



11.11.2020

Land Nordrhein-Westfalen
**Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie
des Landes Nordrhein-Westfalen**

Herrn Minister Prof. Dr. Andreas Pinkwart
Berger Allee 25
40213 Düsseldorf

This is a machine translation of our statement via <https://www.deepl.com>

Statement on the draft key decision "A sustainable perspective for the Rhine basin

Minister Pinkwart, ladies and gentlemen

Parents for Future GERMANY, Christians for Future, Teachers for Future GERMANY and Grandparents for Future Deutschland make the following joint statement on the draft key decision "A Sustainable Perspective for the Rhine Region" of October 2020.

With the leading decision in its current form, the State of NRW cannot ensure its social, ecological and economic sustainability:

- Large parts of the key decision are based on outdated assumptions. These are no longer legally or scientifically tenable and do not correspond to economic reality.
- Civil society was not sufficiently involved in the drafting process.
- Furthermore, the state of NRW cannot achieve the legally enshrined climate targets with this key decision.

We therefore reject the draft in its October 2020 version and call on the State of NRW to draw up a contemporary revision based on a Citizens' Council that is capable of consensus and aims to achieve the climate targets laid down in law. In addition, we are submitting the demands developed by civil society for inclusion in the process.

Particularly as parents and grandparents of growing citizens: we consider it our duty to participate in shaping the Energy State of NRW with the aim of creating a liveable and sustainable NRW for everyone. Through such exemplary political and civil society participation, the children of today can grow up to become responsible and politically interested citizens.

In particular, we consider the following measures to be necessary:

Shortening the planning horizon

The planning horizon is too long at 18 years. As explained in the following list of points, electricity generation from lignite is already no longer economically viable today and is therefore financially damaging to the State of NRW and its citizens. Moreover, the planning horizon set out in the draft of October 2020 misses the objectives of the Paris Climate Protection Agreement and national and international legislation and regulations.

Fixing the volume of lignite mining at 100 million tonnes

To enable the State of NRW to achieve the climate targets set, the additional production volumes from the Hambach and Garzweiler opencast mines must be fixed at a maximum of 100 million tonnes from 2020.

Immediate end to resettlement

A further resettlement of people is no longer necessary due to the above-mentioned shortening of the planning horizon and the necessary fixing of quantities. Under the premise that those who want to stay, those who want to resettle can do so, the progressive loss of confidence in politics can be counteracted.

Relocation of the open-cast mine apron to uninhabited villages and immediate moratorium on demolition of the Garzweiler open-cast mine

We welcome the approach that "land use in the open-cast mining area should be limited to what is absolutely necessary to produce the required quantity of coal and should initially be geared primarily to the use of already uninhabited localities (Immerath and others)". Accordingly, the State of NRW can declare an immediate moratorium on demolition of the Garzweiler opencast mine. By changing the direction of mining, the uninhabited sites can be taken up first.

Inclusion of the concepts drawn up by civil society for residual lake design with shallower depths and the renunciation of the excavation of the "Manheimer Bucht" in the plans of the State of NRW (e.g. Revierperspektiven Rheinland 2020¹)

Especially the current planning around residual lake depths must be viewed critically in view of increasing climate warming and droughts (cf. UFZ Helmholtz 2020).

Inclusion of civil society concepts for networking the Bürgewälder

We support the concept of the Civil Society Coordination Circle for Structural Change to network the Bürgewälder. In particular, the lighthouse projects described under the keyword #arnoldustrail can make structural change in the Rhenish mining area tangible and tangible for future generations. The church in Manheim is to be preserved as a space for innovation (ZKS 2020).²

No development of gravel pits directly at the Hambach forest, Development of landscape ecosystems in the district

We welcome the fact that sentence 6 of the decision requires that "no new excavation areas or expansion of existing ones should be carried out in the immediate vicinity of forests, as this would run counter to the above objectives". Accordingly, any further expansion of existing excavations, any

¹ <https://fffutu.re/ML5Tur>

² <https://fffutu.re/NFNGOi>

new development of declared excavation interests and any activation of designated reserve areas must be prevented.

We support the recommendations of Ibsch, P. L. & Blumröder, J. S. (2020) from the statement "Hambacher Forst in der Krise 2020"³.

Investing in the future in the form of renewable energy

To ensure that the Rhenish region remains an energy region, the State of NRW must unleash necessary investments in renewable energies. Numerous current publications outline feasible ways of doing this with technology that is already available on a mass scale. The adaptation for the Rhenish mining area can be implemented in the near future:

- Drawdown 2020: Sector Summary Electricity
- Exponential Roadmap 2020: Scaling 36 solutions to halve emissions by 2030
- Hentschel, K.M. et.al. 2020: Handbuch Klimaschutz
- Kölle for Future 2020b: Kommunalwahlen 2020 - Forderungen für ein klimaneutrales Köln
- Prognos, Öko-Institut, Wuppertal-Institut 2020: Klimaneutrales Deutschland.

Install Climate Citizens' Council as a modern participation format

We call on the State of NRW to set up a Climate Citizens' Council to promote co-migration to a climate-friendly state. In France, the "Convention Citoyenne pour le Climat" has been very successful and, together with politicians, has launched a comprehensive reform.

Brief justification of the opinion and the demands contained

The five key messages on climate change can be summarised in 20 words (Deutsches Klima-Konsortium et. al. 2020)⁴:

1. it is real.
2. we are the cause.
3. he is dangerous.
4. the experts agree.
5. we can still do something.

Accordingly, business, politics and society must stand together to ensure a future worth living for us and our children, grandchildren and future generations here in NRW. Thanks to such a reorientation, various serious economic risks of the State of NRW are eliminated.

A future-proof key decision for the Rhenish lignite mining area must be based on the objectives of the Paris Climate Protection Agreement (Europäische Kommission 2015)⁵ and must be in line with the Federal Climate Protection Act (KSG)⁶ and other national and international laws, regulations and agreements.

We consider the revision of the leading decision to be absolutely necessary for the following reasons:

³ <https://fffutu.re/9OUcnG>

⁴ <https://fffutu.re/Mj538G>

⁵ <https://fffutu.re/g08w56>

⁶ <https://fffutu.re/9HC0sa>

1. It does not take sufficient account of the current development of the financial markets away from fossil fuels and towards sustainable energy sources, neglects the foreseeable consequential costs of climate change and therefore represents a considerable financial risk for the citizens of NRW.
2. It does not take sufficient account of foreseeable current technological developments and is therefore based on incorrect assumptions. Furthermore, it prevents Germany from developing into a driver of innovation in Europe.
3. It does not take into account the EU's current agreements on the Green Deal and tighter emission targets.
4. It does not take into account the further falling costs of renewable energies and the possibilities of their scaling up and rapid implementation.
5. It envisages paying taxpayers' money to shut down power plants that would soon be shut down for economic reasons anyway, thereby damaging the citizens of Germany financially.
6. It does not take into account the broad and persistent criticism from civil society.
7. It is not oriented towards the objectives of the climate protection agreements and does not sufficiently serve to reduce emissions.
8. It does not take into account the political and human responsibility that we all bear to leave behind an environment worth living in for future generations. It represents a political failure in the necessary management of the climate crisis and the associated protection of the population.
9. It does not take into account the global networking of risks arising from global warming.
10. It does not take into account current legal proceedings.
11. It does not take into account the major role of the State of NRW and in particular its open-cast mines and coal-fired power generation in meeting NRW's climate protection targets and the CO₂ budgets for NRW and its energy production which can be calculated from this.
13. It does not take into account the immense damage caused to agriculture, species protection and residents in NRW and beyond by groundwater lowering in combination with increasing droughts caused by climate change.

Detailed justification of the opinion and the demands it contains

1. Development of financial markets and consideration of climate change costs

The financial markets are changing their system for transferring the economic system (co-migration). During his keynote speech at the 50th Earth Day Conference in April 2020 in front of 1.1 million participants from the financial world and the business community, Nick Robins calculated that investors and banks are already providing 127 trillion dollars in sustainable investments (Robins, N. 2020) ⁷.

Larry Fink, CEO of Blackrock, stated in January "In the near future - and sooner than most anticipate - there will be a significant reallocation of capital. Climate Risk Is Investment Risk" (Fink, L. 2020)⁸.

⁷ <https://fffutu.re/gjZiFG>

⁸ <https://fffutu.re/d6Hg1b>

“US asset manager Blackrock sees above-average climate risk in German government bonds,⁹ Klimareporter reports in October 2020.

