

Ministerie van Economische Zaken
en Klimaat

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Our reference

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Appendix/Appendices

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Dear President,

The Netherlands has major climate ambitions and also wants to be self-sufficient in energy for geopolitical reasons. In the Climate Act (*Klimaatwet*), the Government therefore stipulates that by 2030 our country will reduce its carbon emissions by 55 percent¹, compared to 1990 levels, and be climate neutral by 2050, alongside focusing on more energy generation from wind and solar.

The Government is doubling its target for offshore wind energy, increasing it to an installed capacity of approximately 21 gigawatts (GW) by 2030², provided this is compatible with the ecological capacity of the North Sea and can be integrated into the energy system. This doubling is in line with the European Commission's³ call on Member States to accelerate development of energy from renewable sources.

This is a gigantic task, which must be completed under significant time pressure. The lead time for preparation of a wind farm and the associated section of the offshore grid, including preparations, is about nine years on average. Moreover, this task must be realised in an increasingly tight market conditions, as many countries in Europe and worldwide are increasing their ambitions for wind energy. In addition, nitrogen, the natural environment, and matching supply and demand present additional challenges. I will discuss these issues later in this letter.

Our approach to the climate challenge, and the contribution offshore wind can make in that regard, also requires international collaboration as well as an integrated approach that takes into account the ecosystem of the North Sea and other offshore stakeholders. I will discuss this in more detail shortly in a separate letter about the continued growth of offshore wind between 2030 and 2050.

To ensure all parties involved can get started on achieving the 21 GW target, the Government is taking the following preparatory steps:

¹ With a carbon emissions reduction target of 60 percent in accordance with the Coalition Agreement.

² *Parliamentary Papers*, 32813, No. 974.

³ Communication of the European Commission; REPowerEU: Joint European Action for more affordable, secure and sustainable energy; COM (2022, 108 final).

1. Initiating the spatial procedures and investigations for landing the electricity produced offshore. My predecessor informed you about this on 2 December 2021⁴.
2. Designating new Offshore Wind Farm Zones in the North Sea Programme 2022-2027. This was decided by the Government on 18 March 2022⁵.
3. Establishing a supplement to the current Offshore Wind Energy Roadmap 2030. This sets out which new Wind Farm Zones, or parts thereof, will be subject to development and when. It also forms the starting point for preparation of Wind Farm Site Decisions and tenders under the Offshore Wind Energy Act.
4. Awarding the contract for the construction of the offshore grid required for the new wind farms to TenneT.

With the updated Development Framework for Offshore Wind Energy, attached as a separate Appendix to this letter, I am taking steps 3 and 4 above. Based on anticipated energy consumption, this signals the start for construction of the additional offshore wind capacity, which will also contribute to achieving this Cabinet's climate goals.

This letter informs the House about the key points of the Roadmap and notifies it about the updated Development Framework. It is also submitted on behalf of the Minister of Agriculture, Nature, and Food Quality, the Minister for Nature and Nitrogen Policy, the Minister of Infrastructure and Water Management, the Minister for Housing and Spatial Planning, the Minister of Economic Affairs and Climate Policy, and the State Secretary for Mining. In doing so, I also give substance to the last part of the motion Boucke et al., which asks for the completion of the addition to the roadmap for offshore wind energy 2030 by the second quarter of 2022⁶.

Reading guide

I will start this letter with a brief outline of the newly designated Wind Farm Zones, through which a large part of the Additional Roadmap will be realised. I shall then set out the framework for the Additional Roadmap and discuss the risks and challenges. The bulk of this letter consists of a detailed outline of the key points of the Roadmap and the updated Development Framework. I conclude this letter by looking ahead to further implementation.

Designation of new Wind Farm Zones

The additional target can only be achieved in zones designated in the North Sea Programme 2022-2027, in which two previously designated Wind Farm Zones have been reconfirmed: *IJmuiden Ver (noord)* can accommodate another 2 GW, and there is still flexibility for a further 0.7 GW in *Hollandse Kust (west)*, Site VIII. In addition, the Government designated three new Wind Farm Zones, referred to as zones 1 (south and north), 2 (south and north) and 5 (east) in the North Sea Programme 2022-2027. These new Wind Farm Zones have since been given the following names: *Nederwiek*, *Lagelander* and *Doordewind* (see Table 1 below and the map in Appendix 1). These names were the result of a public naming competition, in which nearly 6,000 Dutch citizens took part.

⁴ *Parliamentary Papers* 33561, No. 52.

⁵ *Parliamentary Papers* 35325, No. 5, blg-1022234.

⁶ *Parliamentary Papers* 35925-XIII, No 66.

Table 1 Newly designated Wind Farm Zones

Our reference
DGKE-E / 22061752

Designation in the North Sea Programme 2022-2027		New name
Zone 1 (south)	2 GW	<i>Nederwiek (zuid)</i>
Zone 1 (north)	4 GW	<i>Nederwiek (noord)</i>
Zone 2 (south)	4 GW	<i>Lagelander (zuid)</i>
Zone 2 (north)		<i>Lagelander (noord)</i>
Zone 5 (east)	4 GW	<i>Doordewind</i>

Frameworks for the Offshore Wind Energy Roadmap

In recent years, the offshore wind industry has shown it can make a major contribution to making energy production more sustainable. Not only have the technologies and procedures matured, with wind farms even becoming profitable without the need for subsidies, but the sector has also been able to scale up quickly. This means the North Sea will increasingly function as an expansion of our energy system. At the same time, the North Sea is a valuable and vulnerable ecosystem, which we have a joint responsibility to protect. The Dutch North Sea is one of the most intensively used seas in the world, in terms of, among others, shipping, fisheries, oil and gas extraction, carbon sequestration, sand and shell extraction, and defence. All these activities rely on the capacity and limited space of the North Sea. The additional offshore wind energy, including the necessary grid connections, must therefore be carefully integrated into the scarce territory in the North Sea and on land, which means that additional offshore wind requires relevant frameworks and agreements on this issue.

Frameworks from the North Sea Agreement and North Sea Programme 2022-2027

A key feature of the frameworks for the further rollout of offshore wind energy is that they follow on from agreements with stakeholders from all relevant sectors in the North Sea Agreement.⁷ On this basis, and following a comprehensive assessment, the Government subsequently arrived at a spatial division of the North Sea in the North Sea Programme 2022-2027, including the designation of the above-mentioned additional Wind Farm Zones. The North Sea Programme 2022-2027 was established in close consultation with the North Sea Consultative Committee and with stakeholders and local authorities through their participation in the public consultation.

To enable responsible integration of the wind farms and the associated infrastructure of the offshore grid, when designating the new Wind Farm Zones in the North Sea Programme 2022-2027, the Government has decided on a package of measures and reserved EUR 1.69 billion for this from the Climate Fund. This will be used, among other things, for maritime safety, adapting fisheries and making them more sustainable, additional nature-enhancing measures and flanking measures in the vicinity of the grid connection landing sites. With this package of measures, the Government is also strengthening the capacity and resources for executive agencies such as the Netherlands Enterprise Agency (RVO), the Directorate-General for Public Works and Water Management (Rijkswaterstaat) and the Netherlands Coastguard. The ability of these organisations to perform their duties effectively will guarantee a smooth and robust rollout, followed by effective compliance with the agreements of the Wind Farm Site Decisions, tenders and standards after the construction phase. Please see Appendix 2 for an overview of this package of measures.

