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<https://doi.org/10.26881/gsp.2022.3.08>

## **Investments in Offshore Structures from a German Perspective – Selected Aspects**

### **I. Investments in Renewable Energies**

In addition to conventional energy sources (fossil fuels such as coal, natural gas, and oil), renewable energies such as wind power, photovoltaics, and biogas are becoming increasingly important for electricity production in Germany. In 2020, around 500 billion kilowatt-hours of electricity were generated in Germany and fed into the power grid. The share of renewable energies in the amount of electricity generated and fed into the grid in Germany reached a new high. It rose from 42% in 2019 to 47% in 2020. At 26%, wind power was the first renewable energy source to have the highest share of the electricity fed into the grid in a given year, replacing coal as the most important energy source.<sup>1</sup> In the first half of 2021, the major part of electricity fed into the grid came from conventional energy sources (56.0%). Also in the third quarter of 2021, the percentage of renewable energy sources (Figure 1) was lower than conventional energy sources, but still very high. Most of the electricity produced and fed into the grid in Germany again came from conventional energy sources.<sup>2</sup>

There is no question that “Investments in renewable energies are investments in the future”.<sup>3</sup> In 2020, major investments (in billions of euros) in renewable energy plants involved investments in Photovoltaics (4.22 billion euros). However, second place in renewable energy investments was taken by wind power plants (1.97 billion euros). In 2022, 0.07 billion euros were invested in wind power at sea.<sup>4</sup>

<sup>1</sup> [https://www.destatis.de/DE/Themen/Branchen-Unternehmen/Energie/Erzeugung/\\_inhalt.html](https://www.destatis.de/DE/Themen/Branchen-Unternehmen/Energie/Erzeugung/_inhalt.html); date of [accessed: 2022.01.31].

<sup>2</sup> [https://www.destatis.de/EN/Press/2021/12/PE21\\_572\\_433.html](https://www.destatis.de/EN/Press/2021/12/PE21_572_433.html) [accessed: 2022.02.02].

<sup>3</sup> M.L. Wolff, “Investitionen in erneuerbare Energien sind Investitionen in die Zukunft”, *EnWZ* 2020, pp. 289.

<sup>4</sup> <https://www.statista.com/statistics/583563/investments-in-renewable-energy-plants-by-source-germany/> [accessed: 2022.02.05].

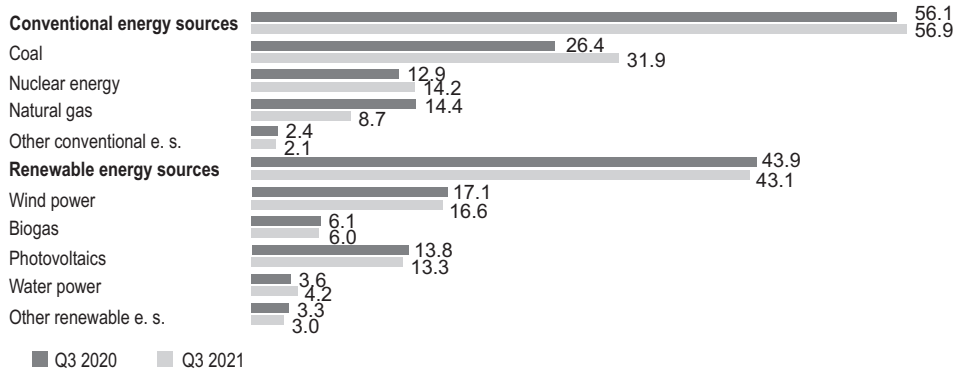


Figure 1: Electricity fed in from conventional and renewable energy resources 2020/2021 in percentages

Source: Federal Statistical Office 2022.<sup>5</sup>

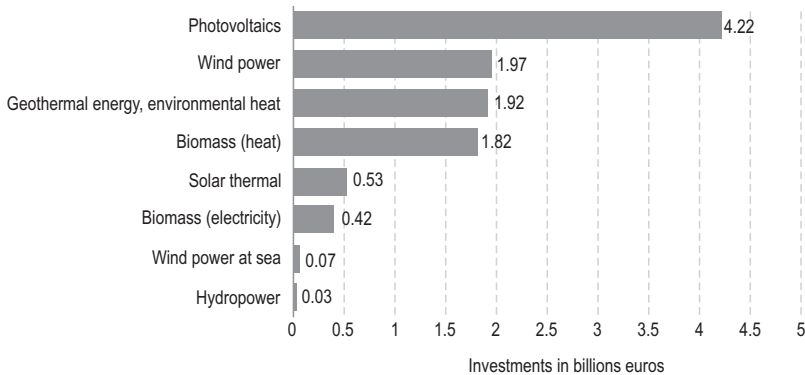


Figure 2: Investments in renewable energy plants in Germany in 2020, by energy source (in billion euros)

Source: Statista 2022.<sup>6</sup>

As the above data shows, most of the electricity generated from renewable energies in Germany comes from onshore wind turbines. However, it is precisely here that expansion has recently come to a severe standstill. There is still an increase in gross electricity generated from wind energy (see: Figure 3); however this is no longer increasing as fast as it used to.