Yuval Noah Harari writes about Corona and climate crisis in the Financial Times: “This storm will pass. But the choices we make now change our lives for years to come“(Harari, Y. N. 2020¹⁰).

AON, a company specialising in risk reduction with 50,000 employees, has identified the attribution of climate change events to companies and countries as one of the biggest questions to be answered (AON 2020, S. 13). Banks and insurance companies are increasingly subject to stress tests to assess whether and how their balance sheets and risks could impact on current and future climate change scenarios (ibid. p. S.15). Investors are increasingly demanding a climate change plan and a financial divestment (ibid. p.32), i.e. the exit from fossil assets.

In October 2020, the Handelsblatt newspaper described the state share portfolio in NRW - which includes RWE - as "not Paris-compatible". In a comparison of the federal and state governments in the study "Feverish Finances", NRW scored particularly badly because its share transactions are at a global temperature of 4.2 degrees Celsius („Fiebrige Finanzen“¹¹). One reason is RWE shares, which, according to the study, are heading for a temperature of over 13 degrees (Handelsblatt 2020b)¹². Quote in the SPIEGEL magazine: Fossil fuel stocks are "financially risky (SPIEGEL 2020b)¹³. In May 2020, the FAZ headlined in its business section: Because of coal production: Norwegian state fund excludes RWE (FAZ 2020)¹⁴.

In January 2020, McKinsey published a study¹⁵, widely acclaimed in the economic and financial world, on the negative impact of climate change on socio-economic systems. Too slow a pace of transformation would put "hundreds of millions of lives, trillions of dollars in economic power and the world's physical and natural capital" at risk. (Spiegel 2020).

Economic reality: “The coal industry is going bankrupt”¹⁶

The Coal Phase-out Act (KVBG) laid down the so-called "energy policy and economic necessity of the Garzweiler II open-cast mine ¹⁷. The facts of the case are disputed (z.B.: DIW 2020¹⁸; Parents for Future Germany 2020b¹⁹).

The economic reality of the coal industry is best described by the quote from Jeffrey Sachs, known for his radical-neoliberal Marković Sachs shock therapy in front of an audience of millions: **the coal industry is going bankrupt** (Sachs J. 2020)²⁰.

The effects of climate warming will have a major impact on the quality of life and productivity, food production, material assets, infrastructure and natural capital in Germany too (McKinsey 2020).

⁹ <https://fffutu.re/O18FUF>

¹⁰ <https://fffutu.re/XRjvJZ>

¹¹ <https://fffutu.re/awnWpp>

¹² <https://fffutu.re/StiwL5>

¹³ <https://fffutu.re/NVL2xZ>

¹⁴ <https://fffutu.re/vMOWxz>

¹⁵ <https://fffutu.re/4yS7OX>

¹⁶ <https://fffutu.re/hzyERc>

¹⁷ <https://fffutu.re/IOpoc8>

¹⁸ <https://fffutu.re/9ZE86x>

¹⁹ <https://fffutu.re/Z6rosr>

²⁰ <https://fffutu.re/hzyERc>

Major loss events and insured consequential climate costs are already above the median (Figure 1). In 2018, Germany had the third-highest expenditure due to climate damage events. The forecast assumes that insurance losses will double by 2030.

MunichRe describes man-made climate change as "one of the greatest challenges facing humanity" and calls for resolute action from politicians (Munich Re 2020)²¹.

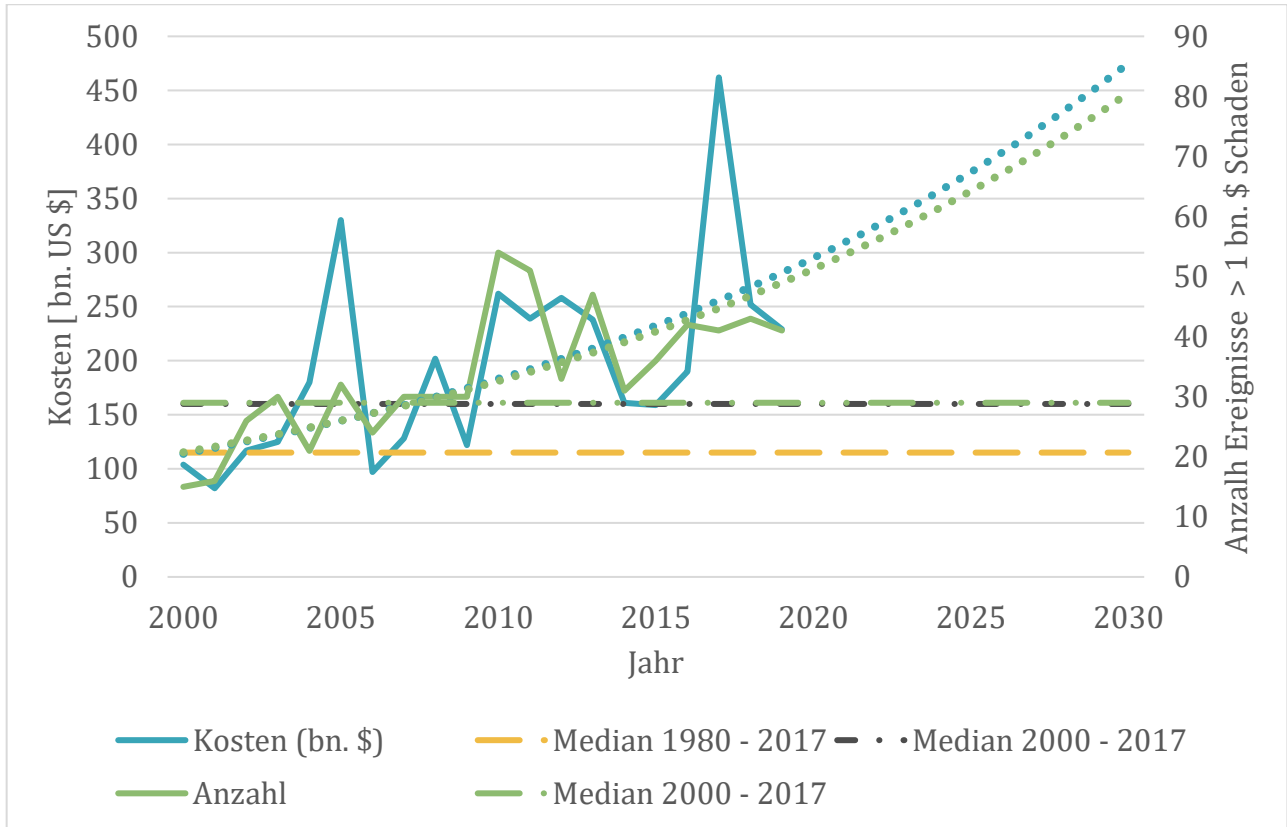


Figure 1: Insured climate damage and forecast 2030, AON (2020)²²

2. Technology Development

Owen Gaffney, one of the brains behind the Exponential Roadmap sponsored by the Federal Republic of Germany, outlines in his keynote speech: "The financial industry's path towards 1.5°C, based on the 36 solutions to halve emissions by 2030 and how they can be scaled up" that we will experience the fastest economic transition in history in the 1920s (Gaffney, O. 2020)²³.

In September 2020, the German Climate Consortium presented concrete measures on how Germany can help to keep global warming below 1.5°C and become a driver of innovation in Europe (Deutsches Klima-Konsortium et. al. 2020)²⁴.

Readily available technologies and ideas can be taken from the following literature, for example:

Drawdown 2020: Sector Summary Electricity²⁵

²¹ <https://fffutu.re/PYORLD>

²² <https://fffutu.re/5lseSs>

²³ <https://fffutu.re/SmULLs>

²⁴ <https://fffutu.re/Mj538G>

²⁵ <https://fffutu.re/kmlp3w>

- Exponential Roadmap 2020: Scaling 36 solutions to halve emissions by 2030²⁶
- Hentschel, K.M. et.al. 2020: Handbuch Klimaschutz²⁷
- Kölle for Future 2020b: Kommunalwahlen 2020 - Forderungen für ein klimaneutrales Köln²⁸
- Prognos, Öko-Institut, Wuppertal-Institut 2020: Klimaneutrales Deutschland²⁹

3. Green Deal of the European Union

In the public consultation on the European Green Deal, 91% of respondents from the public, associations and industry called for more action on climate change (Parents for Future Germany 2020c:)³⁰. Consequently, the European Parliament has decided to reduce emissions by more than 60% compared to the reference year. The final decisions will be directly incorporated into German legislation at the end of December 2020 in accordance with Article 3 sentence 3 of the KSG.

