence of section 1004 BGB, for they are the only suitable or minimum necessary measures to remove the disturbance.

(2) Joint ventures - applications under 3).

The targets to be implemented as requested in petition 3) are identical in basis to those requested in petitions 1) and 2). However, since in the case of non-consolidated joint ventures, not least due to the significance of the group for other companies, a significant but at least formally non-controlling influence can be exercised, the requests here are reduced to a best-efforts obligation. Since the shareholdings are a subject matter of a diligent group organisation, it already follows from the duty of care, which also determines the legal consequences here and requires the observance of climate-related due diligence in business activities, that such claims are well-founded.

(3) Reasonableness and obligation to tolerate, section 1004 subsection 2 BGB

Removals as duties to take action are only owed if they are reasonable (sections 1004 subsection 2 BGB and Art. 20 subsection 3 GG - principle of proportionality). The Defendant is required to make submissions in this regard.

However, it must be reiterated here that the measures demanded are based on extremely conservative calculations and, moreover, were calculated by a partnership organisation of the Defendant (IEA).

From a risk management perspective under corporate law, it would have been necessary anyway for the Defendant to adjust the group on the basis of these findings.

According to the state of scientific knowledge (also prior to the publication of the cited IEA report), which VW could have made use of by means of implementation some time ago, the necessary measures also take account of company interests in particular, insofar as a cost-optimised model is applied.

Nor can a lack of reasonableness be submitted on the grounds of a lack of knowledge in the past, as has already been described (from 1958). There are also a number of subsequent historical events that could have served as a starting point for a transition (e.g. the Kyoto Protocol, the Paris Agreement, the decision of the BVerfG of 24 March 2021[258]). Therefore, assuming lawful behaviour, a group restructuring could have been initiated some time ago.

[258] Cf. [Fn. 2]

The expense for the transformation, which is not underestimated on this side, but nevertheless exists, does not exclude the claim either. On one hand, there is no protection of legitimate expectation in relation to the status quo or reduction paths incompatible with the Paris Agreement. This is further reinforced by the order of the BVerfG just mentioned, and the pressure for transformation is thus high. The constitutionally binding carbon budget must be taken into account here by way of indirect horizontal effect, in particular in the context of the interpretation of the indeterminate legal concept of the obligation to tolerate or of reasonableness. There can therefore be no protection of legitimate expectation in reduction paths that are incompatible with this budget.

On the other hand, business studies show that adapting business operations to the Paris Agreement is in fact an opportunity for the company.

Ultimately, reasonableness is also observed by limiting the demand to a reduction path that is compatible with Paris. The interests and legal interests are thus carefully balanced. It is precisely not the complete cessation of the CO2-emitting operation that is demanded, which would mechanistically be the obvious legal consequence of section 1004 subsection 1 BGB and has already been adjudicated.[259]

This is also in line with the established case-law of the BGH, according to which disturbances are no longer to be tolerated if they go beyond the scope of proper management of a plot of land.[260]

On the basis of the constitutional concretization of the 1.5 °C target, the limit of the claimable business adjustment can also be seen as the limit of the still socially adequate, permissible risk. The emissions below these limits thus simultaneously define, in practical concordance, the limits of property and other absolute legal interests.

In any case, with the action already filed today, an ambitious but not drastic transition program is still feasible for the group. According to the case-law of the BGH, orders to cease business operations by civil courts are also the consequence in main proceedings if it is not possible to achieve an adjustment of operations in time due to harmful emissions.[261]

(4) Documentation and enforceability

The claim covers suitable measures to remove the disturbance.

This is only verifiable for the enforcement court if uniform standards are used to assess the achievement of the target. This is because it is practically impossible

[259] See BGH, Judgement of 22 October 1976 - V ZR 36/75 as well as BGH NJW 2004, 1035, 1036.

[260] BGH, Decision of 20 September 2019, V ZR 218/18, NJW 2019, 607 (608), Defence and compensation claim due to ‘natural’ immissions from the neighbouring tree.

[261] See BGH, judgment of 22 October 1976 - V ZR 36/75 and BGH NJW 2004, 1035, 1036,

for the court to measure the group's CO2 emissions itself across Scopes 1-3.