<sup>5</sup> [https://www.destatis.de/EN/Press/2021/12/PE21\\_572\\_433.html?sessionid=8A655AEA1BBCDE9244355DE9E6F39127.live742](https://www.destatis.de/EN/Press/2021/12/PE21_572_433.html?sessionid=8A655AEA1BBCDE9244355DE9E6F39127.live742) [accessed: 2022.02.02].

<sup>6</sup> <https://www.statista.com/statistics/583563/investments-in-renewable-energy-plants-by-source-germany/> [accessed: 2022.02.02].

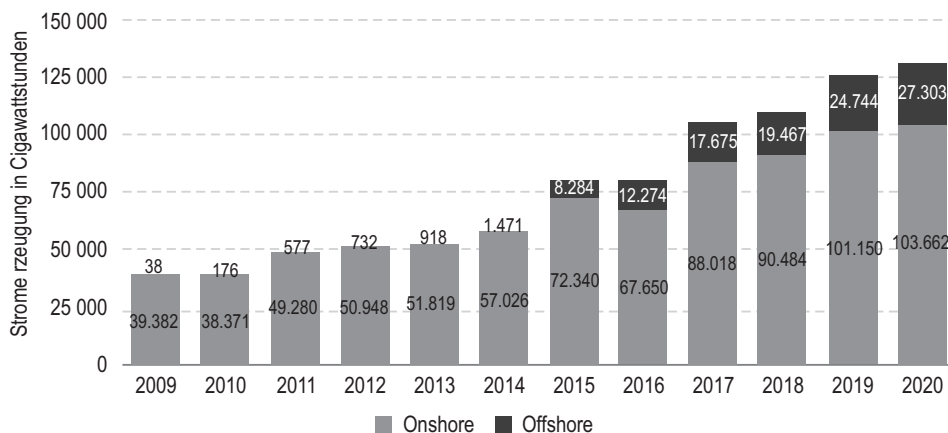


Figure 3: Gross electricity generation from wind energy in Germany by offshore and onshore structures in the years 2009 to 2020 (in gigawatt-hours).

Source: Statista 2022.<sup>7</sup>

As illustrated in Figure 2, gross electricity generation from wind energy in Germany by offshore structures is also growing very slowly. It should be noted, however, that wind energy at sea offers a lot of potential that is currently not being fully exploited. In 2020, 27,303 gigawatt-hours came from wind energy in Germany produced by offshore structures.

## II. Regulations Relating to Offshore Structures – International and EU Regulations for Exclusive Economic Zones and the High Seas

The development of offshore wind energy is closely linked to the development of international maritime law and European law. The point of reference is the United Nations Convention on the Law of the Sea (hereinafter UNCLOS), which in its art. 55 et seq. lays down detailed rules on the exclusive economic zone (EEZ) which shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.

The exclusive economic zone is not part of coastal state territory, but it is an area which is subject to a special system of international law. This regime, nevertheless, massively expands the regulatory powers of the coastal states in the area of the seas. The sovereign powers of the coastal state are standardised in art. 56 of UNCLOS. According to this article “the coastal State has:

(a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent

<sup>7</sup> <https://de.statista.com/statistik/daten/studie/270892/umfrage/stromezeugung-aus-windenergie-in-deutschland/> [accessed: 2022.02.05].

to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;

- (b) jurisdiction as provided for in the relevant provisions of this Convention with regard to: (i) the establishment and use of artificial islands, installations and structures; (ii) marine scientific research; (iii) the protection and preservation of the marine environment;
- (c) other rights and duties provided for in this Convention.”

It should be noted that art. 56 (1)(a) is drafted broadly so as to make it possible to extend the sovereign rights of the coastal state to other economically relevant uses of the EEZ.<sup>8</sup> As A. Proelss indicates, “the coastal State is thus given the possibility to take advantage of new technological developments, the only requirement for the legality of the exercise of sovereign rights arguably being that the activity concerned ought to be of economic relevance”.<sup>9</sup> In this regard, it is appropriate to especially draw attention to art. 56 (2), which indicates that the coastal state shall have due regard to the rights and duties of other states and shall act in a manner compatible with the provisions of UNCLOS.