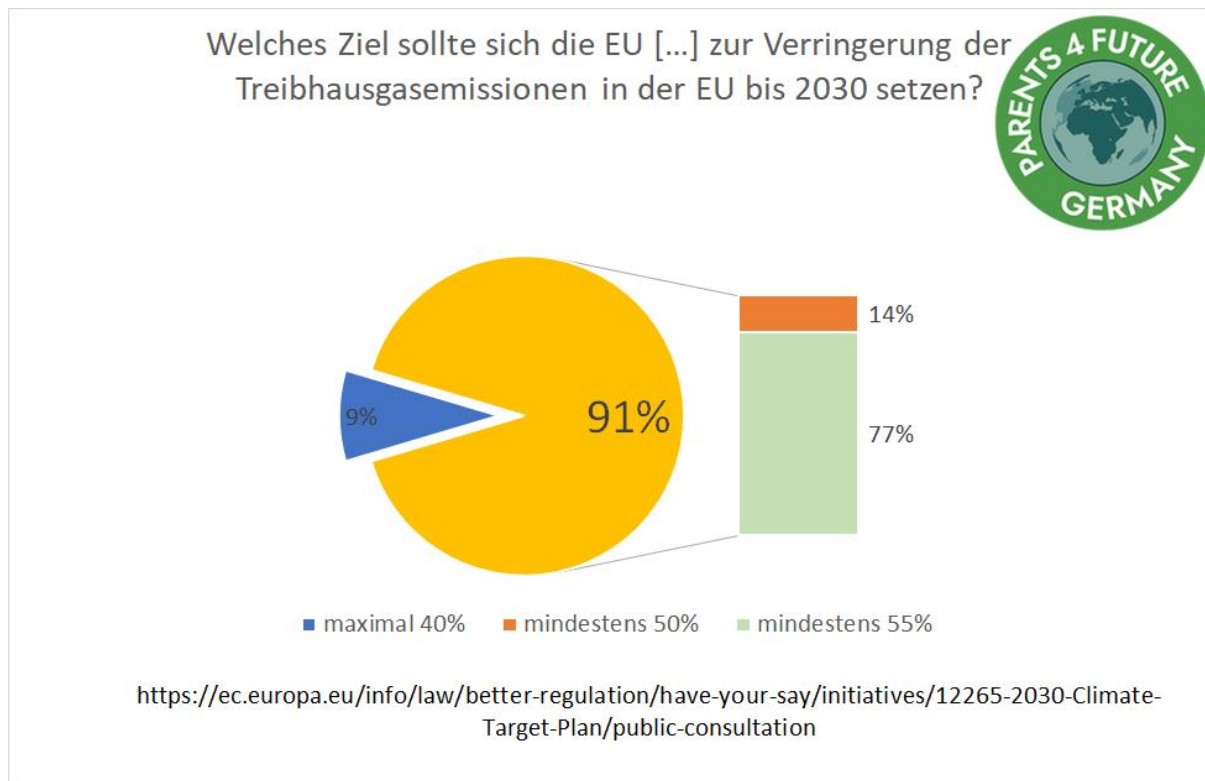


Figure 2: Results of the public consultation on the EU Green Deal

4. Falling costs and technical development of renewable energies

The calculations of the International Energy Agency (IEA) in its latest World Energy Outlook of October 2020 are clear: accelerated by the corona crisis, the economic viability of coal has come to an end, whereas renewable energies are proving crisis-proof (Handelsblatt 2020a)³¹.

²⁶ <https://fffutu.re/FYR89N>

²⁷ <https://fffutu.re/SSQGcm>

²⁸ <https://fffutu.re/L9mdMB>

²⁹ <https://fffutu.re/aWgRCL>

³⁰ <https://fffutu.re/uLnN5f>

³¹ <https://fffutu.re/CJYtUI>

Economist, expert and press all agree on this ³². Ramez Naam, entrepreneur, scientist and economic analyst and a key driver of Microsoft's success, describes Wright's law of economics (see Figures 3 and 4) as a key element in the displacement of fossil fuels (Naam, R.2020)³³.

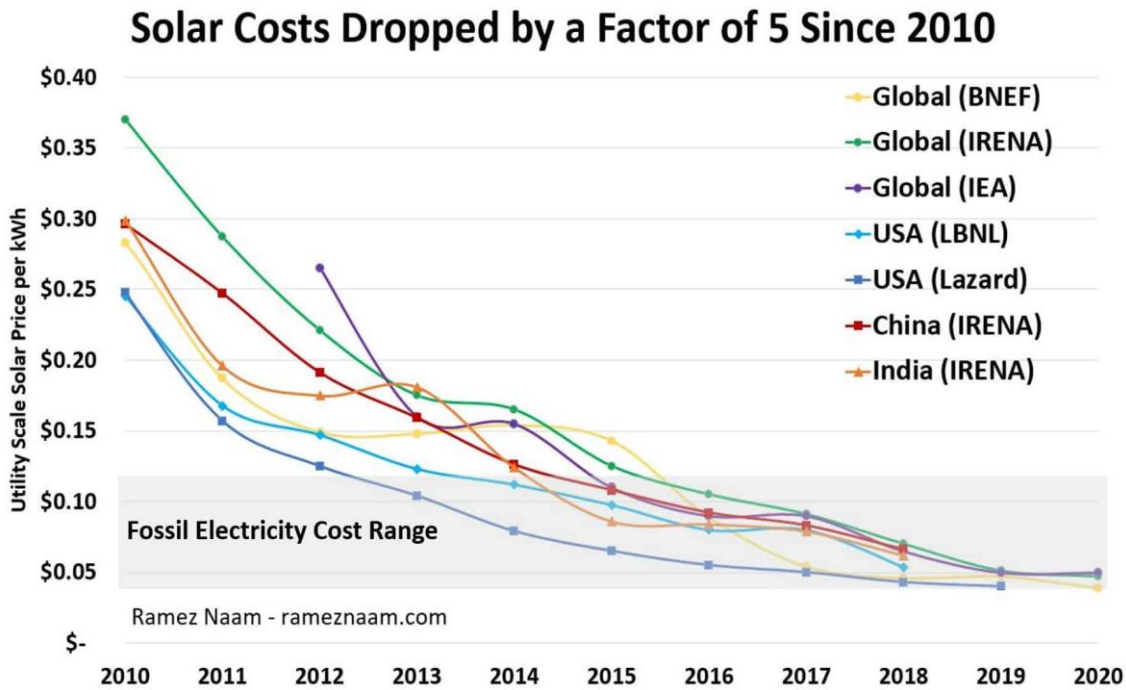


Figure 3: Solar energy generation is significantly cheaper than fossil fuels

IEEFA comes to similar conclusions in September 2020 (see Figure 4): renewable energies with battery storage coupling are the cheapest form of electrical energy generation by 2022 at the latest (IEEFA 2020)³⁴.

³² <https://fffutu.re/HxSxOs>

³³ <https://fffutu.re/MYGXEE>

³⁴ <https://fffutu.re/nKXRVF>

Wright'sches Gesetz der Ökonomie

Spätestens 2022 sind erneuerbare Energien mit Batteriespeicherkopplung die günstigste Form der Energieerzeugung

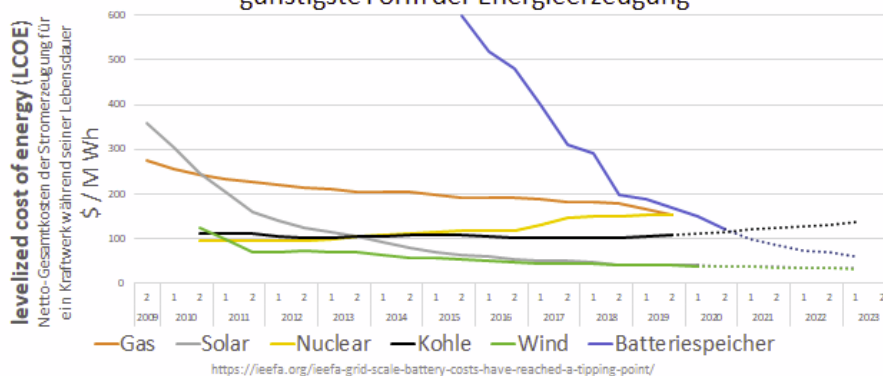


Figure 4: Net total costs of electricity generation of a power plant during its lifetime (IEEFA 2020)

China, world market leader in solar power generation, consequently installed a 2.2 GW plant with 203 MW / MWh battery storage in only four months construction time (C-Net 2020)³⁵ for just 2 billion US\$ (10⁹). Further plants are planned.

