Climate Neutrality Foundation

How to increase the availability of land for onshore wind energy rapidly and with legal certainty

Regulatory proposal

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The study "Towards a Climate Neutral Germany" has shown that an installed capacity of 80 GW of onshore wind will be needed by 2030. This figure increases to 130 GW by 2050. However, at the end of 2020, just under 55 GW was installed.

On the way to a climate-neutral economy, wind energy will become the most important energy source in Germany and thus a precondition for security of supply. Without it, the supply of CO_2-free energy to the mobility, building and industrial sectors cannot succeed.

We have commissioned the onshore wind energy agency to estimate the tender volumes and expansion corridors that will be required in the future. The agency concludes that, assuming a realistic project realization rate, tender volumes of 6.5 GW per year will be required in the 2020s (background paper in German available on our website).

The expansion of onshore wind energy has slumped massively in the last three years. One of the main reasons is a lack of available land. According to current estimates, the transformation to climate neutrality will require an average of 2% of state and municipal land for wind energy. We are still a long way from this, with 0.9% so far.

Stiftung Klimaneutralität has commissioned a legal opinion to investigate which changes to planning law are necessary to make sufficient qualified areas available for onshore wind energy. The expert opinion was prepared by Prof. Martin Kment (University of Augsburg), a recognized expert in environmental and planning law.

Prof. Kment first examined why the current regulatory structure of the Federal Building Code (Baugesetzbuch, BauGB), its application in the municipalities and the related case law of the administrative courts have not led to the provision of sufficient areas. He then made proposals for legal changes that would allow sufficient areas to be made available for wind energy in the future.

Today, wind energy plants are to be erected in the so-called external area. These are all areas that cannot be assigned to the planned and unplanned inner area of a municipality. Approval under building law (in the course of the approval procedure in accordance with the Federal Immission Control Act) is based on Section 35 of the Federal Building Code. There it is regulated in paragraph 1 number 5 that wind energy plants belong to the projects which are permissible in the external area "if public interests do not oppose". In Section 35, Paragraph 3, Sentence 3 of the BauGB, the legislature has introduced a provision which states, mutatis mutandis, that municipalities or the regions or the state can designate so-called concentration zones by way of a land use plan or regional planning, which restricts the erection of wind turbines in outdoor areas to these designated areas. Wind turbines can then no longer be approved in the remaining outdoor areas.

In practice, concentration zone planning has become the subject of numerous legal disputes. In the final instance, the Federal Administrative Court has developed special requirements that land use

and regional plans as well as regional planning objectives must meet if they want to spatially concentrate wind energy plants. In essence, the aim is to create substantial space for the use of wind energy; negatively impacting prevention plans are not permissible. However, the case law of the Federal Administrative Court, which was originally developed as an aid for municipalities and regional planning authorities, has proven to be a disservice. Many planning authorities are unable to meet the demanding requirements of the Federal Administrative Court and fail with their plans before the administrative courts.

Against this background, we propose the following regulatory approach:

1. the legislator determines the required area for wind energy use in Germany by means of a positive legal, political decision. According to current estimates, this is an average of 2% of state and municipal land if the goal of climate neutrality is taken as a basis.
2. the legislature applies uniform rules to calculate an area share for each municipality and state. This is the wind energy contribution value. It is determined for all municipalities in the unit of measurement of km² in an annex to the law. This proposal is based on the assumption that all municipalities and all states make an appropriate contribution to climate neutrality and that no one should avoid doing so.
3. there is no obligation to plan and designate concentration zones for wind energy. Consequently, there is no transfer of new or additional tasks by the federal government to the municipalities.
4. however, in the future, only those concentration zones which correspond at least to the respective wind energy contribution value will have an exclusion effect for wind energy plants in the remaining outer area. This creates an incentive to provide sufficient areas for wind energy with positive planning.
5. several municipalities can jointly provide their wind energy contribution values through joint land use plans or regional land use plans.
6. regional planning authorities and federal states can designate areas for wind energy with the help of regional planning instead of the municipalities. The regional planning plans have a concentration effect (only) if these areas at least correspond to the sum of the wind energy contribution values of the municipalities.
7. a simple and fast test procedure is introduced to determine whether a municipality or several of them together, a regional planning authority or a state with spatial planning for its territorial authorities at least meets the wind energy contribution values. In essence, the test is only about whether the size of the designated concentration zones (in km²) at least meets the wind energy contribution value in the annex to the Act. The competent review body could be a federal authority or state authorities. Area certificates that are not confirmed within three months are considered approved. Confirmations are limited in time in order to be able to react to undesirable developments in the future.