Therefore, a binding and precise documentation of the reduction measures is necessary, which puts the enforcement court in position to control the compliance. Since in this respect the requirements of the compulsory enforcement proceedings coincide with material requirements, this obligation to specify also results from section 1004 BGB (analogous, if necessary, in conjunction with section 242 BGB) and can already be requested here.

The reference to a specific standard becomes necessary because, both in view of the group's history regarding the diesel scandal and with regard to the (non-financial) reporting currently taking place, there is a concrete risk of the use of inadequate documentation standards: Not only is the Defendant's public reporting contradictory in terms of content, but it is also misleading with regard to the parameters stated.

For example, the group uses a so-called 'decarbonization index' (DKI) in its non-financial reporting with regard to the achievement of its own CO_2 reduction targets, which indicates the CO_2 emissions in weight/km per vehicle, and places this in a systematic context with absolute values for Scope 1 and 2. In addition, the DKI has so far included, but not adjusted for, the region-specific CO_2 emission assumptions according to the drive cycles applicable in each case, which are significantly higher in reality - at any rate in the jurisdiction of EU specifications (around 35 percent).[262]

In the event of further growth in vehicle sales and thus *increasing* Scope 3 emissions attributable to the Defendant, the group can nevertheless indicate a *reduction* in the CO2 value according to the DKI. There is thus also the possibility of influencing the values by extraneous factors. The decisive error here is that the remaining carbon budget is an absolute value, but the DKI is a relative parameter.

The respective standards demanded in the petitions to prove compliance with the target are therefore included in the claims under section 1004 BGB (possibly in conjunction with section 242 BGB) because of the concrete danger that non-transparent standards will continue to be used over the long period of time and that ultimately control by the enforcement court will be made more difficult in retrospect. This also appears to serve procedural economy, as it enables a purely formal examination in the enforcement proceedings and avoids a declaratory action supplementing the enforceable legal document.

Judicial notice is requested should the need for further elaboration arise.

[262] See ICCT, From Laboratory to Road. A 2018 Update of official and 'real-world' fuel consumption and CO2 values for passenger cars in Europe, p. 12.

c) Petitions

The Plaintiffs' submissions thus fully support their procedural demand.

The common factual cause of action is the delta between the announced behaviour of the Defendant and the scientific requirements, which directly become legal obligations in conjunction with the duty of care and the legal consequences of sections 1004, 823 subsection 1 BGB to the extent explained. In this respect, the duty of care incorporates the NZE scenario into civil law via the due diligence expectation and the requirement of science-based measures, but according to the general principles under section 1004 BGB, this also results from the duty to 'effectively remove the source of disturbance' as well as the claim to specific measures if only one or a minimum measure is possible.

In summary, and in view of the complex factual basis, the petitions shall be explained in detail once again in condensed form in one place:

• Petition 1. a): This petition ensures that, with an assumed average lifetime of 17 years in 2045 (KSG) or 2050 (global NZE scenario), there will be as few passenger cars and light commercial vehicles with internal combustion engine as possible in the global fleet, as this is the only way to achieve greenhouse gas neutrality.

• Petition 1. b) ensures, in accordance with the attributability of the placing on the market by, for example, authorised sellers, that they no longer sell internal combustion cars and light commercial vehicles at the inducement of the Defendant, so that no production on stock emerges.

• Petition 2(a): If the Defendant ceases the selling of internal combustion vehicles in 2030, does not sell more than 25 percent internal combustion vehicles by then (Petition 2(b) and 3(b)), and the Scope 1-3 ratio remains as it is now, it automatically complies with this reduction ratio. However, the petition also protects against completely inefficient electric vehicles suddenly being developed.

• Petition 2(b): This petition ensures that the reduction path to the 2030 combustion phase-out is not exceeded by the Defendant.

• Petition 3: These requests aim at a best-efforts obligation for the Defendant to also work seriously towards the targets of petitions 1. and 2. in its influenced but not formally controlled joint ventures. This takes the Defendant at its word and follows from the legal requirement that 'effective' measures are required and the fact that the Defendant operates to a significant extent through joint ventures.

