ORANGE ZEST: Cable installation is underway at RWE and TotalEnergies' 795MW OranjeWind
Credit: TenneT

Building spree lined up at Hollandse Kust West

Ecowende and OranjeWind farms to add 1.6GW to Dutch pot by 2027, writes **Karolin Schaps**

Investors in Dutch North Sea waters are gearing up for the start of construction on the 760MW Ecowende (Hollandse Kust West 6) and the 795MW OranjeWind (Hollandse Kust West 7) farms.

"Pre-foundation scope is already finished and all wind farm material is in full production," said Marin van Regteren, marine ecologist at Eneco, part of the Ecowende consortium alongside Shell and Chubu.

The team has also concluded its ecological baseline surveys, including digital aerial surveys of birds and marine mammals. "We have detected bats on their migration route offshore this autumn," van Regteren noted.

In late September, Van Oord began installing scour protection at the site – located 53km off the Dutch coast – based on tailor-made designs that include placing a wide array of stones on the seabed, with some weighing up to 450kg, in order to prevent erosion around the base of the future monopiles. The layers of stones also create crevices to attract marine species to the surroundings of the wind farm, including the endangered Atlantic cod.

The Dutch marine services company is using its Nordnes and Bravenes subsea rock installation vessels to carry out the works, which it said were unprecedentedly challenging due to the weight of some of the rocks.

At the end of September, Sif completed production of the wind farm's 52 monopile top sections, amongst the first to be made at the company's new 60,000 square-metre Maasvlakte 2 factory that was inaugurated in May. The monopiles are now receiving secondary steel at Smulders in Belgium.

Construction at Ecowende is expected to begin before the end of the year, with the wind farm on track to start operating at the end of 2026.

Meanwhile, RWE and TotalEnergies are expecting to commence build-out work at OranjeWind in the summer of 2026, with the project due to deliver first power in 2027.

"Preparations for the construction of the OranjeWind wind farm are progressing, including the production of the wind farm components, such as cables, foundations and wind turbines," an RWE spokesman said. OranjeWind's 53 monopiles will also come from Sif's new Rotterdam factory.

One of the wind farm's innovative elements will be linking it to an onshore inertia battery storage system.

The battery's highly-reactive grid-forming inverters will allow it to provide virtual inertia, which in turn helps regulate the intermittent pattern of wind power production.

The 7.5MW battery, the first of its kind connected to a high-voltage power grid, was commissioned at RWE's Moerdijk power

31 plant in early 2025 and is currently undergoing testing in partnership with Dutch grid operator TenneT.

RWE and TotalEnergies also continue to refine plans to use OranjeWind's green electrons to power various electrolysers for green hydrogen production.

In August, RWE's 100MW Eemshaven green H2 project, which will be directly connected to the offshore wind farm, was awarded €551m in Dutch government funding, bringing the project a step closer to a final investment decision.

Earlier this year, TotalEnergies inked deals with chemicals giant Air Liquide to use green electricity from OranjeWind to power two electrolysers.

The first will have a capacity of 250MW, which both parties will jointly build to fuel TotalEnergies' Zeeland refinery.

TotalEnergies' project director for the Zeeland hydrogen project Laurent Ferry said the intermittent nature of OranjeWind's power supply means that the company has to find back-up resources to make up for times of shortfall. "We are currently exploring various technical options, including a connection to the hydrogen backbone," he said.

Air Liquide is also planning to construct a second 200MW electrolyser on the Dutch Maasvlakte. OranjeWind will supply power for 130MW of the electrolyser to produce green hydrogen that will then be transferred for use at TotalEnergies' Antwerp refining and petrochemicals complex.

In late October, OranjeWind gained a grid readiness certificate, approving its network connection and by then all seabed inspections had also been completed. In May, the topside of TenneT's 4000-tonne offshore substation for OranjeWind was installed and commissioned.

Next in the Dutch pipeline are the first 1GW phase of the 2GW Zeevonk project (Ijmuiden Ver Beta) – being developed by Vattenfall and Copenhagen Infrastructure Partners – and SSE Renewables' and APG's 2GW Noordzeker project (Ijmuiden Ver Alpha), both set for first electricity production in 2029.

Since the project permits were awarded in June 2024 the conditions for building offshore wind farms in the Netherlands (and globally) have worsened amid rising costs, uncertainty about the outlook for power prices, low demand for green electricity and regulatory hurdles.

In an unusual permit renegotiation, the Dutch government agreed in August to amend the Zeevonk contract that initially foresaw a 2GW project to come online by the end of 2029. The changes were agreed upon due to the delay in the roll-out of the Delta Rhine Corridor (DRC) hydrogen export infrastructure, which Zeevonk's electrolyser will feed into.