⁷Parliamentary Papers 33450, No. 68, blg-941241.

In addition to the use of the Climate Fund to cover incidental costs, the structural costs for integration of offshore wind, which will principally occur from 2031, will be passed on to wind farm operators. I shall be providing more details about the precise method by which this will take place, with a key area of focus being that the rollout of offshore wind should not be delayed and that it should remain financially feasible for wind farm developers.

Ecological frameworks

To enhance and ensure the ecosystem of the North Sea remains in good condition, which already involves a nature restoration challenge, a review will also be carried out for each new wind farm within Wind Farm Zones already designated, to examine whether the impact of the total number of wind farms fits within the ecological capacity. This will take place on the basis of an assessment against the Nature Conservation Act (*Wet Natuurbescherming*) – by way of a project environmental impact report and an appropriate assessment – and will be supported by the Ecology and Cumulation Framework (*Kader Ecologie en Cumulatie*, KEC) and the Offshore Wind Ecological Programme (Wozep).

Landing frameworks

Another part of the frameworks stems from the construction and integration of the offshore grid that brings the energy ashore. My predecessor addressed this aspect with you on 2 December 2021.⁸ An important starting point is connecting the offshore grid to the onshore network with electricity cables where there is space on the high-voltage grid and where a high demand for sustainable energy is expected, i.e. in or near the large industrial clusters. The more electricity is landed near industrial activity (including for the production of green hydrogen using electrolysis) for direct use, the less need there is for electricity to be transported via the high-voltage grid. This prevents congestion on the onshore high-voltage grid.

Another starting point is that TenneT will install the grid connections for the new wind farms. With the enclosed Development Framework, I have formally instructed TenneT to do so. The actual feasibility, possibility of permits being granted, and the desirability should become apparent from further research and the subsequent weighing of all the various interests involved.

Frameworks for the choice of Wind Farm Zones (or sections thereof)

In its decision to make use of the designated Wind Farm Zones, or sections thereof, to supplement the Offshore Wind Energy Roadmap, the Government has taken two additional starting points:

1. Firstly, the designated Wind Farm Zones, or sections thereof, must be available in time to realise 21 GW by 2030.
2. Secondly, it is important to minimise fragmentation of the space at sea as much as possible. The Government therefore plans to cluster the wind farms as much as possible and leave as much connected space as possible for other offshore uses. This will be achieved through the construction of compact wind farms, with approximately 10 MW of wind capacity per square kilometre. This 'capacity density' is approximately 2.5 times higher than the first large-scale wind farms in the Borssele Wind Farm Zone and therefore, proportionally, makes less use of available space at sea per unit of installed capacity.

⁸ *Parliamentary Papers* 33561, No. 52.

Challenges and risks for the Offshore Wind Energy Roadmap

The accelerated pace of the rollout and the associated frameworks outlined above entail risks, which means the timely realisation of the Additional Roadmap is uncertain.

Accelerating in a scarce market

In the introduction to this letter, I indicated that the target for offshore wind must be achieved in increasingly tight market conditions. The combination of the domestic acceleration of the rollout and strong growth (and demand) in the global market for offshore wind energy means the risks of delay are increasing. The current geopolitical situation, the aftermath of the COVID-pandemic and the consequences for the timely availability of raw materials may amplify these risks. To realise the offshore grid, which requires the longest preparation time, I am asking TenneT to speed up the process by awarding contracts before any final permits have been issued. I will discuss this later in this letter in the context of the updated Development Framework for Offshore Wind Energy.

Coordinating electricity supply and demand

With the Additional Roadmap, the Government is increasing the supply of wind energy. The 21GW of capacity will provide approximately 90 terawatt hours (TWh) of electricity annually, enough to meet 75% of our country's current electricity demand⁹. However, this additional supply cannot simply be fed into the national electricity grid. Of the approximately 21 GW to be realised by 2030, the 11 GW of the original Offshore Wind Energy Roadmap 2030¹⁰ can be fed into the onshore high-voltage grid and can then be transported to end customers, i.e. industry, offices, businesses, and households. The additional (approximately) 10.7 GW planned cannot simply be fed into the national electricity grid and will have to be used as much as possible near the landing points. Therefore the offshore grid landing points for this capacity will be located in or around the major industrial clusters on the coast. The electricity supplied can then be used on site for the electrification of industrial processes and/or the production of green hydrogen. To do this, however, it is necessary that sufficient electricity demand develops, with the correct demand profile, to use the additional supply of offshore wind energy.

It is possible that the pace of the transition of industrial energy demand will not match that of the supply of offshore wind energy. This presents a risk that, even though a connection to the offshore grid may be constructed on time, it subsequently remains underutilised (for some time) due to a lag in demand for electricity from wind farms from the industry cluster near the landing point. The expectation is that industrial demand will eventually materialise, but its timing may be out of step with the development of the supply of offshore wind energy, creating a (temporary) mismatch.

⁹ Electricity consumption is expected to increase in the coming years due to, among other things, the electrification of industrial processes, mobility and heating of buildings. Extra electricity will also be used for the production of green hydrogen.

¹⁰ Parliamentary Papers 33561, No. 42

In addition to (temporary) underutilisation of the offshore grid, this situation may also lead to congestion on the onshore high-voltage grid due to excessive amounts of electricity supplied from offshore wind having to be transported further inland through the high-voltage grid, either for consumption there or for export abroad.

The Minister of Economic Affairs and Climate Policy and I are working to prevent mismatches as much as possible using a three-pronged approach:

1. Involving the industrial clusters located at the potential landing sites, as well as any relevant local and provincial authorities, regarding the landing of the offshore grid.
2. Stimulating demand: To keep supply and demand at the same pace, it is important to further encourage industrial demand in line with the recommendations of the Electrification Roadmap.
3. Bespoke agreements with industry: Finally, this Government wishes to conclude binding bespoke agreements with the 20 largest industrial emitters regarding additional carbon emissions reductions¹¹. A policy framework is currently being drafted for these bespoke agreements, which the Minister of Economic Affairs and Climate Policy and I will share with the House before the summer.

Nevertheless, (temporary) underutilisation and congestion cannot be ruled out in advance. To tackle congestion, TenneT may need to take measures that involve costs or that may consequences for (participation in) the electricity market. In the first instance, it is about congestion management. In the absence of sufficient development of flexible electricity demand, it is likely that congestion will be substantial and structural in nature. In that case, congestion management is unlikely to be the most effective and efficient solution from a societal point of view. For that reason, other measures will also be considered, which may mean electricity from offshore wind cannot immediately be fed into the grid. This could include encouraging development of electricity demand in conjunction with conditional transport agreements and possible combined tenders for offshore wind with electricity demand. Additional measures may include a review of the Dutch bidding zone, later completion dates of wind farms, etc. To determine which measure would be most effective in which situation, I will be complete this package of measures in consultation with TenneT before opening the first tenders in 2025 for the sites of the Additional Roadmap.