III. Value of the claim

The impairment that is to be feared from the behaviour complained of and to be removed by the Defendant, is decisive for the value and is to be estimated in accordance with section 3 of the Code of Civil Procedure (ZPO).[263] In the case of prohibitory injunction, the interest in the omission of this disturbance is primarily to be taken into account by way of an economic consideration.[264]

In the present legal dispute, this includes the manifold concrete impairments to property, health and the safeguarding of greenhouse gas-related freedom. The Plaintiffs are, however, united by their interest in being spared from emissions.

If several Plaintiffs pursue the same interest, the prohibition of addition applies due to economic identity.[265]

Accordingly, the highest individual value of the claim is to be regarded as the exclusively decisive factor.

In this context, the objective market value of the first Plaintiff's forest plot could in principle be taken as a basis pursuant to section 6 p. 1 alt. 1 ZPO, which is all the more applicable in the case of property.[266] However, the market value of EUR 7,155 calculated in this way does not appear to be appropriate in relation to the importance of the impairments of freedom asserted at the same time.[267]

In similar cases of injunctive relief, values of the claim of between € 20,000.00 and € 30,000.00 were set in each case (BGH, order of 13 July 2017, ref. V ZR 260/16; BGH, order of 18 March 2021, V ZR 156/20; OLG Karlsruhe, order of 1 February 2021, ref. 6 W 55/20).

In the proceedings before the BVerfG already cited, which resulted in the climate decision of 24 March 2021,[268] the value of the claim has not yet been determined, but on the part of the Federal Government a value of the claim of 25,000 is considered appropriate in total.

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263 cf. Zöller, ZPO, 33rd edit., section 3, para. 16.170

264 s. BGH, Decision of 21 March 2019 - V ZR 127/18.

265 cf. Zöller, 33rd ed., section 5, para. 8.

266 cf. MüKoZPO/Wöstmann, 6th ed. 2020, ZPO section 3, para. 13, section 6. para. 6.

267 For the forest area of Plaintiff 1), a standard land value of 1 €/m2areas with vegetation is stated in the district of Bad Kissingen according to the standard land value database of the district (generous), for the forest area in Gmünden am Main, 1.5 €/m for 2'forestry area' is stated in the state-wide database *geoportal.bayern.de.* This multiplied by the respective areas of 0.477 and 0.159 ha results in 7155 € market value, see the values at https://www.landkreis-badkissingen.de/buerger--politik/buergerservice/fachbereiche-und-abteilungen/bauen--umwelt/bauen/gutachterausschuss/m_11101 as well as http://geoportal.bayern.de/bayernatlas-klassik/bodenrichtwerte?lon=4335513.0&lat=5544445.0&zoom=13&base=904 with the keywords: Gemarkung Harrbach, Flurstückzähler 1337, -nenner 0.

268 s. Fn. [2].

One year's **deprivation of liberty** under section 7 subsection 3 of the StrEG provides for €27,375 in compensation.

This results in the value of the claim of € 25,000.00 stated by us, which should adequately reflect the interest of the Plaintiffs.

IV. Summary

The action pursues the Plaintiffs' legitimate concern to protect their property, their health and their right to safeguard greenhouse gas-related freedom from climate impacts caused by excessive interference by the Defendant in the future.

The connection between the Defendants' contribution to causation and the resulting impairment of legal interests is compelling. The group strategy with the resulting greenhouse gas emissions is blatantly contrary to the state of the science. The Defendant simply does not intend to globally operate within a carbon budget compatible with the Paris Agreement’s targets.

In view of the facts described, the Plaintiffs see no other possibility than to defend their legal positions, which are threatened by the Defendant and are also protected under private law, in civil proceedings.

The measures demanded are deliberately chosen to be sparing. The Plaintiffs are expressly not pursuing the goal of Volkswagen AG suffering damage as a result of the action. On the contrary, the Defendant could use these proceedings as an opportunity to take measures that are from a business perspective also reasonable in the long term.

In doing so, the Defendant is also only taken at its word. Only measures are demanded which should be a matter of course according to the public announcements of the Defendant.

In the light of the foregoing, the Defendant is to be sentenced as requested.

Attorney
Dr. Roda Verheyen

Attorney
John Peters

Qualified electronically signed by

attorney
Dr. Roda Verheyen

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