5. Energy realities

Petra Pinzler analyses in DIE ZEIT, "It would be pretty stupid if the grand coalition were to pay the energy companies a lot of money for something they will have to do soon anyway, namely shutting down coal-fired power plants. And it would be even greater nonsense if the government were to commit itself, as it has so far planned, in a public-law contract to establish the "energy-economic necessity of the Garzweiler open-cast mine". In doing so, it would be certifying the mine and RWE's coal production as having some kind of systemic relevance - until there is no more lignite to be extracted there. The material would thus be defined as politically necessary, even if companies and consumers have long since preferred to heat with gas or solar energy. Because it is cheaper and healthier (Pinzler, P. 2020)³⁶."

Felix C. As an expert advisor to the German Bundestag within the framework of the KVBG legislative procedure, Matthes certifies that German lignite-fired power plants are in the economic death zone, as they no longer generate their contribution margin (Ökoinstitut 2020:)³⁷.

“ **The era of coal is over** ³⁸”, berichtete das Handelsblatt folgerichtig im Oktober 2020.

Reiner Holzengel, President of the Taxpayers' Association, criticised the coal phase-out in the current Schwarzbuch: "Taxpayers are being asked to pay billions of euros. The politically decided coal phase-out will be more expensive for the taxpayer than necessary because the politicians have opted for a national solo effort. A higher carbon dioxide price in European emissions trading would have made it cheaper to end coal-based electricity generation" (FAZ 2020b)³⁹.

³⁵ <https://fffutu.re/84bGe4>

³⁶ <https://fffutu.re/kVbO8l>

³⁷ <https://fffutu.re/zsLXwm>

³⁸ <https://fffutu.re/rl9xSP>

³⁹ <https://fffutu.re/NgMYO1>

Other aspects were summarised under Kölle for Future 2020a ⁴⁰.

Due to these realities, the position of the federal and state governments is completely incomprehensible. Although the CDU/CSU wants to "achieve cost-effective climate protection with a market economy (CDU/CSU parliamentary group 2020)⁴¹", and emphasises in Sunday speeches the free forces of the market. With lignite, on the other hand, she pursues a nostalgic state-socialist course. Good money is still being thrown after a dead business model without necessity.

6. Criticism from civil society on the procedure

The participation of civil society has been criticised: "It has been neglected in the participation process for the new NRW key decision and was not sufficiently considered from the outset," criticised Climate Alliance Germany, Friends of the Earth Germany (BUND) and the initiative Alle Dörfer bleiben ('All villages stay') at the joint press conference on 14 October (Klimaallianz 2020a)⁴².

7. Paris agreement on climate change

With the Paris Climate Change Convention, the international community decided in December 2015 that our planet should remain worth living on for us and our future generations. Global warming should remain well below 2°C, or better still below 1.5°C. Germany ratified the agreement in 2016.

Irreversible consequences, such as a further increase in droughts, heat waves and heavy rainfall, as well as a rise in sea level are therefore very likely and are already being felt today. Also in Germany.

"For years, limiting global warming to less than 2 degrees was considered the goal to be pursued in climate policy. This changed with the Paris Climate Conference in 2015 and finally with the Intergovernmental Panel on Climate Change's Special Report in 2018, because more recent research has made it possible to better assess not only the direct effects of greenhouse gas emissions on the Earth's climate, but also the threatening feedback and tipping points in the climate system. These could already be triggered by the 2 degrees of global warming mentioned above.

Since then, the Intergovernmental Panel on Climate Change has urged policymakers to do everything possible to keep average global warming below 1.5 degrees. The IPCC concludes that this goal is achievable and could reduce many of the negative effects of global warming. However, the measures planned by all countries in the world so far make a global warming of at least 3 degrees probable (Hentschel, K.M. et.al. 2020)⁴³.

8. Political responsibility

Consequently, the WEF (World Economic Forum 2020)⁴⁴ reassesses the political failure to tackle climate change as the greatest threat to humanity (Figure 5).

⁴⁰ <https://fffutu.re/HxSxOs>

⁴¹ <https://fffutu.re/2fkRkg>

⁴² <https://fffutu.re/Wq71jE>

⁴³ <https://fffutu.re/SSQGcm>

⁴⁴ <https://fffutu.re/jEDdHI>

Risikoschätzung Weltwirtschaftsforum (2020)

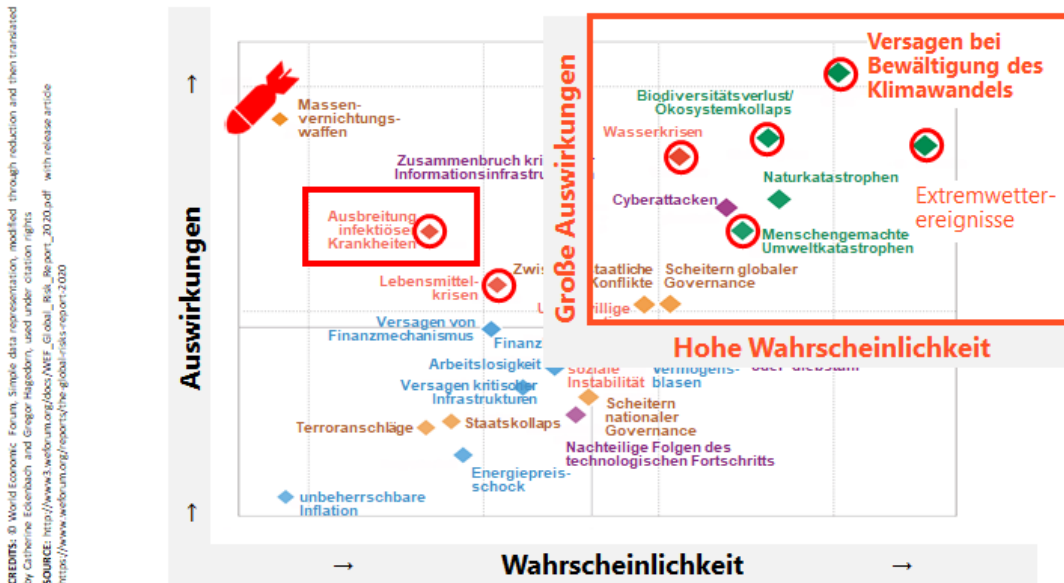


Figure 5: Threats to the survival of mankind (PARENTS FOR FUTURE 2020a)⁴⁵

Wolfgang Schäuble said in an interview with the Tagesspiegel at the end of April 2020: "Not only is the pandemic still the biggest problem, but climate change, the loss of biodiversity, all the damage we humans, and above all we Europeans, are doing to nature through excess (Tagesspiegel 2020)⁴⁶."

"We will have to make massive new investments throughout Europe," said Ursula von der Leyen in March 2020, "and we should consciously focus on future technologies and on clean technologies. Climate change is not going away because a dangerous virus is spreading" (Onvista Finanzportal 2020)⁴⁷.

Slowing, stopping and reversing the increase in annual global CO₂ emissions is as urgent a task as limiting the number of infections per day so as not to overburden the health system.

9. Global networking of risks

Coping with climate change is not a stand-alone issue, but is linked to many other factors (Figure 6).

The main measures to be taken are a rapid and drastic reduction in global greenhouse gas emissions and a doubling of the development of renewable energy sources at least every five years (e.g.: ROCKSTRÖM, J., 2017, QUASCHNING 2016⁴⁸, Wuppertal Institut 2020, Hentschel, K.M. et.al. 2020, Prognos, Öko-Institut, Wuppertal-Institut 2020).

According to this year's environmental report⁴⁹ for the limitation of global warming in Germany: "The analogous calculation for a 50% probability of reaching the 1.5°C target results in a CO₂ budget for Germany of 4.2 gigatonnes of CO₂ from 2020. If emissions remained the same, it would already be consumed in 2026, with linear reduction in 2032" (SRU 2020, S. 52).