The provisions of art. 56 play an important role in the construction and operation of wind farms. As offshore wind or wave energy production necessarily involves the operation of platforms and installations, art. 56 (1)(a) cannot be read in isolation from art. 56 (1)(b)(i) in conjunction with art. 60 UNCLOS.<sup>10</sup>

In comparison to art. 56 UNCLOS, art. 58 UNCLOS regulates rights and duties of other states in the exclusive economic zone. It is indicated in the literature (given the history) that the main purpose of art. 58 is to safeguard the interests of the major maritime states.<sup>11</sup>

According to international maritime law, the high seas are “no man’s land”. The high seas had, prior to UNCLOS, been negatively defined.<sup>12</sup> The application of the high seas regime embodied in UNCLOS, is to those waters “not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State”.<sup>13</sup> However, it cannot be said that the area of the high seas is diminished by the establishment of EEZs.<sup>14</sup> Article 86 Sentence 2 provides for the continued application of high seas freedoms in the EEZ under art. 58. The high

<sup>8</sup> A. Proelss, “Commentary to art. 56” [in:] *United Nations Convention on the Law of the Sea Commentary*, ed. *idem*, Oxford University Press, Oxford 2017, issue 17.

<sup>9</sup> *Ibidem* and the literature indicated there.

<sup>10</sup> A. Proelss, “Commentary to art. 56” [in:] *United Nations Convention...*, issue 19.

<sup>11</sup> D.R. Rothwell, T. Stephens, *The International Law of the Sea*, 2<sup>nd</sup> ed. 2016, p. 97

<sup>12</sup> D. Guilfoyle, “Commentary to art. 86” [in:] *United Nations Convention...*; D. Guilfoyle, “The High Seas” [in:] *The Oxford Handbook of the Law of the Sea*, eds D.R. Rothwell, A.G. Oude Elferink, K.N. Scott, T. Stephens, Oxford University Press, Oxford 2015, p. 203 *et seq.*

<sup>13</sup> Art. 86 UNCLOS.

<sup>14</sup> D. Guilfoyle, “Commentary to art. 86” [in:] *United Nations Convention...*

seas freedoms are not unqualified. Each state must accept restraints on its own freedom of action arising from other states having the same freedom of action.<sup>15</sup>

The European Union declared its general environmental law applicable to the EEZs of its Member States and established specific requirements for EEZs in the Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008, establishing a framework for community action in the field of marine environmental policy (hereinafter Marine Strategy Framework Directive 2008/56/EC).<sup>16</sup>

### III. Regulations of Offshore Construction in the Exclusive Economic Zone – German Regulations

The legal situation in Germany regarding offshore construction has changed over the years. The earlier legal regime obtained between 1997 and 2017, when the relevant national requirements were found in the provisions of the Maritime Tasks Act of 24 May 1965<sup>17</sup> and in the Offshore Installations Ordinance<sup>18</sup> issued on this basis. It should be noted that Germany established its EEZ with effect from 1 January 1995<sup>19</sup> and, thus, set the course for the massive expansion of the construction of offshore wind farms since the energy transition.

Nowadays, the installations and their constructions are regulated in the Offshore Wind Energy Act of 2016.<sup>20</sup> The aim of the Offshore Wind Energy Act is to increase the installed capacity of offshore wind energy installations to a total of 20 gigawatts between 2021 and 2030 and to a total of 40 gigawatts by 2040. This increase is to take place steadily, cost-efficiently, and taking account of the grid capacities needed for the purchase, transmission, and distribution of the electricity. The expansion of offshore wind energy installations and the expansion of the offshore connections needed to transmit the electricity generated in them are, therefore, to be coordinated, and are also to take into consideration the grid connection points on land.

The Act provides for a differentiated regime consisting of a) site development planning (Division 1), b) preliminary investigations of sites (Division 2), c) tender procedures, and d) subsequent plan approval, in which individual procedural steps fulfil

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<sup>15</sup> *Ibidem*.

<sup>16</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy; read more: A. Weiß, "Meeresstrategie-Rahmenrichtlinie: Auf dem Weg zu einem guten Umweltzustand der Meeresgewässer in Europa?", *ZUR* 2017, p. 331, beck-online.

<sup>17</sup> Gesetz über die Aufgaben des Bundes auf dem Gebiet der Seeschifffahrt vom 24. Mai 1965 (SeeAufgG) BGBl. 1965 II, 833.