DUTCH CONSTRUCTION COUNTDOWN

Online in 2026		
Project	**MW**	**Developer**
Hollandse Kust West 6 (Ecowende)	760	Shell, Chubu, Eneco
Scheduled for 2027		
Hollandse Kust West 7 (OranjeWind)	795	RWE, TotalEnergies
Expected in 2029		
Ijmuiden Ver Alpha (Noordzeker)	2000	SSE Renewables, APG
Ijmuiden Ver Beta (Zeevonk) phase 1	1000	Vattenfall, CIP
On the cards for 2032		
Ijmuiden Ver Beta (Zeevonk) phase 2	1000	Vattenfall, CIP
Total:	**5.6GW**	

ORANGE BLOSSOM: May saw TenneT's substation installed at OranjeWind Credit: TenneT

"We are fully on track to have the first phase of Zeevonk operational by the end of 2029"

Zeevonk has now been split into two phases – a first instalment with the delivery of a 1GW wind farm by the end of 2029, followed by a second 1GW development to be operational in 2032.

The electrolyser's capacity has been reduced from 1GW to a minimum of 500MW and is now expected to come online in 2033, aligned with the start of the DRC.

"Some of the hydrogen regulation still needs to be happening when it comes to (the third Renewable Energy Directive) implementation and regulation for the demand side, so uncertainties remain, but we are very committed to building the 500MW electrolyser," said Vattenfall programme director for Zeevonk Felix Würtenberger.

With offshore site investigations concluded, the Zeevonk team is now in the procurement process and aims to pick a turbine supplier in the first half of next year, he added.

A final investment decision will follow at the end of 2026 or in early 2027, with construction expected to start in 2028.

"We have a deadline for having the first phase of the wind farm operational by the end of 2029 and we are fully on track for that," Würtenberger said.

A spokesman for SSE Renewables declined to comment on the progress of the Noordzeker project. ■

DUTCH DEVELOPMENT PIPELINE

Project	MW	Developer
Area 6/7	19000	tbc
Doordewind	2000	tbc
Doordewind West	2000	tbc
Hollandse Kust (West) 8	700	tbc
Ijmuiden Ver Gamma A	1000	tbc
Ijmuiden Ver Gamma B	1000	tbc
Nederwiek (South) 1A	1000	tbc
Nederwiek (South) 1B	1000	tbc
Nederwiek (North) 2	2000	tbc
Nederwiek (North) 3	2000	tbc
Ten Noorden van de Waddeneilanden 1	700	tbc
Total:	**32.4GW**	

Nederwiek flop proves need for sector support

Tender no-show as players wait for The Hague's new CfD scheme

In late October, a tender for the 1GW Nederwiek 1A site concluded without any bids, a situation that had been expected due to a newly-announced subsidy scheme that will apply to new offshore wind projects tendered from 2026 onwards.

Auction conditions for the site had already been improved by the government earlier this year in a bid to stir up more interest. This included an option to relinquish the permit if the project's business case worsens dramatically, and delaying any payment of a financial bid for the wind farm to the start of operations.

"This confirms the fact that we have entered a market situation in which government support is crucial to prevent the realisation of offshore wind energy from stalling," said outgoing Dutch energy minister, Sophie Hermans, in a letter to parliament dated 30 October.

The government plans to put 2GW of offshore wind capacity up for grabs in 2026, but it is yet to specify at which sites. Following the failed auction, the Nederwiek 1A area will likely be part of next year's tender. The 2GW target is a steep reduction from the roughly 5GW that was initially expected to be put up for sale next year.

Schemes tendered in 2026 will be financially supported through an amendment to the existing Dutch renewable energy subsidy scheme (SDE++), details for which are expected before January.

"We are happy that the cabinet has decided to set aside nearly €1bn for a temporary measure, so that the development of offshore wind will not come to a halt. Whether Eneco will participate in the 2026 tender based on this temporary measure will depend on the details, which are as yet not clear," said a spokesman for the Dutch utility.

From around mid-2027, new Dutch offshore wind farms will be offered a Contracts for Difference mechanism to guarantee a minimum price for a project's green power. The new support scheme needs to be approved and ushered through parliament by the next Dutch coalition government, which will be formed over the coming months.

It will also decide whether to go ahead with the development of area 6/7 in the Dutch North Sea that could host another 19GW of capacity. The outgoing government had earlier this year cut the Netherlands'

34

Slow industrial electrification the 'biggest pain point' for concerned Dutch industry

The Dutch offshore wind industry is concerned about the shrinking outlook for green power demand and is urging the government to take more pressing action to enforce industrial electrification.

Due to high costs, geopolitical changes and concerns about available infrastructure, the push to electrify industrial processes has slowed down in recent years. This has in turn weighed on medium-term electricity demand forecasts that had been driving the roll-out of new offshore wind projects.

"Future demand for renewable electricity is decreasing and the roll-out of renewable energy projects is being delayed," said PBL – the Netherlands Environmental Assessment Agency – in its latest Dutch climate & energy outlook report.