⁴⁵ <https://fffutu.re/nA1VZ2>

⁴⁶ <https://fffutu.re/sVixG2>

⁴⁷ <https://fffutu.re/vHx58g>

⁴⁸ <https://fffutu.re/co4Hip>

⁴⁹ <https://fffutu.re/miTDzu>

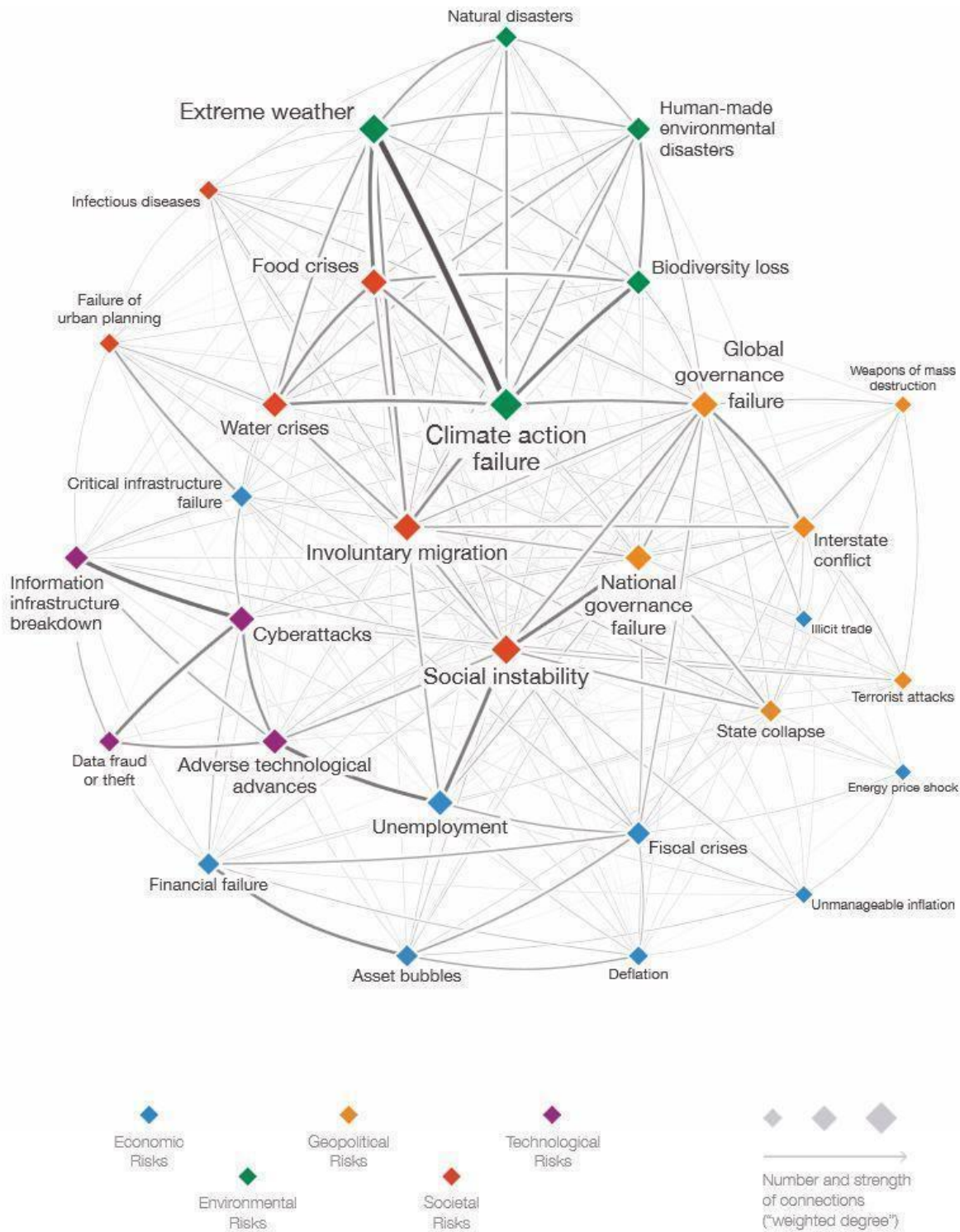


Figure 6: Network diagram of global risks (WORLD ECONOMIC FORUM 2020)⁵⁰

⁵⁰ <https://fffutu.re/JEDdHI>

In October 2020 the WUPPERTAL Institut⁵¹ outlined a possible reduction path for Germany in a meta-analysis on this basis:

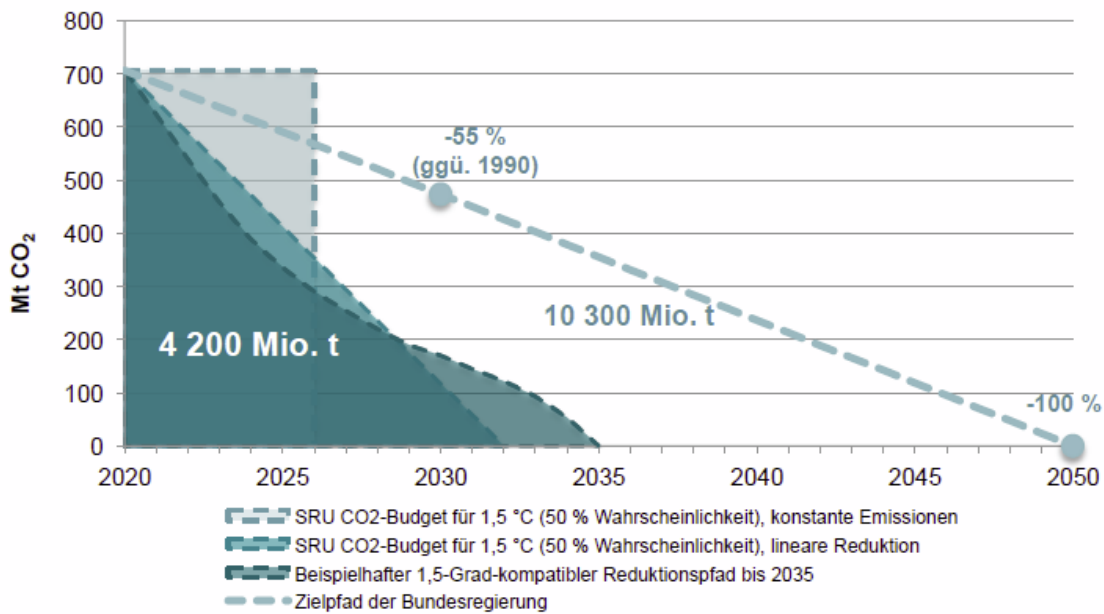


Figure 7: Exemplary emission path for compliance with the German 1.5°C budget at 50% probability of occurrence, including current targets of the German government (Wuppertal Institut 2020, S. 11)

A slightly higher certainty of 67% probability of occurrence conversely means a lower residual budget of 2.5 gigatonnes CO₂ from 2020 (SRU 2020, S.52).

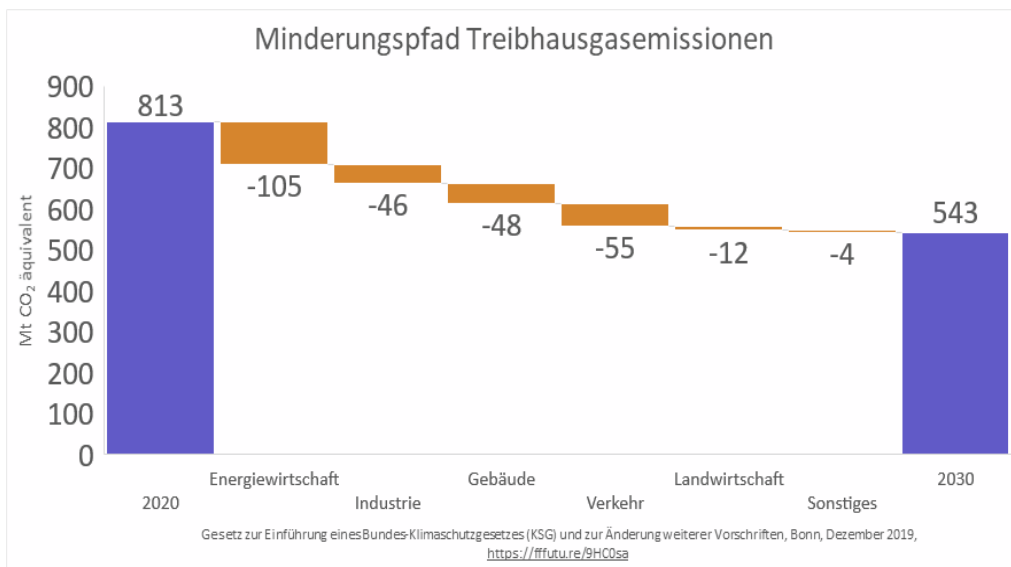


Figure 8: Statutory savings from the German Climate Protection Act (KSG)

The German Climate Protection Act (KSG)⁵² already prescribes in Article 3, first sentence, the emission savings shown in Figure 8. Emissions in Germany must be reduced by at least 55% compared with the reference year 1990.