<sup>18</sup> Verordnung über Anlagen seewärts der Begrenzung des deutschen Küstenmeeres (SeeAnIV) v. 23.1.1997, BGBl. 1997 I, 57.

<sup>19</sup> Die Proklamation über die Errichtung einer ausschließlichen Wirtschaftszone der Bundesrepublik Deutschland in der Nordsee und in der Ostsee v. 25.11.1994, BGBl. 1994 II.

<sup>20</sup> Gesetz zur Entwicklung und Förderung der Windenergie auf See (WindSeeG), BGBl. I S. 2258, 2310 last amended by art. 19 of the Act of 21 December 2020 (BGBl. I p. 3138).

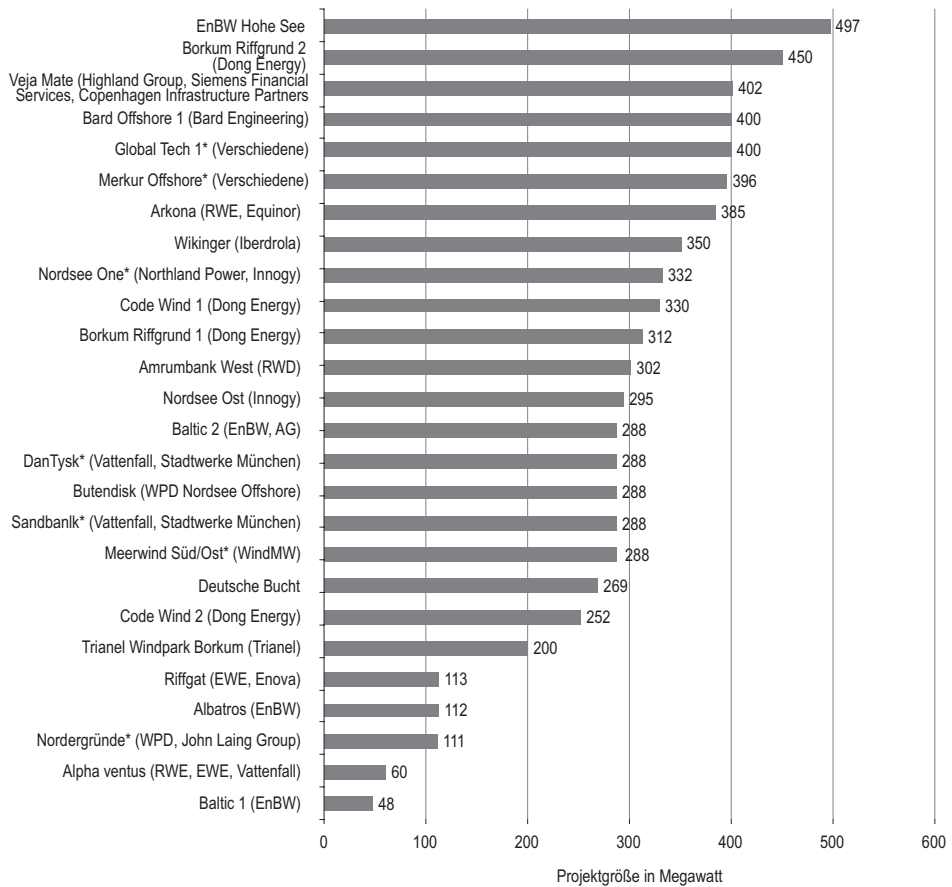


Figure 4: Nominal capacity of current and planned offshore wind farms in the North Sea and Baltic Sea in 2020

Source: Statista 2022.<sup>21</sup>

both planning and public procurement functions. Inclusion of already ongoing applications for approval in this regime<sup>22</sup> was considered highly controversial. In 2020, the Federal Constitutional Court declared the Offshore Wind Energy Act unconstitutional, when it did not provide for any compensation scheme for offshore wind farms already planned under the Offshore Installations Ordinance;<sup>23</sup> however, this infringement only led to a finding that the Act was incompatible with the German Basic Law. The legislature was obliged to make a new regulation by 30 June 2021 at the latest.

<sup>21</sup> <https://de.statista.com/statistik/daten/studie/222194/umfrage/offshore-projekte-in-nord-und-ostsee/> [accessed: 2022.02.07].

<sup>22</sup> W. Durner, "Planung, Finanzierung und Zulassung von Offshore-Windenergie – Grundfragen des maritimen Infrastrukturrechts", *ZUR* 2022, p. 3.

<sup>23</sup> BVerfG, Beschl. v. 30/06/2020 – und 1 BvR 2190/17, NVwZ-RR 2021, 177 ff., with note: Gebert, *RdE* 2021, p. 21.