It is difficult to predict in advance where and to what extent a (temporary) supply and demand mismatch will occur. In my view, however, the risk is unavoidable given that the alternative is a risk that the growth of offshore wind energy is realised too late compared to sustainability improvements of industry.

Ecological limits

The increasing number of wind farms on the North Sea means we are approaching the limits of the ecological frameworks of the Nature Conservation Act. The impact of the envisaged 21 GW of wind capacity was determined in the designation of the Wind Farm Zones in the North Sea Programme 2022-2027 (by means of an environmental impact report and appropriate assessment). The conclusion is that, for most protected species, the impact will remain within the working standards (Acceptable Level of Impact, ALI) used for this purpose in the KEC. In the case of two bird species (gannet and herring gull), it emerged that the standard would indeed be exceeded with the further rollout of offshore wind, based on current knowledge and with due observance of the precautionary principle, leading to an increased likelihood of population decline. The final assessment of the wind farms planned in relation to the ecological space will take place in the environmental impact reports to the

¹¹ *Parliamentary Papers* 29826, No. 135.

Wind Farm Site Decisions. After all, more details will be available then regarding the design and configuration of the wind turbines and wind farms. Existing knowledge gaps can then be (partially) filled with results from the additional review and the analysis that is part of Wozep. The Wind Farm Site Decisions can only be taken if the ecological standard is not exceeded.

If it proves impossible to stay within these frameworks using mitigating and reinforcing measures, the rollout of offshore wind energy may be delayed or stopped. The Additional Roadmap outlined in this letter is therefore no guarantee that we shall realise the 21GW by 2030 target. However, both the climate and biodiversity targets are obligations. That is why I intend to work with the Minister for Nature and Nitrogen Policy and other relevant colleagues to find a way in which both nature and climate goals can be achieved at sea. Our efforts will take place along the following lines:

1. Knowledge development. This provides the foundation in order to better understand the impact of offshore wind and be able to include effective mitigating measures in the Wind Farm Site Decisions.
2. Mitigating measures. The regulations in the Wind Farm Site Decisions include mandatory mitigating measures to limit impact on nature. These may potentially be tightened or expanded based on the results of ecological studies and, if possible, insights gained from the results of the recently closed tender for Site VI of Hollandse Kust (west), in which bidding parties were challenged to present solutions that benefit the ecology of the North Sea.
3. Anticipatory measures. I will be working with my colleague for Nature and Nitrogen Policy to develop species protection plans and a programme to enhance the natural environment of the North Sea, both within and outside the wind farms. Through the nature enhancement programme, we will also be focusing on fostering more international cooperation in the area of ecology in relation to offshore wind.
4. International cooperation. The Netherlands is not alone in facing the dilemma of ensuring that the further rollout of offshore wind takes place within ecological frameworks – Denmark and Germany are facing similar issues, for example. I am committed to engaging with my counterparts from these countries, and with the European Commission, to find joint solutions. Discussions are also underway with the United Kingdom through a working group under the OSPAR Convention.

Nitrogen

A construction exemption for the temporary emission of nitrogen applies for both offshore wind farms and the offshore grid build out. These emissions take place both at sea and on land, where, generally, the impact of nitrogen deposition is greater – greater emissions and closer to nature reserves. This exemption is currently being reviewed by the Council of State in a ruling on the Porthos CO2 transport and storage project. I await that judgment.

Additional Offshore Wind Energy Roadmap

Section 16e of the Electricity Act 1998 (*Elektriciteitswet 1998*) sets out that the Minister for Climate and Energy Policy will establish a framework for the development of offshore wind energy. This framework should, on the one hand, include the sites and commissioning dates of the wind farms, or the Offshore Wind Energy Roadmap, and on the other, the functional requirements and completion date of the offshore grid. Below, I first discuss the Roadmap. In the subsequent section, I explain the updated Development Framework for the offshore grid.

Two-part supplement

In concrete terms, the Additional Roadmap includes seven additional sites for wind farms, on top of the wind farms in the existing Offshore Wind Energy Roadmap 2030,¹² to arrive at a total installed capacity of approximately 21 GW by 2030. This means an increase of 10.7 GW of offshore wind energy. As a follow-up to the preparatory steps for the grid connections, almost all of which are already underway, the additional capacity is made up of two key parts:

1. Part 1 comprises 6 GW and consists of four sites in the *IJmuiden Ver (noord)* and *Nederwiek (zuid and noord)* Wind Farm Zones and is expected to be realised in 2029 and 2030 respectively. The preparatory studies for these wind farms are the most advanced. Besides the usual site studies (including for soil conditions) and assessment against the Nature Conservation Act, no additional studies therefore need to be conducted for these Wind Farm Zones. However, the results of the species protection plan for the gannet, which is yet to be drawn up, as well as other ecological mitigation measures, will be included in the Wind Farm Site Decisions, and the ecological suitability thereof must be demonstrated. In addition, the permit procedures for landing the offshore grid connections for these sites are expected to be the least complex due to the option of laying the cables parallel to connections from the *IJmuiden Ver* Wind Farm Zone, which are already further along in the process. The Government therefore expects to have completed the wind farms in these sites, including the associated grid connections, by 2030 at the latest:
 - Sites V and VI (2 GW total) in *IJmuiden Ver (noord)*, with a grid connection to Maasvlakte;
 - Site I (2 GW) in *Nederwiek (zuid)*, with a grid connection to the Borssele area¹³;
 - Site II (2 GW) in *Nederwiek (noord)*, with a grid connection to Maasvlakte.
2. Part 2 consists of sites yet to be selected in the *Doordewind*, *Nederwiek (noord)* and *Hollandse Kust (west)* Wind Farm Zones for a total capacity of 4.7 GW and is expected to come online by 2031. Because lead times of these spatial planning procedures require more time due to the technical and ecological complexity of the cable routes, an additional 2 GW will be investigated (overplanting) in respect of the required 4.7 GW.

¹² *Parliamentary Papers*, 33561, No. 42.