⁵¹ <https://fffutu.re/oE42CO>

⁵² <https://fffutu.re/9HC0sa>

Further adjustments will have to be made as a result of the tightening up from the EU, which has a direct effect on the third sentence of Article 3 of the KSG (see Figure 9):

“ Even if the EU reduction target for 2030 is raised from 40 to 55 percent, Germany will still be required to make a contribution in the region of 65 percent. In the energy sector, emissions can be reduced by 207 million tonnes by 2030 CO₂Äq.

Compared to the sectoral target of the Climate Protection Act, the additional savings amount to 77 million tonnes CO₂Äq.

This will be achieved primarily through an accelerated coal phase-out in 2030 and the increased use of renewable energies for electricity generation. In the context of a tightening of the EU reduction target to 55 percent and an adjustment of the EU ETS, the coal phase-out by 2030 will probably be largely "driven by the then changed market conditions for coal-fired electricity generation". (Prognos, Öko-Institut, Wuppertal-Institut (2020) S.17f).

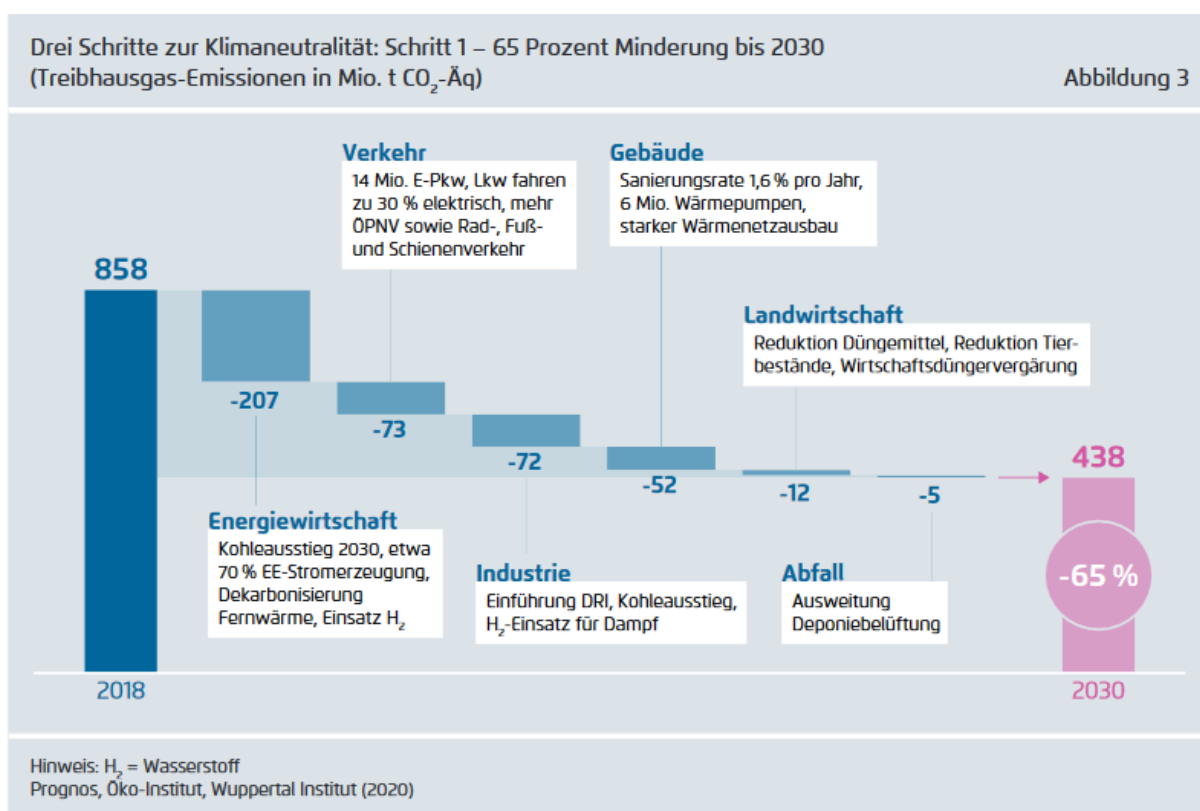


Figure 9: Prognos, Öko-Institut, Wuppertal-Institut (2020): Coal phase-out by 2030 is possible and necessary⁵³

10. Climate complaints

The climate targets of the Federal Republic of Germany are therefore currently far from sufficient to meet the Paris Climate Protection Agreement and the legal requirements, such as the KSG.

Accordingly, climate complaints to the Federal Constitutional Court are likely to be successful.

In the case of GÖPPEL et.al. vs. FRG, the plaintiffs clearly show that "the legislator does not even aim to achieve the level of protection required by fundamental rights - zero emissions in a maximum of two decades - and thus does not even state that this is its objective"⁵⁴ (HEß, EKARDT 2020, S.20). Both the

⁵³ <https://fffutu.re/aWgRCL>

⁵⁴ <https://fffutu.re/gycbxa>

expert opinion prepared for the procedure by the BMU and the expert opinion of the BMWi come to the clear conclusion that the Federal Republic of Germany is failing to meet the climate targets laid down in the Climate Protection Programme 2030 in all sectors except waste management (ebd., S. 10f).

11. The importance of the State of NRW for compliance with the Paris Climate Protection Agreement

The industrial and energy state of NRW has a responsible role to play in Germany. The draft key decision "A Sustainable Perspective for the Rhine Region" ("Eine nachhaltige Perspektive für das Rheinische Revier⁵⁵") must therefore be formulated in such a way as to ensure compliance with the Paris Climate Protection Agreement and the relevant laws and regulations in Germany and Europe.

As an innovation leader, the State of NRW must make every effort to ensure that the earth's temperature will most probably fall below 1.5°C.

If the residual quantities for the Garzweiler and Hambach open-cast mines are calculated in line with the DIW report⁵⁶ for limiting global warming to 1.5°C with a probability of 67%, the Hambach and Garzweiler open-cast mines have a maximum total emission quantity of 0.1 Gt CO₂ from 2020 (DIW 2020, p. 12f, own calculation see Table 1

Table 1: Global CO₂ budgets in gigatonnes of CO₂ from the IPCC Special Report (SRU 2020, S. 46)

Remaining global CO ₂ budget (without additional impacts on the Earth system) as of Jan 2018		
Erderhitzung / °C	Wahrscheinlichkeit 50 %	Wahrscheinlichkeit 67 %
1,5	580	420
1,75	1.040	800

German CO ₂ -Budget bei 1,1% Bevölkerungsanteil ab 01.01.2018		
Erderhitzung / °C	Wahrscheinlichkeit 50 %	Wahrscheinlichkeit 67 %
1,5	6,4	4,6
1,75	11,4	8,8

⁵⁵ <https://fffutu.re/74m1WP>

⁵⁶ <https://fffutu.re/9ZE86x>

Deutsches CO ₂ -Budget abzüglich 2018 (0,859 Gt) und 2019 (0,805 Gt) ab 01.01.2020		
Erderhitzung / °C	Wahrscheinlichkeit 50 %	Wahrscheinlichkeit 67 %
1,5	4,7	3,0
1,75	9,8	7,1

CO ₂ budget for lignite-based electricity generation from the Hambach and Garzweiler open-cast mines in NRW (4% share) as of Jan 2020		
Erderhitzung / °C	Wahrscheinlichkeit 50 %	Wahrscheinlichkeit 67 %
1,5	0,2	0,1
1,75	0,4	0,3

In terms of raw lignite, about 1 tonne of carbon dioxide is released per tonne of coal burned ⁵⁷ (BUND).

If the State of NRW is to achieve its climate targets, the additional production volumes from the Hambach and Garzweiler opencast mines must be **fixed at a maximum total of 100 million tonnes**.

12. Climate change impacts in Germany and NRW today: Increasing droughts make it more difficult to fill the remaining lakes

The original and continually updated plans for the Hambach open-cast mine state that "it can take up to 14 years to fill the lake. Due to the rapidly decreasing gradient, it would still take **450 years** to replenish the groundwater. (Geologisches Landesamt NRW, 1977, S.103).

However, this does not take into account the fact that the rivers Niers and Nette in the municipality of Keyenberg already regularly have very low water levels or are drying up, and that in Brandenburg it is already impossible to fill much shallower remaining lakes⁵⁸. The Rhine will also increasingly have low water in summer, so that no filling can be diverted from there. In Germany it has been significantly too dry in the last 10 years, and it is highly likely that this will increase in the coming decade (cf. Figure 10).