Maritime Spatial Plan for the German exclusive economic zone in the North Sea and the Baltic Sea 2021 - Overview

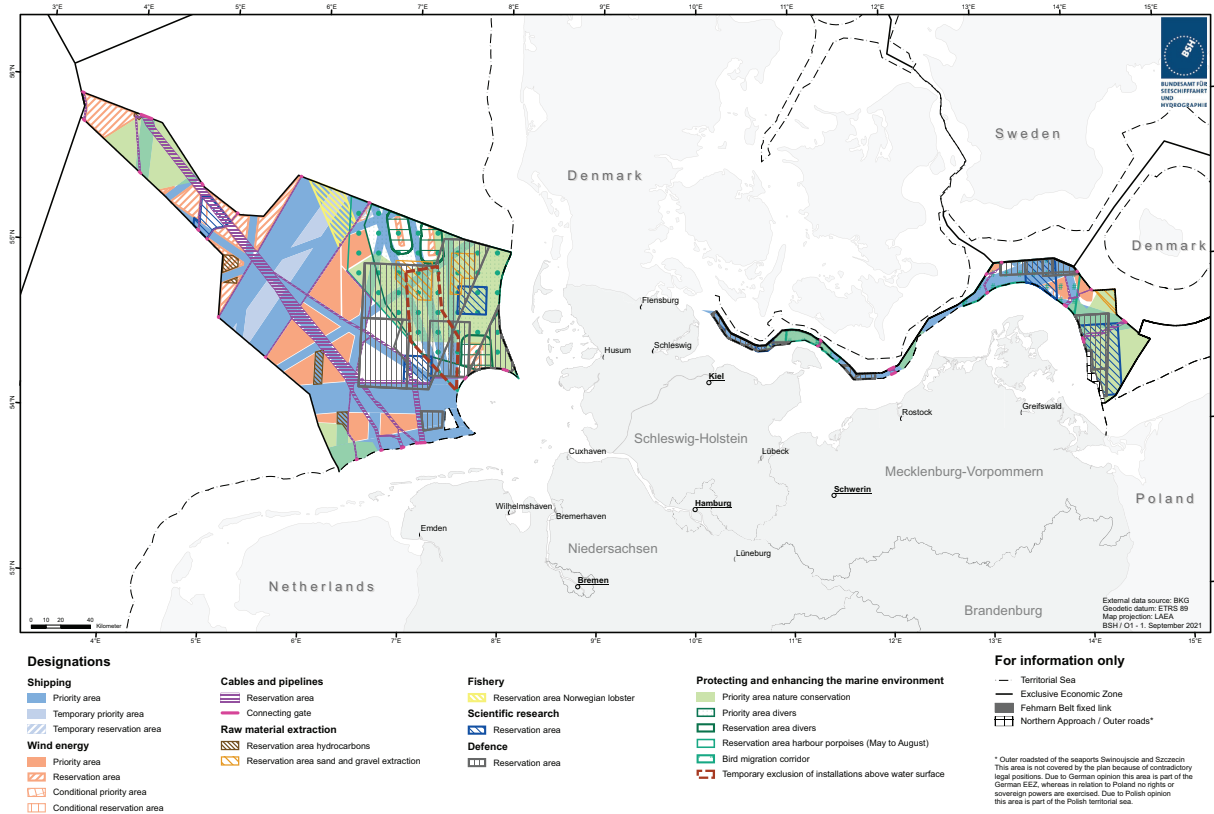


Figure 5: Maritime Spatial Plan for the German exclusive economic zone in the North Sea and the Baltic Sea 2021  
Source: Federal Maritime and Hydrographic Agency.<sup>24</sup>

<sup>24</sup> [https://www.bsh.de/DE/THEMEN/Offshore/Meeresraumplanung/meeresraumplanung\\_node.html](https://www.bsh.de/DE/THEMEN/Offshore/Meeresraumplanung/meeresraumplanung_node.html) [accessed: 2022.02.12].

In 2021, the new Ordinance on the Maritime Spatial Plan in the German exclusive economic zone (EEZ) in the North Sea and the Baltic Sea<sup>25</sup> was adopted. The new spatial development plan designated a number of priority and reserved areas for wind energy use. Compared to the 2009 spatial development plan, the number of priority areas in the North Sea has increased from 5 to 11, in addition to one conditional priority area in the north-east. At the same time, the area has roughly tripled.<sup>26</sup> The scope of the priority areas for wind power plants defined in the new spatial development plan is based, in particular, on the new expansion targets set by the German government in December 2020, which call for an installed capacity of at least 20 GW by 2020 (see: Offshore Wind Energy Act). In addition, eight reserved areas and one conditionally reserved area have been defined in the North Sea, most of which are located in the northern part of the German EEZ. The new Spatial Plan requires that the construction of wind power plants be coordinated.<sup>27</sup> As a first step in this process, reference is made to the instrument of the Site Development Plan, which was drawn up by the Federal Maritime and Hydrographic Agency (BSH) for the first time in 2019 and is constantly being further developed.