¹³ The current high-voltage substation at Borssele is at capacity. The actual connection of *Nederwiek*, Site I to the high-voltage grid depends on a new high-voltage substation to be built in the Borssele area;

This relates to:

- Sites I and II (4 GW combined) in *Doordewind*, with a grid connection in Eemshaven.¹⁴ Here, three additional studies are currently underway:
 1. The Offshore Wind Energy Connection – Eemshaven Programme (*Programma Aansluiting Wind Op Zee – Eemshaven*, PAWOZ-Eemshaven) is investigating potential cable routes through the Wadden Sea area for the grid connections of both the *Doordewind* and *Ten noorden van de Waddeneilanden* zones (0.7 GW, from the existing 2030 Roadmap). The programme will also examine spatial planning options for landing additional cable connections or a hydrogen pipeline for the period beyond 2031.
 2. An ecosystem study in the area itself is underway to identify what impact the future wind farms may have on the stratification of the seawater and what the effects may be on nature.
 3. The layout of the sites will be coordinated with the gas production platforms present and with the shipping lane to Germany that lies to the south.
- Site III (2 GW) in *Nederwiek (noord)*, with a grid connection in Geertruidenberg. Further investigation as part of the spatial planning procedure should reveal whether a significant impact on the Natura 2000 areas of *Voordelta*, *Haringvliet*, *Hollands Diep*, and *Biesbosch* will occur and whether this will require a time-consuming AIC assessment¹⁵.
- Site VIII (0.7 GW) in the southern part of the *Hollandse Kust (west)* Wind Farm Zone, with a grid connection in the North Sea Canal Area. In the letter of 2 December 2021,¹⁶ my predecessor indicated that a potential spatial planning procedure for this connection would be included in the Reconnaissance Landfall Offshore Wind Energy 2031-2040 (*Verkenning Aanlanding Windenergie Op Zee 2031-2040*, VAWOZ 2031-2040), which will start in the summer of 2023. This spatial planning procedure can only start after it has been ascertained that sufficient connection capacity is available at the Velsen high-voltage substation. This largely depends on the precise detailing of the sustainability plans of Tata Steel Netherlands, which involves the phasing out of coal-fired steel production and a transition to a sustainable production process. In view of the lead time of a spatial planning procedure for a connection to the offshore grid and the uncertainty regarding the connection capacity at the Velsen high-voltage substation, it is uncertain whether this grid connection can be realised by 2030. The VAWOZ 2031-2040 will investigate the future opportunities for the landing and provision of sustainable energy in the North Sea Canal Area. This will also involve a re-examination of the options for landing energy from *Hollandse Kust (west)* Site VIII to the North Sea Canal Area.

¹⁴ The current high-voltage substation in Eemshaven does not have sufficient capacity to be able to connect the full 4.7 GW from the *Doordewind* and *Ten noorden van de Waddeneilanden* Wind Farm Zones. Connecting at least 2 GW will depend on a new high-voltage substation to be realised in the Eemshaven area.

¹⁵ The AIC assessment is the final step that can be taken after an appropriate assessment has shown that a significant negative impact on the Natura 2000 areas cannot be excluded or cannot be completely excluded. ADC stands for A: there are no alternatives; I: imperative reasons of overriding public interest are at play; C: the necessary compensatory measures will be put in place to ensure that the overall coherence of Natura 2000 is preserved.

¹⁶ *Parliamentary Papers*, 33561, No. 52.

Appendix 3 summarises the details of the above sites and shows which studies have yet to be carried out.

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Decision-making on Part 2

By end 2023 or early 2024, I expect to have all or most of the results of the studies referred to above. In addition, I expect the plans of Tata Steel Netherlands to be concrete by then. I also expect the partial revision of the North Sea Programme 2022-2027, which was recently started by the Minister of Infrastructure and Water Management and in which the Government designates Wind Farm Zones for the period beyond 2030, to have made good progress by then.

The Government will make a decision regarding the Wind Farm Zones for the remaining 4.7 GW, or sections thereof, in conjunction with a decision on the designation of new Wind Farm Zones in the context of the partial review, in which any Wind Farm Zones, or sections thereof, unused in this Additional Roadmap can be carried forward for offshore wind development beyond 2031. I will also be finalise the schedule for the Wind Farm Site Decisions and tenders for these sites for Part 2 of this Roadmap. This provides the opportunity for an adaptive Roadmap, in which the latest insights are incorporated in a comprehensive manner. I intend to make a decision in this regard as soon as possible in 2024.

Considerations underpinning non-use of the *Lagelander* Wind Farm Zone

When supplementing the Roadmap, it was decided not to make use of the *Lagelander* Wind Farm Zone. The principal reason for this is that, in the coming years, the zone will still be used intensively for gas extraction and, in addition to offshore wind energy, other new developments will be taking place that make efficient use of the area difficult to orchestrate in the period leading up to 2030:

- There are approximately 15 platforms in or around the area where gas is extracted and processed. For accessibility of these platforms by helicopter, an area with a radius of 2.5 nautical miles (approx. 4.6 kilometres) must be kept free around each platform – see Figure 1.
- There are plans for transport and underground storage of CO₂ in this area under the Aramis project, which envisages transporting CO₂ from Maasvlakte to depleted gas fields under the North Sea.
- The area may be suitable for offshore production and storage of hydrogen, with offshore wind farms providing the electricity. The plans for this initiative are still in the early stages.

Updating the Development Framework for Offshore Wind Energy

Pursuant to the Electricity Act 1998, I have formally commissioned the offshore grid operator, TenneT, to construct the offshore grid connections outlined above. Under the same law, TenneT is subsequently obliged to draw up an investment plan, in which the provisions of the Development Framework are included, and then implement it.

Cost of the offshore grid

The construction of the additional connections for the offshore grid involves an investment of approximately €16 billion. This brings total investment costs for the entire 21 GW, including those for the original Roadmap, to approximately €26 billion. The costs referred to are currently indicative: developments in the raw materials market, the financial market and the regulatory framework will affect the eventual costs. These costs are spread across the depreciation period of the offshore grid. In addition to investment costs, offshore grid costs consist of financing costs, maintenance costs, and the permitted return for TenneT. Total costs will increase from approximately €40 million this year to over €2 billion per year from 2032 to end 2057 – thereafter, they will decrease to zero in the period up to 2062, at which point the offshore grid will have been fully depreciated.

TenneT may begin charging the costs of the offshore grid from the moment construction of the grid begins. The regulatory authority, the Netherlands Authority for Consumers and Markets (ACM), determines exactly how the costs may be charged by means of a Method Decision (*Methodebesluit*). To this end, the ACM will inter alia determine the depreciation period for the offshore grid. Of the total costs of the offshore grid, approximately €4 billion will be paid for by means of a subsidy to TenneT from the funds for the Stimulation of Sustainable Energy Production and Climate Transition (*Stimuleren Duurzame Energieproductie en Klimaattransitie*, SDEK). This concerns the offshore grid for the wind farms in the *Borssele* and *Hollandse Kust (zuid and noord)* Wind Farm Zones being constructed in the period of up to 2023 (and are partly already in use) for the commitments of the Energy Agreement (2013). The offshore grid for the other wind farms will be financed from the network tariffs¹⁸ in accordance with the commitment in the Climate Agreement.

In the near future, I will be working with the ACM to determine how the allocations of costs of the offshore grid can be developed using the network tariffs, taking into account the powers of the ACM and the relevant European laws and regulations, as well as the effects on the distribution of the burden among those directly connected.

Longer service life of the offshore grid

With the entry into force of the amended Offshore Wind Energy Act (*Wet windenergie op zee*) on 29 October 2021, the maximum permit period for offshore wind farms has increased from 30 years to 40 years. Wind farm permit holders already issued with a permit with a term less than 40 years can also apply for an extension of the permit. In practice, the operating period of an offshore wind farm is approximately three to five years shorter than the maximum permit period, because it includes time needed for construction of the wind farm and its removal towards the end of the permit period.

¹⁸ Parliamentary Papers 32813, no. 342, blg-892567, p. 161.