The lack of sufficient demand for their future green electrons has left Dutch offshore wind developers very concerned about their project's business cases.

"We see the lagging of electrification as the biggest pain point. That is where the biggest action is still to be taken. We want to be in a market where industry wants the product that we create," said Vattenfall director of market development in the Netherlands Ireen Geerbex.

In September, as part of its action plan to support the Dutch offshore wind industry, the government announced several measures aimed at further stimulating green power demand. These include extending a mechanism that compensates some industrial electricity users for high carbon emissions costs in their power prices, as well as assessing the creation of a power purchase agreement warranty fund that will allow more users to conclude long-term off-take contracts.

In September the government also signed an agreement with Tata Steel Nederland, one of the country's highest carbon emitters, to support the replacement of coal used in its steel-making processes with up to €2bn in government funds.

HIGHER FEES: Common Futures managing director Kees van der Leun Credit: Common Futures

"There still needs to be quite a lot done on the demand side, relating to the current industrial processes using fossil fuels, and also heating and transport," said Dutch wind association NedZero offshore wind specialist André Craens.

A mismatch between supply and demand will mean that the price for wind power will be below economic levels for the multi-billion euro projects.

"If the demand does not grow that means higher grid fees per megawatt and also higher grid connection fees for new entrants onto the grid," Dutch energy transition advisory Common Futures managing director Kees van der Leun said.

The need to stimulate green power demand stretches across Europe's borders, therefore requiring an EU-wide response, the industry representatives argue.

"There need to be some kind of European-led markets where it is mandatory to use green energy for producing products," said NedZero's Craens. ■

Green energy off-takers get €1bn PPA fund lift

The Dutch government has earmarked €1bn to support the creation of a guarantee fund for corporate power purchase agreements which aims to give smaller energy users access to green electricity off-take agreements.

The fund, which could initially mobilise around €3.6bn in renewable energy project finance, will bridge any shortfalls in contract payments in case of bankruptcy of an off-taker, therefore making it more attractive for green power producers to enter PPAs with companies that have a lower credit rating or which are not rated.

Around 60% of Dutch companies qualify as this type of business, according to Dutch national financing and development institution Invest-NL.

"For electricity suppliers, this potentially means a greater supply of parties willing and able to conclude long-term electricity contracts, enabling wind farm developers to finance projects," the Dutch government said.

With a buffer capital of up to €70m, the fund can guarantee a yearly off-take of 3.6 terrawatt-hours of electricity, equal to around 10% of Dutch annual industrial power demand.

Off-takers will pay a premium of €1 to €3/megawatt-hour, or €5/MWh for some offshore wind projects that are seeking a 15-year guarantee period – the time foreseen for how long the fund will be operational.

If the fund continues to grow beyond its start-up capital, it could span 1700 guaranteed contracts delivering 547TWh of green electricity and unlocking €43bn in green energy project finance, according to Invest-NL.

"Depending on the duration, the fund can be deployed from 2026 onwards in the best-case-scenario," said outgoing Dutch climate policy and green growth minister Sophie Hermans.

Dutch offshore wind developers welcome the proposal as demand for corporate PPAs from their projects remains low.

The Dutch wind and solar associations, NedZero and HollandSolar, have been lobbying for the creation of such a fund for a while, supporting a motion brought forward in the Dutch parliament.

"A PPA guarantee fund makes sustainable power contracts more robust, affordable, and accessible," the associations said.

Although the creation of the fund is largely welcomed, some doubt whether it will tackle the root problem of slow electrification among industrial energy users.

"A PPA fund is definitely welcome and also needed, but it does not help create an increase in PPA demand – it only facilitates it. Yes, it helps but it is not a quick fix," said Vattenfall director of market development in the Netherlands Ireen Geerbex. ■

NO QUICK FIX: Vattenfall director of market development in the Netherlands Ireen Geerbex Credit: Vattenfall

33 offshore wind capacity goal for 2040 from 50GW to between 30GW and 40GW. Current installed capacity is 4.7GW.

The Ten Noorden van de Waddeneilanden (TNW) site, which was to be a 700MW project, has been dedicated to hosting the Netherlands' second offshore hydrogen demonstration project instead.

As this requires less space, The Hague is now weighing up whether to merge the spare TNW area with the nearby 2GW Doordewind site. "Initial calculations show that the business case for the wind farms in Doordewind would improve substantially with this additional space," the government said.

The slipping timeline for the Netherlands' new offshore wind farms is adding "very significant" costs to the books of Dutch grid operator TenneT, according to the government. The TSO has signed a number of supplier contracts to the tune of €42bn to lock in availability for offshore and onshore grid infrastructure when required.

"Additional costs due to delays will be passed on by TenneT, after review by the Netherlands Authority for Consumers and Markets (ACM), in the long term through grid tariffs for citizens and businesses," the government said. ■