The use of offshore wind energy in German waters takes place primarily outside the 12-nautical-mile zone in the exclusive economic zone (see: Figure 5).<sup>28</sup> It should be emphasised that the Federal Government is responsible only for the exclusive economic zone but not for territorial waters, responsibility for which lies with governments of the Federal States.<sup>29</sup> Since 1997, the Federal Maritime and Hydrographic Agency has been responsible for the testing, approval, and monitoring of wind turbines and structures in the EEZ.<sup>30</sup> During recent years, the capacities of offshore wind energy have been expanded. By the end of 2017, the BSH had approved 34 wind farms with over 2,200 wind turbines and 9 converter platforms.<sup>31</sup> The nominal capacity of current and planned offshore wind farms in the North Sea and Baltic Sea are presented above in Figure 4. It should be noted that the EEZ is relatively small and has to accommodate other users, for example, shipping, fishing, military, and has to host cables for power and telecommunication.<sup>32</sup>

<sup>25</sup> Verordnung über die Raumordnung in der deutschen ausschließlichen Wirtschaftszone in der Nordsee und in der Ostsee (AWZROV), Bundesgesetzblatt Part I No. 58, p. 3886.

<sup>26</sup> M. Salomon, J. Schumacher, "Ein neuer Raumordnungsplan für die deutschen Meeresgebiete in der ausschließlichen Wirtschaftszone – ein Beitrag für den Meeresschutz?", *Natur und Recht* 2021, no. 43, p. 823.

<sup>27</sup> M. Salomon, J. Schumacher, "Ein neuer Raumordnungsplan für die deutschen...", p. 823.

<sup>28</sup> Germany has largely decided against using the territorial sea for offshore wind energy (unlike other countries). There are however, three parks within the 12-mile zone. For more about two of them Baltic 1 and Riffgat, see: P. Kerres, R.E. Sieler, J. Narita, J. Eckardt, L. Overbeck, *Germany's policy practices for improving community acceptance of wind farms*, Berlin 2020.

<sup>29</sup> Due to this different, and mostly less concise, framework on a provincial level and due to the fact that many coastal waters are environmental protection zones, there are very few possibilities for wind parks on territorial waters.

<sup>30</sup> [https://www.bsh.de/DE/THEMEN/Offshore/offshore\\_node.html](https://www.bsh.de/DE/THEMEN/Offshore/offshore_node.html) [accessed: 2022.01.29].

<sup>31</sup> *Ibidem*.

<sup>32</sup> See more: P. Kerres, R.E. Sieler, J. Narita, J. Eckardt, L. Overbeck, *Germany's policy practices...*, p. 15.



#### IV. Regulation of Offshore Construction on the High Seas – German Regulations

The construction of offshore wind farms in German waters could also take place on the high seas and thus at great distances from the coast<sup>33</sup>. Part 4 of the Offshore Wind Energy Act regulates approval, construction, operation, and alteration of offshore wind energy installations and installations to transmit electricity if and to the extent that

- 1) they are located in the exclusive economic zone of the Federal Republic of Germany or
- 2) they are located on the high seas and if the company headquarters of the party responsible for the project is located in federal territory.

It should be noted that Number 2 extends the scope of application to facilities on the high seas, but restricts the personal scope of application to project developers whose registered office is based in Germany. With the link to the company's registered office, a more practicable and simple criterion is now chosen than the previous provisions, where the nationality of the respective owner and, in the case of companies, the nationality of the shareholders or board members was decisive.<sup>34</sup>

The construction, operation, and modification of offshore installations are also regulated by the Offshore Installation Act of 13 October 2016.<sup>35</sup> The Act applies to installations in the area of the Exclusive Economic Zone of the Federal Republic of Germany and on the high seas if the business seat of the beneficiary is within the scope of the Basic Law. Article 6 on authorizations establishes that the construction, operation, or substantial alteration of installations require approval by the Federal Maritime and Hydrographic Agency.