A longer permit period for offshore wind farms means the lifespan of the offshore grid must also be longer. In this case, a distinction must be made between wind farms that have yet to be granted a permit under the amended Offshore Wind Energy Act and wind farms already issued a permit under this Act:

- Parts of the offshore grid for wind farms yet to be granted a permit under the amended Offshore Wind Energy Act, starting with the future wind farms in *Hollandse Kust (west)*, must be made suitable for a longer service life at an early stage (design phase). The Development Framework requires a lifespan of at least 37 years (the permit period of 40 years minus a minimum of 3 years for the construction and removal of the wind farm) for these sections of the offshore grid.
- For wind farms that already have a permit, the relevant sections of the offshore grid are already in use or are at an advanced stage of realisation. It is more difficult to achieve a longer service life for these parts of the offshore grid, as adjustments in the design phase are no longer possible. A longer service life can only be achieved by adjusting the maintenance and replacement strategy.

Criteria established in accordance with the Offshore Wind Energy Act will be taken into account when granting an extension to existing wind farm permits, including the importance of an efficient connection of a wind farm to a connection point. In the case of the wind farms in the *Borssele, Hollandse Kust (zuid), and Hollandse Kust (noord)* Wind Farm Zones, the Development Framework stipulates that TenneT should take into account a potential lifespan extension as efficiently as possible. The exact scope of this will be determined once an application for the renewal of the permit for the relevant sections of the offshore grid has been submitted.

Due to the longer service life of the offshore grid, in the Method Decision 2022-2026¹⁹, ACM has extended the depreciation period of the sections of the offshore grid from *Hollandse Kust (west)* from 20 to 30 years. This also means the costs of the offshore grid will be depreciated over a longer period of time, reducing these costs per unit of electricity transported.

TenneT to award contracts earlier

In order to realise the construction of the offshore grid for the (approximately) 21 GW around 2030, through the Development Framework, I am asking TenneT to award contracts for the manufacturing the required platforms, cables, and equipment – and thus to enter into obligations – before the final permits have been obtained for the relevant sections of the offshore grid (Parts 1 and 2 of the Additional Roadmap). This decision is in accordance with the relevant commitments included in the Climate Agreement on greater ambitions for 2030²⁰ and has been agreed with the shareholder of TenneT (the Minister of Finance).

Being able to award contracts at an early stage also has the advantage of TenneT being better able to cope with the enormous pressure in the supply chain for platforms and cables that is beginning to manifest itself. Just like the Netherlands, other North Sea countries are also increasing their goals for offshore wind, which will lead to a major shortage in the production and implementation chains leading up to 2030. By bundling the manufacture of platforms and cables for several sections of the offshore grid, TenneT will be able to purchase these products for several projects at once. This allows a greater degree of certainty to be achieved in terms of planning and also makes TenneT an interesting – i.e. major – customer for any suppliers, which ultimately benefits the Netherlands. The combined realisation and procurement strategy also creates advantages in terms of synergy and

¹⁹ Method Decision of the Grid Operator of the Offshore Grid 2022-2026; Decision of the Netherlands Authority for Consumers and Markets as referred to in Section 42b(1) of the Electricity Act 1998. 16 September 2021.

²⁰ Parliamentary Papers 32813, no. 342, blg-892567, page 181-182.

economies of scale, which are essential to allow for the acceleration of the rollout of offshore wind energy.

Our reference
DGKE-E / 22061752

However, there are also risks associated with asking TenneT to award contracts at an earlier stage, which I would like to make the House aware of. The ACM also wishes to alert the House to these risks from their position of responsibility in terms of supervising the efficient realisation of the offshore grid and protecting consumers and businesses from unnecessarily high network tariffs. See the letter from the ACM for this, attached to this letter as a separate Appendix.

A situation may arise in which it ultimately turns out that a certain connection of the offshore grid has been delayed in procedural aspects, for example, due to the permits. The impact and resulting additional costs that may arise as a result will depend on the phase in which the project concerned is at.

At my request and that of the Minister of Finance, TenneT has drawn up a relevant risk assessment in which the opportunities and consequences of the various scenarios have been identified, including the exceptional situation that TenneT is required to terminate a contract prematurely in the case of a permit being delayed by more than two years or in the case that a permit cannot be granted. The risk assessment has been attached to this letter as a separate Appendix.

On the basis of this risk assessment, and taking into account the need to accelerate the pace of the rollout outlined in the introduction to this letter, the commitments of the Climate Agreement and the procurement and synergy benefits, the Government believes it is justified for TenneT to enter into obligations at an earlier stage.

Finally, I wish to note – partly on the advice of the ACM – that, in addition to the risks of TenneT awarding contracts at an early stage, risks are equally associated with the acceleration of the rollout of offshore wind energy, due to a potential temporary or permanent mismatch of the supply of offshore wind energy and (industrial) energy demand and the use of the construction exemption for the temporary emission of nitrogen. This has been outlined earlier in this letter.

Looking ahead to further implementation: speeding up

Based on the Additional Roadmap and the updated Development Framework, the realisation of the additional contribution of offshore wind energy to this Government's climate goals has got off to a flying start. In this letter, I have outlined how the Government wishes to ensure acceleration of the permit process and realisation of the grid connections, given this requires the most time. It is important to maintain the same diligence in further implementation. At the same time, this must be done carefully, with consideration for the environment and stakeholders, who will be closely involved and consulted in these processes. I outline of the main next steps below.

Starting preparatory site surveys

At my request, the Netherlands Enterprise Agency (RVO) has already started to have preparatory (site) studies and surveys carried out into the physical conditions in the Wind Farm Zones. The information from these studies is important for the environmental impact assessments for the Wind Farm Site Decisions and for the bids wind farm developers make in the tenders.

Drafting Wind Farm Site Decisions and further assessment against ecological frameworks

With a Wind Farm Site Decision under the Offshore Wind Energy Act, I specify the exact contours of a site within a Wind Farm Zone and set rules and conditions for construction and operation of a wind farm within that site. A Wind Farm Site Decision is carefully coordinated with the other users of the North Sea, for example, by making the draft decision available for inspection. Final Wind Farm Site Decisions are also open to appeal. An environmental impact assessment is mandatory for any Wind Farm Site Decision. This is assessed by the independent Environmental Impact Assessment Committee (*Commissie voor de milieueffectrapportage*). The design and scope of the environmental impact assessment is announced in advance with a draft memorandum on the scope and level of detail – this memorandum is also made available for inspection.

The environmental impact assessment once again examines, at design level and in greater detail, whether the wind farm fits within the limits of the ecological capacity. The first assessment, at planning level, took place when the North Sea Programme 2022-2027 was drawn up, in which the Government designated the Wind Farm Zones. The rollout of offshore wind energy makes a great deal of ecological knowledge to validate and improve model studies into bird victims, for example, by using camera footage and sensor data within the wind farms to measure how many gannets actually fly around a wind farm.

In addition, research is being conducted into potential mitigating measures, such as increasing the minimum distance of the rotor (the blades) of the wind turbine from the sea surface and painting one of the blades black. In the case of the gannet, additional studies are being conducted in an international context, given this bird does not breed in the Netherlands.