For this reason, the concepts developed by civil society (e.g. Revierperspektiven Rheinland 2020) for shaping the remaining lake with significantly less depth and the renunciation of the excavation of the "Mannheim Bay"⁵⁹ must be included in the planning of the state of NRW. As a result, the residual lake volumes, especially in the Hambach opencast mine, can be massively reduced.

It is not comprehensible to the local population why the parts of the Sophienhöhe spoil heap and the elevated inner dump at the Hambach open-cast mine which have not yet been recultivated were not included in the previous planning.

⁵⁷ <https://fffutu.re/8R3EyK>

⁵⁸ <https://fffutu.re/tdk8Ws>

⁵⁹ <https://fffutu.re/ML5Tur>

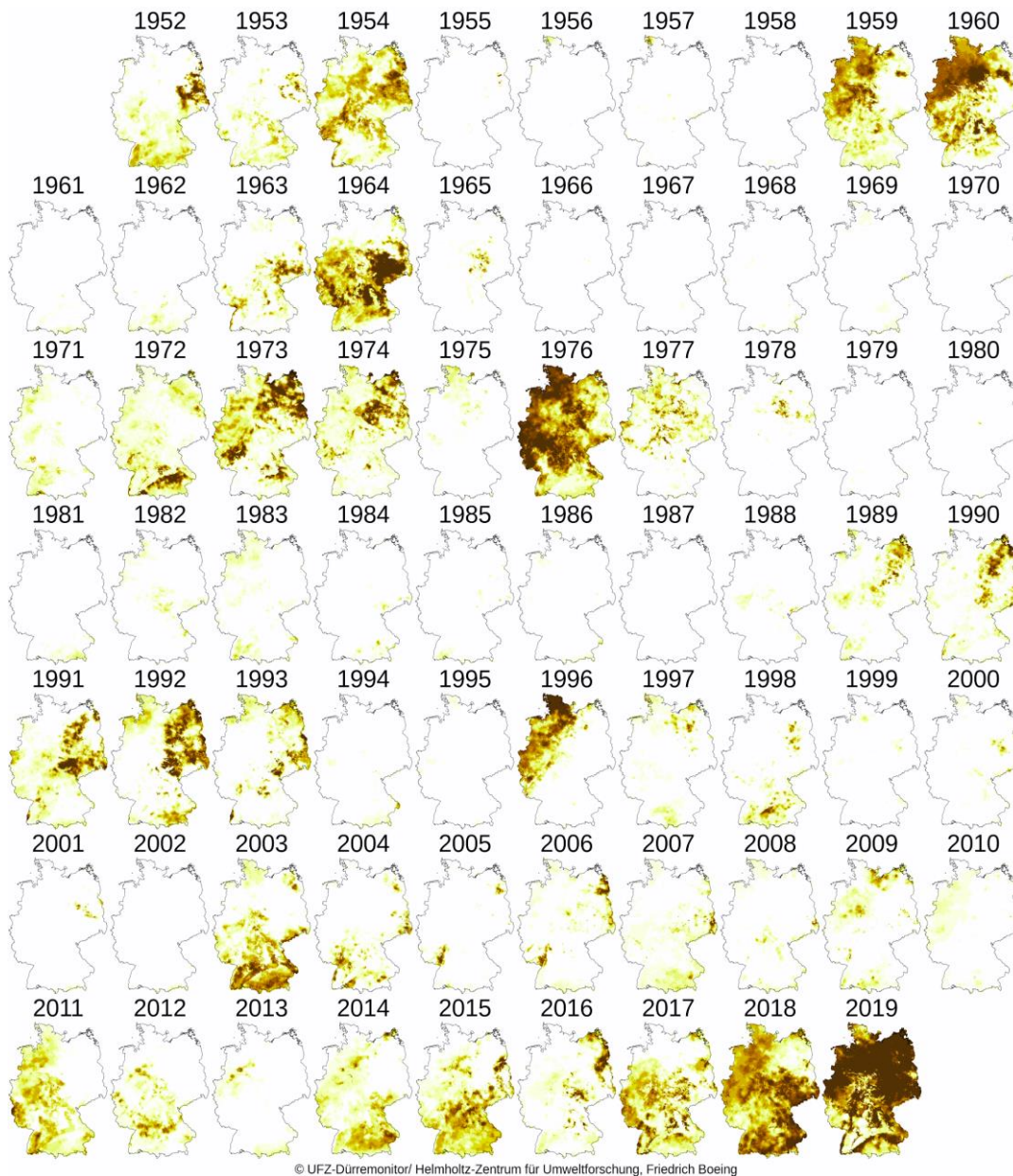


Figure 10: Drought magnitudes in the total soil in the growing season April to October ⁶⁰

⁶⁰ <https://fffutu.re/3a8TCX>

We are convinced that the draft leading decision in its current version is untenable for the reasons set out here and for other reasons to be pointed out. We, our local groups and people from our surroundings reserve the right to make additions to this opinion up to the submission deadline.

Alternative

If, despite statements to the contrary from citizens, associations and interest groups, the State of NRW insists on the draft lead decision from October 2020, the following Bundesrat initiatives must be launched in parallel with the lead decision:

- Germany's withdrawal from the Paris climate protection agreement
- Significant amendment to the Climate Protection Act (KSG)
- Exit from the EU

Without these initiatives, it will not be possible to implement the state planning resulting from the lead decision in a legally secure manner.

We look forward to your feedback and remain

With kindest regards

i.A.

Parents for Future GERMANY

Christians for Future

Teachers for Future GERMANY

Grandparents for Future Deutschland

Sources used (alphabetical order)

AON 2020: Weather, Climate & Catastrophe Insight, 2019 Annual Report, Chicago, 2020, <https://fffutu.re/5lseSs>

BUND: Klimaschutz heißt Braunkohlenausstieg, <https://fffutu.re/8R3EyK>

Bezirksregierung Köln 2017: Informationsveranstaltung am 22.05.2017 zum Braunkohlenplanverfahren Garzweiler II; Sachlicher Teilplan Sicherung einer Trasse für die Rheinwasser Transportleitung, Köln, Mai 2017, <https://fffutu.re/vW2jL>

Bundesgesetzblatt 2019: Gesetz zur Einführung eines Bundes-Klimaschutzgesetzes (KSG) und zur Änderung weiterer Vorschriften, Bonn, Dezember 2019, <https://fffutu.re/9HC0sa>

Bundesgesetzblatt 2020: Gesetz zur Reduzierung und zur Beendigung der Kohleverstromung (KVBG) und zur Änderung weiterer Gesetze (Kohleausstiegsgesetz), Jahrgang 2020 Teil I Nr. 37, Bonn, August 2020, <https://fffutu.re/l0poc8>

Bürgerrat Demokratie 2020: Klima-Bürgerrat: „Ein Beispiel für uns alle“, <https://fffutu.re/LAqqt0>

Calel, R., Chapman, S.C., Stainforth, D.A. *et al.* Temperature variability implies greater economic damages from climate change. *Nat Commun* **11**, 5028 (2020). <https://doi.org/10.1038/s41467-020-18797-8>

CDU/CSU-Bundestagsfraktion 2020: Für einen „Green Deal“ – Klimaschutz und nachhaltige Entwicklung mit wirtschaftlicher Erholung, Wettbewerbsfähigkeit, sozialer Ausgewogenheit und Stabilität verbinden, Mai 2020, <https://fffutu.re/2fkRkg>

C-Net 2020: China's biggest-ever solar power plant goes live, Oktober 2020, <https://fffutu.re/84bGe4>

Deutsches Klima-Konsortium et. al. 2020: Was wir heute übers Klima wissen BASISFAKTEN ZUM KLIMAWANDEL, DIE IN DER WISSENSCHAFT UNUMSTRITTEN SIND, Stand: September 2020, <https://fffutu.re/Mj538G>

DIW 2020: Politikberatung kompakt 150 - Garzweiler II: Prüfung der energiewirtschaftlichen Notwendigkeit des Tagebaus, Berlin, Mai 2020, <https://fffutu.re/9ZE86x>

Drawdown 2020: Sector Summary Electricity, <https://fffutu.re/kmlp3w>

Europäische Kommission 015): Übereinkommen von Paris, <https://fffutu.re/g08w56>

Exponential Roadmap 2020: Scaling 36 solutions to halve emissions by 2030, <https://fffutu.re/FYR89N>

FAZ 2020a: Wegen Kohleproduktion: Norwegischer Ölfonds schließt RWE aus, <https://fffutu.re/vMOwzx>