It should be noted that the construction of offshore wind farms on the high seas offers the advantage of higher wind speeds and thus also higher wind power yields. However, it raises several legal questions concerning, among other matters, ownership and liability issues. The literature points out that offshore projects are capital intensive and often financed by lenders (frequently consortia of several banks and other lenders such as insurance and asset management companies), which, in turn, require collateral. If the permanently installed offshore wind turbine is located on state land (territorial sea), there are no problems in this respect. In such a case, it is possible to resort to the security mechanisms of German property rights, as this part of the sea is German territory. In the case of such an offshore wind turbine on the high seas, doubts arise as to the jurisdiction of the law.

<sup>33</sup> <https://www.erneuerbare-energien.de/EE/Navigation/DE/Forschung/Windenergie-auf-See/windenergie-auf-see.html> [accessed: 2022.01.29].

<sup>34</sup> W.F. Spieth, "WindSeeG § 44" [in:] *Offshore-Windenergie recht*, eds *idem*, S. Lutz-Bachmann, Nomos 2018, issue 19, 20.

<sup>35</sup> Seeanlagengesetz vom 13. Oktober 2016 (BGBl. I S. 2258, 2348), last amended by art. 3 of the Act of 3 December 2020 (BGBl. I S. 2682).

It should be noted that today's offshore wind turbines, rooted to the seabed by monopile or jacket foundations, are restricted to waters less than 50–60 m deep. A total of 80% of Europe's offshore wind resources is in waters 60 m and deeper, including most opportunities in the Atlantic, the Mediterranean, the Celtic Sea, the Black Sea, and the Norwegian Sea.<sup>36</sup> In these areas, traditional, bottom-fixed turbines are not economically attractive. Floating offshore<sup>37</sup> can be a way of generating power from these (deeper) waters.

## V. The Distant Future or the Near Present – Construction of Floating Offshore Wind Farms on the High Seas

Currently Europe has only a few floating offshore wind farms in operation,<sup>38</sup> but it is to be expected that the next few years will bring progress towards the development of commercial-scale floating wind farms.<sup>39</sup> Floating offshore installations are characterised by the fact that they are erected on a floating body. There are different solutions, according to which the float can consist of a floating platform with one or more pontoons, a central large float, or also partially submerged floats.<sup>40</sup>

It is necessary to recall here the disputed issues which are raised in discussions on floating wind farms.<sup>41</sup> The first question that arises is whether the provisions of art. 43 EGBGB<sup>42</sup> or art. 45 EGBGB apply in the case of wind parks. If the connection with the seabed is only of a temporary nature, it would then be worth considering using art. 45 I No. 2 EGBGB, according to which the right to something "waterborne" as a "means of transport" is determined independently of the place of location. The EGBGB understands the category of waterborne (according to art. 45 I No. 2 EGBGB) not only

<sup>36</sup> <https://www.energymonitor.ai/tech/renewables/scotland-cements-position-as-europes-floating-offshore-wind-leader> [accessed: 2022.01.29].

<sup>37</sup> <https://bwo-offshorewind.de/category/offshore-windenergie/weiteres/floating/>; [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2016/IRENA\\_Offshore\\_Wind\\_Floating\\_Foundations\\_2016.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2016/IRENA_Offshore_Wind_Floating_Foundations_2016.pdf) [accessed: 2022.02.01].

<sup>38</sup> More information: <https://windeurope.org/newsroom/press-releases/scotland-awards-seabed-rights-for-massive-amounts-of-offshore-wind-most-of-it-floating/> [accessed: 2022.01.31].

<sup>39</sup> It should be emphasised that in 2016, in Europe there was also the first decommissioning of a floating turbine off the coast of Portugal, after a successful 5 year demonstration, <https://windeurope.org/wp-content/uploads/files/policy/position-papers/Floating-offshore-wind-energy-a-policy-blueprint-for-Europe.pdf> [accessed: 2022.01.31].

<sup>40</sup> See more: WindEurope, "Floating Offshore Wind Energy – A Policy Blueprint for Europe", 2018, p. 3 f.; <https://windeurope.org/wp-content/uploads/files/policy/position-papers/Floating-offshore-wind-energy-a-policy-blueprint-for-Europe.pdf> [accessed: 2022.01.31].

<sup>41</sup> M. Meister, P. Overkamp, "Floating Offshore – Windkraft unter deutscher Flagge?", *EnWZ* 2021, p. 71.