Regardless of whether concentration zone planning is carried out or not, the rule of § 35 of the Federal Building Code that public concerns must not conflict with the project at the specific location remains in force for all wind turbines in the external area. Thus, an examination of the respective individual case will continue to take place within the framework of the plant approval procedure.

This proposal should and can make a significant contribution to accelerating the necessary expansion of wind energy. Nevertheless, beyond the legally secure and sufficient designation of areas, there are a number of further obstacles to the expansion of wind energy that need to be addressed by additional measures, e.g. with regard to regulations on species protection and licensing law. For these issues, Climate Neutrality Foundation will also develop and present proposals for solutions.

Determination of the wind energy contribution value

For the determination of the wind energy contribution value for each municipality in Germany, we propose a mathematical procedure. This is explicitly not intended as a first planning step or as a pre-selection of possible concentration zones. It is simply a transparent and objective procedure that adequately takes into account the different conditions in the municipalities when assessing the wind energy contribution value. There are densely and sparsely populated communities; and there are those with more and with less wind. A uniform value of 2% of the total area for all municipalities would hardly be justifiable. Therefore, we propose the following procedure:

In a first step, a set of criteria based on officially available geo-information is used to determine which areas are not included in the calculation of wind energy contribution values as so-called exclusion areas. Only those exclusion areas were included in the list that are uniformly denied wind energy use nationwide for legal or factual reasons and are regularly confirmed by the courts. On the other hand, the list does not include categories of areas that are not generally excluded by the courts. As a result, the exclusion areas used as a basis for calculating the wind energy contribution values are:

1. settlement areas with residential use as well as weekend and vacation home areas (each plus 400 m distance zone);
2. areas for sports, leisure and recreation, allotments and cemeteries;
3. airports, landing fields, glider airfields;
4. civil air traffic control facilities (plus 600 m distance zone);
5. federal trunk roads, federal highways and state, county and municipal roads (plus 50 m distance zone);
6. railroad lines (plus 50 m distance zone);
7. federal waterways (plus 50 m distance zone);
8. high-voltage overhead lines (plus 100 m distance zone);
9. restricted military areas and properties;
10. world cultural heritage (core zone);

11. water protection areas and medicinal spring protection areas, each zone 1 (radius of 50 m around catchment area);
12. first-order running waters and standing waters (from 1 ha, § 61 BNatSchG) (plus 100 m distance zone);
13. floodplains according to § 76 WHG and flood polders;
14. nature reserves (§ 23 BNatSchG);
15. national parks (§ 24 BNatSchG) and national nature monuments (§ 23 BNatSchG);
16. biosphere reserves (core and maintenance zone);

The respective areas are identified for each municipality and, taking into account overlaps, the calculated exclusion area is determined.

In a second step, a residual area is determined for each municipality as the difference between the municipality area and the calculated exclusion area. An analysis commissioned by Climate Neutrality Foundation from the Fraunhofer Institute for Energy Economics and Energy System Technology (IEE) shows that the sum of all exclusion areas determined according to the above criteria is approximately 57% of the total area of the Federal Republic. Accordingly, there is a residual area of about 43 %. Of this residual area, a proportion must be made available for wind energy use that corresponds in total to the required 2% of the total area. This requires an average of just under 5% of the total remaining area. This share forms the starting point for each municipality to determine the so-called wind energy contribution value.