FAZ 2020b: Steuerzahlerbund - Wie der deutsche Staat das Geld seiner Bürger verschwendet, <https://fffutu.re/NgMYO1>

Fink, L. 2020: A Fundamental Reshaping of Finance, Blackrock Inc., Januar 2020, <https://fffutu.re/d6Hg1b>

Fossil Free Berlin 2020: Fieberige Finanzen, Berlin, September 2020, <https://fffutu.re/awnWpp>

Gaffney, O. 2020: The finance industry's path toward 1.5°C, based on the Exponential Roadmap's 36 solutions to halve emissions by 2030 and how to scale them, Exponential Roadmap Initiative, Stockholm Resilience Centre and Potsdam Institute for Climate Research., *Earth Day Conference 2020*, <https://fffutu.re/SmULIs>

Geologisches Landesamt NRW: Tagebau Hambach und Umwelt, Krefeld, 1977

Handelsblatt 2020a: World Energy Outlook: Wie Corona den Energiemarkt neu ordnet, Düsseldorf, Oktober 2020, <https://fffutu.re/rI9xSP>

Handelsblatt 2020b: BUSINESS BRIEFING NACHHALTIGE INVESTMENTS - Staatliche Geldanlagen forcieren Klimawandel, Düsseldorf, 09.10.2020, <https://fffutu.re/StiwL5>

Harari, Y. N. 2020: The world after coronavirus, Financial Times, März 2020, <https://fffutu.re/XRjvJZ>

Heß, F., Ekardt, F. 2020: Verfassungsbeschwerde Göppel J. u.a., 1 BVR 2656/18, Erwiderung auf die Schriftsätze der Gegenseite, 64S/18 FH-sk vom 15. Juni 2020, <https://fffutu.re/gycbxa>

Hentschel, Karl-Martin et.al. 2020: Handbuch Klimaschutz, oekom verlag München, 2020, <https://fffutu.re/SSQGcm>

Ibisch, Pierre L. & Blumröder, Jeanette S. (2020): Hambacher Forst in der Krise 2020: Aktuelle Beurteilung des Entwurfs einer neuen Leitentscheidung „Neue Perspektiven für das Rheinische Braunkohlerevier“ der nordrheinwestfälischen Landesregierung vom 6.10.2020, Centre for Ecnics and Ecosystem Management an der Hochschule für nachhaltige Entwicklung Eberswalde, Oktober 2020, <https://fffutu.re/9OUcnG>

IEEFA 2020: Grid scale battery costs have reached a tipping point, <https://fffutu.re/nKXRVF>

Kölle for Future 2020a: Kohleverstromung ist nicht mehr wirtschaftlich, <https://fffutu.re/HxSxOs>

Kölle for Future 2020b: Kommunalwahlen 2020 - Forderungen für ein klimaneutrales Köln, <https://fffutu.re/L9mdMB>

Klimaallianz Deutschland e.V. 2020a: Zivilgesellschaft nicht ausreichend beteiligt, Pressemitteilung vom 16. Oktober 2020, <https://fffutu.re/Wq71jE>

Klimareporter 2020: Blackrock sieht hohes deutsches Klimarisiko, Oktober 2020, <https://fffutu.re/O18FUF>

Landesamt für Natur, Umwelt und Verbraucherschutz Nordrhein-Westfalen 2019: Fachbeitrag des Naturschutzes und der Landschaftspflege für die Planungsregion des Regierungsbezirks Köln, Recklinghausen, <https://fffutu.re/ADQ4z0>

Landesamt für Natur, Umwelt und Verbraucherschutz Nordrhein-Westfalen 2018: Fachbeitrag Klima für die Planungsregion Köln, Recklinghausen, <https://fffutu.re/PGivth>

LMBV: Wasserzuleiter zum Klinger See wird vorerst zurückgestellt, Oktober 2020, <https://fffutu.re/tdk8Ws>

McKinsey 2020: Climate risk and response, <https://fffutu.re/4yS7OX>

MunichRe 2020: Klimawandel - Eine der größten Herausforderungen für die Menschheit – Unsere Antworten, <https://fffutu.re/PYORLD>

Naam, R.2020: Solar's Future is Insanely Cheap, Mai 2020, <https://fffutu.re/MYGXEE>

NRW 2020a: Entwurf einer Leitentscheidung der Landesregierung von Nordrhein-Westfalen zur Zukunft des Rheinischen Braunkohlereviere / Garzweiler II: Eine nachhaltige Perspektive für das Rheinische Revier, Düsseldorf, Juli 2020, <https://fffutu.re/74m1WP>

Parents for Future Germany 2020a: Grundvortrag Klima, Seite 14, Revision 36 vom 06.04.2020, <https://fffutu.re/nA1VZ2>

Parents for Future Germany 2020b: Beschwerde über das Kohleausstiegsgesetz bei der EU-Kommission, Juli 2020, <https://fffutu.re/Z6rosr>

Parents for Future Germany 2020c: DIE EU MÖCHTE BÜRGER IN FRAGEN ZUM KLIMASCHUTZ STÄRKER BETEILIGEN! in: Newsletter 09/2020, <https://fffutu.re/uLnN5f>

Pinzler, P. 2020: Der Kohleausstieg geht billiger, besser und klimafreundlicher, Zeit, Mai 2020, <https://fffutu.re/kVbO8l>

Prognos, Öko-Institut, Wuppertal-Institut 2020: Klimaneutrales Deutschland. Zusammenfassung im Auftrag von Agora Energiewende, Agora Verkehrswende und Stiftung Klimaneutralität, <https://fffutu.re/aWgRCL>

Ökoinstitut 2020: Einordnung der geplanten Entschädigungszahlungen für die Stilllegungen deutscher Braunkohlekraftwerke im Kontext aktueller Entwicklungen, Berlin, Juni 2020, <https://fffutu.re/zsLXwm>

Onvista Finanzportal 2020: Von der Leyen setzt trotz Corona-Krise weiter auf Klimaschutz, März 2020, <https://fffutu.re/vHx58g>

Quaschnig, V., 2016: Sektorkopplung durch die Energiewende. Anforderungen an den Ausbau erneuerbarer Energien zum Erreichen der Pariser Klimaschutzziele unter Berücksichtigung der Sektorkopplung, Hochschule für Technik und Wirtschaft Berlin, <https://fffutu.re/co4Hip>

Revierperspektiven Rheinland 2020: Zivilgesellschaft fordert alternatives Planungskonzept zu RWE-Entwürfen: Konzept von ZKS/ANSEV sichert Erhalt von Wald und Dörfern, Kerpen, Juni 2020, <https://fffutu.re/ML5Tur>

Robins, N. 2020.: Keynote Sustainable Finance, Grantham Institute/London School of Economics, Earth Day Conference 2020, <https://fffutu.re/gjZJFG>

Rockström, J. et al.: A roadmap for rapid decarbonization. In: Science. Band 355, Nr. 6331, 2017, S. 1269–1271, doi:10.1126/science.aah3443, <https://fffutu.re/4lgw3M>

Sachs J. 2020, Circular economy and consumption, Center for Sustainable Development, Columbia University, Earth Day Conference 2020, <https://fffutu.re/hzyERc>

Spiegel 2020: "Hundert Millionen Menschenleben, Billionen von Dollar", Hamburg, Januar 2020, <https://fffutu.re/gOrsoj>

Spiegel 2020b: Bund und Länder investieren stark in fossile Aktien, Hamburg, 21.09.2020, <https://fffutu.re/NVL2xZ>

SRU 2020: Für eine entschlossene Umweltpolitik in Deutschland und Europa, Umweltgutachten 2020, Berlin. <https://fffutu.re/miTDzu>

Tagesspiegel 2020: Schäuble will dem Schutz des Lebens nicht alles unterordnen, April 2020, <https://fffutu.re/sVlxG2>

UFZ Helmholtz 2020: Jährliche Dürrestärken in Deutschland, <https://fffutu.re/3a8TCX>

World Economic Forum 2020: The Global Risks Report 2020, 15th Edition, <https://fffutu.re/jEDdHI>

Wuppertal Institut 2020: CO₂-neutral bis 2035: Eckpunkte eines deutschen Beitrags zur Einhaltung der 1,5-°C-Grenze. Bericht. Wuppertal. <https://fffutu.re/oE42CO>

ZKS (Zivilgesellschaftlicher Koordinierungskreises Strukturwandel) 2020: Raumkonzept „Bürgewälder vernetzen“, <https://fffutu.re/NFNGOi>