<sup>42</sup> Introductory act to the Civil Code, in the version promulgated on 21 September 1994, *Federal Law Gazette* [Bundesgesetzblatt] I p. 2494, last amended by art. 2 of the Act of 19 March 2020, *Federal Law Gazette* I, p. 540; art. 240 last amended by art. 10 of the Act of 22 December 2020, *Federal Law Gazette* I, p. 3328.

as ships, but as also covering other maritime constructions, the design of which in principle permits traffic with foreign countries.<sup>43</sup> However, it is not fully clarified how restrictively the term “waterborne” or the term “means of transport” used in the official title of art. 45 EGBGB are to be understood. The question that arises in this context is whether a floating offshore installation could even be entered in the shipping register. When analysing all these questions as well as taking into consideration the clear lack of answers, it is necessary to recall the view presented by M. Meister and P. Overkamp. The German legislator has failed for many years to create a regulatory framework in the area of credit protection for offshore wind energy that offers legal certainty.<sup>44</sup>

Such a solution would certainly have several advantages. If the construction and maintenance of the plants takes place in a harbour – and not at sea with the costly and weather-dependent use of special jack-up vessels – there may also be logistical and cost advantages. In this context, it should be noted that the disadvantages for flora and fauna are smaller than those associated with the construction of fixed connections between the turbine and the seabed.<sup>45</sup>

Since floating wind turbines can be used in water depths of more than 60 m, it is also conceivable in the future that turbines will be operated on the high seas – i.e. more than 200 nautical miles from the coast. The question that arises at this point is whether floating wind turbines can be sited on the high seas. This question leads to a number of new issues.

## VI. Conclusions

Wind energy makes a large contribution to electricity supply in Germany and is becoming the most important source of energy on the road to climate neutrality. The expansion of wind energy has accelerated steadily over the past two decades, but has recently come to a halt. Further development of offshore wind farms, as well as new forms such as floating offshore structures, seem to be the best solution for the future. However, it should be remembered that offshore wind energy is essentially a matter of state-initiated and state-designed infrastructures, the accelerated expansion of which cannot succeed without the state assuming a certain degree of co-responsibility. The special role of the state should be seen in this context by providing legal certainty also for new developments of floating offshore structures. And in the future, it may be possible to develop conditions for the operation of turbines and technical components

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<sup>43</sup> C. Wendehorst, “Commentary to art. 45 EGBGB” [in:] *Münchener Kommentar zum BGB*, eds F.J. Säcker, R. Rixecker, H. Oetker, 7<sup>th</sup> ed. 2018, issue 16, 22. A teleological interpretation of the term “waterborne” can also include drilling platforms or offshore wind turbines, provided they are used on the high seas or at changing locations. However, overseas cables, pipelines, and the like are no longer included, because they are used exclusively in stationary applications and no longer have anything to do with vehicles, even within the broadest understanding of the term.

<sup>44</sup> M. Meister, P. Overkamp, *Floating Offshore – Windkraft...*, p. 71.

<sup>45</sup> This aspect is emphasized by: M. Meister, P. Overkamp, *Floating Offshore – Windkraft...*, p. 71.

and to introduce solutions that can ensure a high level of operational reliability for wind turbines on the high seas.

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## Summary

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### Investments in Offshore Structures from a German Perspective – Selected Aspects

The purpose of this article is to analyse the current legal framework regarding offshore constructions in Germany. The regulations examined relate to construction of offshore installations in the German exclusive economic zone. Subsequently, the possibility of construction of offshore installations on the high seas is considered. At the beginning of the article, the current situation of investments in renewable energies is presented. International rules play a special role in offshore investment opportunities on the high seas. After exploring these general issues, the article focuses on German offshore regulations. As a final step, the current regulations relating to floating wind turbines are presented and evaluated.

**Keywords:** offshore installations; the high seas; exclusive economic zone; floating wind turbines.

## Streszczenie

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### **Inwestycje w budownictwo *offshore* z perspektywy niemieckiej – wybrane aspekty**

Celem artykułu jest analiza aktualnych ram prawnych budownictwa *offshore* w Niemczech. Analizowane przepisy dotyczą budowy instalacji *offshore* w niemieckiej wyłącznej strefie ekonomicznej. Autorka rozważa również możliwość budowy instalacji *offshore* na pełnym morzu. Na wstępie przedstawiona została aktualna sytuacja inwestycji w odnawialne źródła energii. Szczególną rolę w możliwościach inwestycyjnych *offshore* na pełnym morzu odgrywają przepisy międzynarodowe. Dalsze rozważania koncentrują się na niemieckich regulacjach prawnych dotyczących *offshore*. Na końcu autorka przedstawia i dokonuje oceny aktualnych przepisów dotyczących pływających turbin wiatrowych.

**Słowa kluczowe:** *offshore*; pełne morze; wyłączna strefa ekonomiczna; pływające turbiny wiatrowe.