In a third step, the wind energy contribution value is determined for each municipality from the calculated remaining area. For this purpose, in addition to the above-mentioned initial value, the wind accessibility in the respective federal state is taken into account. The wind energy contribution value in communities with a lot of wind should be larger than in communities with little wind. In total, the wind energy contribution values of all communities correspond to 2% of the total area of Germany. The individual values for each of the more than 11,000 municipalities in Germany are listed in a file available on our German website.

These respective wind energy contribution values provide the benchmark for determining whether the designated areas are sufficient to justify concentration zone planning. Which concrete areas are actually designated by the municipalities, regions or states is left to the local planning authorities. The values are to be understood as minimum values. Of course, the planning authorities can also designate significantly more areas for wind energy use.

Aggregated by federal states, the following picture emerges:

Federal State	Total area (km²)	Exclusion area (km²)	Remaining area (km²)	Sum of municipal wind energy contribution values (km²)	Sum of the municipal wind energy contribution values in % of the state area
Schleswig-Holstein	15813	10296	5517	385	≥ 2.4 %
Free and Hanseatic City of Hamburg	752	669	83	4	≥ 0.6 %
Lower Saxony	47707	28469	19238	966	≥ 2.0 %
Free Hanseatic City of Bremen	420	349	71	4	≥ 0.9 %
North Rhine-Westphalia	34095	25825	8270	377	≥ 1.1 %
Hesse	21099	10560	10539	456	≥ 2.2 %
Rhineland-Palatinate	19847	11020	8828	382	≥ 1.9 %
Baden-Wuerttemberg	35723	19681	16042	671	≥ 1.9 %
Free State of Bavaria	70553	41686	28867	1.208	≥ 1.7 %
Saarland	2570	1874	696	30	≥ 1.2 %
Berlin	893	771	122	6	≥ 0.6 %
Brandenburg	29698	13716	15982	728	≥ 2.5 %
Mecklenburg-Western Pomerania	23308	11160	12148	678	≥ 2.9 %
Free State of Saxony	18477	10858	7620	347	≥ 1.9 %
Saxony-Anhalt	20554	9560	10994	501	≥ 2.4 %
Free State of Thuringia	16197	7380	8817	402	≥ 2.5 %
Germany	**357706**	**203873**	**153834**	**7145**	**≥ 2.0 %**

Source: Calculations by Fraunhofer IEE on behalf of the Climate Neutrality Foundation.

The procedure described above is part of the explanatory memorandum to the law. The resulting wind energy contribution values (in km²) for the municipalities become part of the law in an annex. The legislator has a wide margin of discretion in the calculation and determination. Whether he has complied with this can only be reviewed by the Federal Constitutional Court.

Both the stipulation of the need for areas for wind energy use and the amendments to the Building Code fall within the federal government's regulatory powers under Articles 72 and 74 of the Basic Law. This is concurrent legislation; the federal government can pass the necessary laws without the consent of the states; they apply nationwide without a right of deviation for the states.

What are the advantages of this proposal?

1. The path via an amendment to the Building Code is by far the fastest option for making sufficient areas available for wind energy. Nevertheless, the legislature will have to give the parties involved time with a transitional period of, say, two years to be able to plan sufficiently dimensioned concentration zones.

2. The federal states have no right to deviate from this legislation, which could jeopardize the achievement of the goal of making 2% of the federal territory available for wind energy.

3. There is no obligation to plan and designate concentration zones for wind energy. Consequently, there is no transfer of new or additional tasks by the federal government to the municipalities. However, there is a positive incentive to plan. Those who want to make use of concentration zone planning must make sufficient areas available for wind energy. There will be no more prevention planning.

4. Since the wind energy contribution value is determined for each municipality by the legislature, the regulation cannot be challenged before the administrative courts, but only before the Federal Constitutional Court. It could only fail if the Federal Constitutional Court concluded that the legislature had acted arbitrarily. If the legislature works carefully, this case cannot occur.