On the basis of these new studies, among other things, the KEC will be updated and subsequently used for each Wind Farm Site Decision to assess whether the new wind farm falls within the ecological capacity, thus ensuring the latest ecological knowledge is always used. Based on the realisation that there may be difficulties from an ecological standpoint, we are simultaneously taking urgent action, as outlined previously, to strengthen the situation for gannets and herring gulls.

On the basis of current insight, and based on advancing insight arising from the Wozep, among other things, I will update a number of aspects relating to the following critical species either during or prior to making the Wind Farm Site Decisions in the context of this Roadmap:

- Marina mammals, harbour porpoises in particular, suffer from loud impulsive underwater noise during construction of wind farms. For the new wind farms, I will adjust the sound emission standard in the Wind Farm Site Decision, based on the applicable KEC at the time.
- To prevent collision victims (birds and bats), I am including a shutdown protocol in the Wind Farm Site Decisions.
- As stated previously in this letter, for herring gull and gannet bird species, the ALI working standards, according to the current KEC, are exceeded. Specific, additional research is being carried out for these species and, if necessary, I will ensure additional mitigating measures are required.

Wind Farm Site Decisions can only be taken when the proposed wind farm, in combination with existing wind farms, remains within the framework of the Nature Conservation Act.

Our reference
DGKE-E / 22061752

Approach to trawl fishing and new forms of food extraction from the sea

An investment package has been agreed for the transition to a sustainable food supply from the North Sea, whereby there will be less free space for trawl fishing. This package focuses on innovations and the development of new techniques for seabed fishing and for shared use in wind farms, as part of the €1.69 billion from the Climate Fund referred to previously. The funds can also be used where necessary, and to the extent possible within the European state aid frameworks, to support any changes in the supply chain and communities, which may be necessary for the maintenance of a robust fishing infrastructure in a shrinking and evolving sector. In addition, the funds may be used for the development of new forms of maritime entrepreneurship, such as passive fishery and aquaculture, including within the wind farms and during all phases of the rollout of offshore wind energy. This is being developed further by the Minister of Agriculture, Nature, and Food Quality in consultation with the various Ministries and relevant stakeholders.

Establishing shipping routes through the *Nederwiek* Wind Farm Zone

In the North Sea Programme 2022-2027, space is reserved for an IJmuiden-Newcastle clearway (shipping route) through the *Nederwiek* Wind Farm Zone, between the *Nederwiek (zuid)* and *Nederwiek (noord)* sites. This connects to another clearway already planned through the adjacent *IJmuiden Ver* Wind Farm Zone. This guarantees the accessibility (including using the IJmuiden-Newcastle ferry) of the United Kingdom from the North Sea Canal Area and provides a connection to the future Northern Sea route (shipping route via the Arctic). The process has been started to formally record the exact site of the clearway through the *Nederwiek* Wind Farm Zone in the Environmental Regulation (*Omgevingsregeling*). This will also ensure shipping safety for a gas platform located within the clearway.

Multiple use of space and shipping corridors

The starting point, in accordance with the principles of the National Strategy on Spatial Planning and the Environment (*Nationale Omgevingsvisie*), is to enable as many different uses of the space within Wind Farm Zones and offshore wind farms as possible. This specifically relates to opportunities for shipping corridors through Wind Farm Zones, passages for recreational boating and fisheries, permitting for passive fishing and aquaculture, nature development and sustainable energy generation, other than using wind turbines. Under the responsibility of the Minister of Infrastructure and Water Management, the Government will provide guidance for this by way of area surveys (as part of the preparation of the Wind Farm Site Decisions) as well as more detailed guidance in relation to area passports once the wind farms are commissioned.

According to current practice, an area survey maps existing knowledge about natural features, current use and potential future use of the Wind Farm Zone. Following site tenders, permit holders for the relevant wind farms draw up a development plan. Based on the area survey and the development plan, the Government will draw up an area passport, under the responsibility of the Minister of Infrastructure and Water Management. The area passport will further define the development and priorities for shared use within the wind farm. Following the application process and receipt of the necessary permits, the co-user can subsequently make use of the space made available within the wind farm. In terms of shipping corridors, in principle, one or more passages will be designated in each Wind Farm Zone that will make it possible to pass through the area in a logical manner and under specific conditions. These passages will be indicated in the area passports.

Joint development of hydrogen production and offshore wind energy

Hydrogen production has the potential to play a key role in integrating offshore wind into the energy system. In addition, production of hydrogen also meets the need for non-electric energy in the form of ‘green molecules’ – after all, only approximately 20 percent of our current energy consumption consists of electricity.

In the period up to 2030, hydrogen production using electrolysis will principally take place on land. After 2030, large-scale production will also be possible at sea. Until 2030, I envisage giving onshore hydrogen production a boost and I am investigating the possible link with offshore wind, for example, in the form of combined tenders. I will shortly submit a letter, in which I will be sharing the results of this investigation with the House. This letter will also discuss the continued growth of offshore wind energy between 2030 and 2050 and the development of offshore hydrogen production.

Tenders: permits for Wind Farm Zones

To achieve the increased target for additional offshore wind energy in time, permits will have to be issued for approximately 15 GW of offshore wind farms over the next four years. The current design of tenders, whereby an average of approximately 1 GW is licenced each year, cannot meet this target. It is necessary to simplify the design of tenders to achieve the speed needed in a responsible manner. At my request, RVO held a confidential market consultation with offshore wind energy developers on this issue in March of this year. Based on this input and coordination with RVO, the Directorate-General for Public Works and Water Management (Rijkswaterstaat), other Ministries, and TenneT, I want to at least use the following principles (below) when granting permits for offshore wind energy. In consultation with the above parties, I will refine these points further in the run-up to the next round of tenders for Sites I to IV of the *IJmuiden Ver* Wind Farm Zone. I will provide more clarity on this matter in a letter after summer. The principles are as follows:

- Larger tender rounds will be held (approximately 4 GW per tender round) in the coming years to accelerate the rollout of the Additional Roadmap and to further enable economies of scale. Throughout, I will continue to pay attention to the usefulness of the learning curve, which is something we go through with the wind energy sector and stakeholders in each round, so that insights gained from previous tenders and from other countries can be taken into account in the next round of tenders.

- The size of the sites for which permits will be granted will be increased to minimum of 1 GW, up to a maximum of 2 GW. This is in line with advice²¹ on the issue to guarantee certainty for the rollout while still offering adequate scale. The confidential market consultation with wind farm developers on the tender system in March also revealed a preference for this site size.
- The sites for which permits can be granted can be bundled, or permits can be awarded for them simultaneously. This means several sites will be offered per tender round.
- It is beyond dispute that offshore wind farms must continue to meet substantive quality requirements, as laid down in the Wind Farm Site Decisions. Following market research and consultation with the Minister of Finance, I determine which procedure will be used to award permits for sites. The Offshore Wind Energy Act includes four procedures that can be used to grant a permit for an offshore wind farm.²² The offshore wind farms under this Additional Roadmap will be granted permits under the procedure involving a comparative assessment with a financial bid or by way of the procedure involving an auction, depending on market research.²³ For further elaboration on this, I am in discussions with the Minister of Finance, the Minister for Nature and Nitrogen Policy, and the Minister of Infrastructure and Water Management regarding which criteria will be part of the Wind Farm Site Decisions and tenders. Examples include criteria in the area of nature, system integration, circularity, International Corporate Social Responsibility (ICSR), shipping and shared use. I will provide additional information on the choice of procedure and design of the next tender round for Sites I to IV of the *IJmuiden Ver* Wind Farm Zone in a letter after summer.
- Appendix 4 to this letter includes a schedule outlining the expected tenders for the sites. I shall be specifying this aspect in more detail in consultation with the relevant parties in due course.
- The Government will be conducting preparatory studies for the sites of the additional tenders for wind farms due to be completed around 2030 and will ensure the infrastructure is available in time, with the help of VAWOZ and PAWOZ-Eemshaven. This current approach has proved successful, and I am therefore keen to continue this.
- All parties whether they have and have not participated in previous tenders – and whether they have or have not won these – are and will continue to be invited to participate in subsequent tenders. I want to give all parties an opportunity to participate and to make the most of the learning curve between tenders.




















²¹ Policy options offshore wind 2040, Guidehouse, March 2022.




²² Section 14a of the Offshore Wind Energy Act states that the granting of a permit is subject to the application of the procedure involving the granting of subsidies, the procedure involving a comparative assessment with a financial bid or the procedure involving an auction.

²³ Ranking based on at least three statutory criteria: 1) certainty of the wind farm's realisation, 2) the wind farm's contribution to the energy supply and 3) the amount of the financial bid. It is also possible to establish additional rules regarding these criteria by Ministerial Order or to establish additional criteria that are involved in the ranking. In the case of an auction, the permit is granted to the applicant with the highest bid.

Table 2 Offshore Wind Energy Roadmap timetable

Our reference
DGKE-E / 22061752

Capacity (GW)	Wind farm zone, site(s)	Tender for sites	(Anticipated) commissioning date of wind farm	Status
0,75	<i>Borssele</i> , kavels I en II	Implemented in 2016	2020	
0,75	<i>Borssele</i> , kavels III, IV en V	Implemented in 2016	2020	
0,76	<i>Hollandse Kust (zuid)</i> , Sites I and II	Implemented in 2017	(2022-2023)	
0,76	<i>Hollandse Kust (zuid)</i> , Sites III and IV	Implemented in 2019	(2022-2023)	
0,76	<i>Hollandse Kust (noord)</i> , Site V	Implemented in 2020	(2023)	
approx. 0,7	<i>Hollandse Kust (west)</i> , Site VI	Implemented in 2022	(2025-2026)	
approx. 0,7	<i>Hollandse Kust (west)</i> , Site VII		(2025- 2026)	
approx. 1,0	<i>Ijmuiden Ver</i> , Site III	Fourth Quarter of 2023	(2028)	
approx. 1,0	<i>Ijmuiden Ver</i> , Site IV		(2028)	
approx. 1,0	<i>Ijmuiden Ver</i> , Site I		(2029)	
approx. 1,0	<i>Ijmuiden Ver</i> , Site II		(2029)	
approx. 1,0	<i>Ijmuiden Ver (noord)</i> , Site V		Second Quarter of 2025	(2029)
approx. 1,0	<i>Ijmuiden Ver (noord)</i> , Site VI	(2029)		
approx. 2,0	<i>Nederwiek (zuid)</i> , Site I	(2030)		
approx. 2,0	<i>Nederwiek (noord)</i> , Site II	2026*	(2030)	
approx. 2,0	<i>Nederwiek (noord)</i> , Site III		(2031)	
approx. 0,7	<i>Hollandse Kust (west)</i> , Site VIII	2026/2027**	TBD **	
approx. 0,7	<i>Ten noorden van de Waddeneilanden</i> , Site I	2026/2027*	(2031)	
approx. 2,0	<i>Doordewind</i> , Site I	2027*	(2031)	
approx. 2,0	<i>Doordewind</i> , Site II	2027*	(2031)	

Operational:  Under construction:  Planned: 

* The tender dates for these offshore wind farm sites are indicative. A final decision on the planning is expected in 2024, based on the results of the research programme – Programme for Offshore Wind Energy Landfall – Eemshaven (PAWOZ - Eemshaven) for Ten noorden van de Waddeneilanden and Doordewind, and the research into landfall for Nederwiek Site III.

** The tender date for this Wind Farm Site is indicative. Pending clarity on Tata Steel’s plans currently under development to make the energy supply and production process more sustainable, further decisions will be made with regard to this matter. The decisions regarding the landfall of the relevant section of the offshore grid will be related to this.

- The costs of the environmental impact assessments and site studies will be borne by the party the permit is awarded to. These preparations are carried out in order to specify the details of the Wind Farm Zone for the Wind Farm Site Decision and to mitigate any risks. These amounts are intended to reimburse the preparation costs incurred by Government and will be laid down by Ministerial Order. Charging these costs is in compliance with EU rules on state aid.
- In addition, structural costs, i.e. approximately €100 million per year, in particular after 2031, for the integration of offshore wind energy (primarily for shipping safety around wind farms) will be passed on to the wind farm operators. I will elaborate further on the exact form in which the costs will be passed on in the aforementioned Letter to Parliament about the further design of the tender procedure.
- Finally, wind-generated energy is needed in the form of electricity, it is similarly needed in the form of 'green molecules' (such as green hydrogen). Coordination between offshore wind energy and hydrogen, in terms of time and location, is therefore required to prevent grid congestion. For example, it is important to have sufficient options for flexible demand available at the electrical landfall point. There are various options available, but electrolyzers seem the most obvious solution. Initially, the focus is on onshore, but I am also examining steps towards the development of hydrogen offshore. The Additional Roadmap is now fixed, so this must be taken into account when setting up the Hydrogen Roadmap, under the National Hydrogen Programme. How this coordination will work is being assessed. Whether the actual linking of offshore wind energy and electrolyser projects in the tenders is required – in addition to this coordination – is still under review. I shall be returning to this issue shortly in a letter on the rollout of offshore wind energy between 2030 and 2050.

Foreign suppliers

The offshore grid and connected offshore wind farms are critical energy infrastructure. Supplying parties for both the offshore grid and the wind farms must therefore comply with the requirements and targets set out in the National Security Strategy 2019 and any updated version thereof, such as the mid-term review 2021. This provision will be included in the Development Framework for Offshore Wind Energy and in the future tender regulations for the wind farms.

The Minister for Climate and Energy Policy will designate certain sections of the offshore grid (the 2 GW direct current connections) as vital or essential services in the context of protecting critical processes for national security. TenneT follows up on all resulting requirements when contracting suppliers.

Citizen participation

In response to the Mulder and Moorlag motion,²⁴ I examined how citizen participation could be given shape in relation to the realisation of offshore wind farms and what the need is for citizen participation in respect of support for the energy transition. I have made a distinction between financial participation and participation in the decision-making process.

²⁴ *Parliamentary Papers* 35092, No. 17.

Figures from Statistics Netherlands (CBS) show that support for offshore wind energy is relatively high, with 72.5% of the Dutch population being in favour of more wind energy and 66.1% being in favour of offshore wind turbines.²⁵

With regard to participation in wind farms, it appears that, given the current tender system, financial participation of citizens can in theory be included in a tender involving a comparative assessment. However, the inclusion of participation as a tender criterion may compete with other important social issues, such as ecology and system integration, the distinguishing criteria of the recent tenders for *Hollandse Kust (west)*. The inclusion of a criterion must therefore always be considered in the round. I shall also be examining whether there are alternative ways of achieving the intended objective.

In terms of citizen participation in the decision-making process for the wind farms currently under construction, there has been extensive cooperation with coastal municipalities and their representatives. To limit any visibility nuisance, modifications have been made to the colour scheme of the wind turbines and their lighting, in consultation with these parties. The wind farms to which the Additional Roadmap relates will be constructed so far out at sea that they will no longer be visible from the coast. This is why I shall primarily be focusing on coordinating with stakeholder organisations that operate at sea, for example, through participation programmes such as those held in the context of the North Sea Programme 2022-2027 and the North Sea Consultative Committee.

As with previous connections, residents living near the landing points of the cables of the offshore grid will be extensively involved in the decision-making process. Where possible, their needs and ideas, such as in relation to the cable route onshore, will be included in the final projects. A recent example of this is the use – on the recommendation of local residents and entrepreneurs and in consultation with the Directorate-General of Public Works and Water Management – of a local sand accumulation on the beach for the necessary supplementation for the drilling of the pipe sleeves for the cables of the offshore grid from the *Hollandse Kust (noord and west)* Wind Farm Zones, as a result of which 2,500 lorry trips through Wijk aan Zee could be avoided.

The Government is also examining how citizens can be involved in climate policy and how offshore wind energy can be included in participation processes. One of the potential forms of participation under review is the use of citizen forums. The Government will issue a letter before the summer recess, which will set out the considerations regarding civic forums and will also address the cooperation between Parliament and the Government in the development of plans for citizen forums on climate and energy policy. The Government is examining whether and, if so, how offshore wind energy can be involved in such civic forums.

All this considered, my intention is to continue to involve local residents in decisions on landing points and to use existing participation processes. For the time being, I will not be including financial civic participation as a mandatory tender criterion in forthcoming tenders for offshore wind farms, but I will be taking it into account in the design of future tenders and subsequently weigh it up against other potential tender criteria.

²⁵ <https://www.cbs.nl/nl-nl/longread/rapportages/2021/klimaatverandering-en-energietransitie-opvattingen-en-gedrag-van-nederlanders-in-2020/3-opvattingen-over-energietransitie>.

Forthcoming Letters to House of Representatives on offshore wind energy

The Additional Roadmap and the updated Development Framework mark a key step in the rollout of offshore wind energy. However, this is by no means the end of the road. In the near future, I shall be submitting letters to you on offshore wind energy relating to the following matters:

- A vision on the rollout of offshore wind energy after 2030 towards 2050. I hope to be able to submit this letter to the House before the summer recess;
- The interest in the tender for Sites VI and VII in the *Hollandse Kust (west)* Wind Farm Zone. I expect to submit this letter to the House after summer;
- Further details about the next tender round for Sites I to IV of the *IJmuiden Ver* Wind Farm Zone. I expect to be able to also present this letter to the House after summer.

Our reference
DGKE-E / 22061752

R.A.A. Jetten
Minister for Climate and Energy Policy

Appendix 1 (New) Designated Offshore Wind Farm Zones



Figure 2 Designated offshore Wind Farm Zones

Appendix 2 Investment package for the integration of 21 GW

Our reference
DGKE-E / 22061752

Investments for 21 GW (original roadmap 2030 + 10.7 GW extra by 2030)	2023 to 2025	2023 to 2030	On a structural basis, annually beyond 2030
1. Offshore integration, of which	388	1,215	95
<i>Of which incidental</i>	351	1,007	-
Safeguarding maritime shipping safety (Ministry of Infrastructure and Water Management, Directorate-General for Public Works and Water Management, and Netherlands Coastguard)	98	697	80
Transition to a sustainable food supply: adapting and the fishing industry and making it more sustainable (Ministry of Agriculture, Nature, and Food Quality)	75	199	-
<ul style="list-style-type: none"> • Preparation of offshore wind farms: site surveys (Netherlands Enterprise Agency); • Supervision and enforcement (including State Supervision of Mines, Maritime Police Team, Directorate-General for Public Works and Water Management, and Dutch Customs); • Management and policy (Ministry of Economic Affairs and Climate Policy, Ministry of Infrastructure and Water Management, Directorate-General for Public Works and Water Management). 	215	319	15
2. Onshore integration, of which	165	530	-
<i>Of which incidental</i>	165	530	-
Reservation for area-specific investments in the vicinity of the landing points of the grid connections	165	530	-
3. Reinforcement of the North Sea ecosystem, of which	54	185	5
<i>Of which incidental</i>	44	149	-
Nature-inclusive uses, compensatory recovery measures, and nature compensation in Natura 2000 areas (Ministry of Agriculture, Nature, and Food Quality)	26	134	4
Research and monitoring: including the Wozep programme (Ministry of Economic Affairs and Climate Policy – Directorate-General for Public Works and Water Management)	20	33	-
Nature enhancement and species protection measures (incl. studies) (Ministry of Agriculture, Nature and Food Quality)	8	18	1
Total general	607	1,930	100
<i>Proportion incidental</i>	560	1,686	0
<i>Proportion structural</i>	47	244	100

Appendix 3 Summary of Wind Farm Zones and studies to be carried out

Wind Farm Zone	Landing point	Number of GW	Operational in	Studies
Additional Roadmap, Part 1 (total of 6 GW):				
<i>Ijmuiden Ver</i> , Sites V and VI	Maasvlakte	2	2029	Ecological assessment
<i>Nederwiek (zuid)</i> , Site I	Borssele	2	2030	Ecological assessment
<i>Nederwiek (noord)</i> , Site II	Maasvlakte	2	2030	Ecological assessment
Additional Roadmap, Part 2 (total of 4.7 GW), to be selected from:				
<i>Doordewind</i> , Sites I and II	Eemshaven	4	2031	<ul style="list-style-type: none"> - Offshore Wind Energy Connection – Eemshaven Programme (PAWOZ-Eemshaven) in conjunction with <i>Ten noorden van de Waddeneilanden</i> - Ecosystem study - Ecological assessment
<i>Hollandse Kust (west)</i> , Site VII	North Sea Canal Area	0.7	To be determined	<ul style="list-style-type: none"> - Ecological assessment of Tata Steel developments
<i>Nederwiek (noord)</i> , Site III	Geertruidenberg	2	2031	<ul style="list-style-type: none"> - Calculation based on KEC
Not part of the Roadmap, potentially to be developed after 2031:				
<i>Lagelander</i>	To be determined	To be determined	To be determined	<ul style="list-style-type: none"> - Review of potential of multi-energy zone: offshore hydrogen production and storage, carbon storage, future gas production, electrification platforms - Ecological assessment