



Wind energy in Europe: National policy and regulatory developments

February 2020

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This publication covers the latest policy and regulatory developments relevant to wind energy in 26 European countries over the last 6 months. It also features a support mechanism overview for new projects in each country. The overview is published every six months. Neither WindEurope nor its members shall be responsible for any loss whatsoever sustained by any person who relies on this publication.

Wind^o EUROPE

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FOREWORD

2019 closed with new political commitments in Europe on climate that could see wind becoming the core of Europe's energy system.

In December the new EU Commission under Ursula von der Leyen took office with a clear political message – the EU must be climate-neutral by 2050, and this must be a top priority for the EU. To this end the Commission is now working up a new “Green Deal for Europe”. They've already presented the financial arm of this, the Sustainable Europe Investment Plan. Many more new policy initiatives will follow.

The Green Deal envisages raising ambitions already for 2030. Later this year the EU will decide whether to increase its greenhouse gas emissions reduction target for 2030, with a potential effect on the renewable energy target. The European Green Deal will also bring new strategies on industrial policy, smart sector integration and offshore wind.

Wind is ideally placed to deliver on these ambitions. But the reality on the ground remains challenging. And delivering on the long-term ambitions requires significantly ramping up today's rate of deployment today.

The 2030 National Energy and Climate Plans will give us a very important indication of what each country will do over the next 10 years. We are still waiting on some countries to finalise them. We'll analyse the final Plans as we did the first drafts. And closely engage with Government so they deliver on the commitments in their Plans.

Permitting remains our top priority. In February we'll present the installation figures for 2019. It's no secret that Germany had a bad year. And the idea of 1,000 metre set back distance for onshore wind that they're discussing would make things worse.

Other countries in Europe have also been struggling with permitting issues and project acceptance issues. In Norway the government dropped its national framework for onshore wind due to public opposition.

And the slow rate of grid build-out is a challenge for projects across Europe, both for onshore and offshore wind. And on offshore the Dutch North Sea Agreement illustrates the challenges we face on maritime spatial planning to deliver the EU's target of 450 GW offshore wind by 2050.

All that said, many good things are happening on the policy front:

- Spain's new Government is strongly committed to climate ambition and, it seems, a healthy further build-out of onshore wind of >2GW pa;
- the new UK Government wants even more offshore wind than they planned before, 40GW by 2030;
- Germany and many other countries have also increased their offshore targets for 2030;
- more Governments see the merits of the 2-sided CfD auction model with the good perspective it offers of revenue stability; and
- barriers to PPAs continue gradually to be removed.

And we've seen some positive developments in onshore wind auctions. Poland held Europe's largest ever onshore wind auction, awarding 2.2 GW at €39-55/MWh. Denmark, Greece and Lithuania all had successful auctions. And even Germany finally managed to have a fully subscribed auction.

This report covers all positive and negative policy and regulatory developments of H2 2019 affecting wind across different countries in Europe.

I wish you a good read.






Kind regards,



Giles Dickson

GLOSSARY

ACRONYM	DEFINITION
CfD	Contract for Difference
CHP	Combined Heat and Power
CO ₂	Carbon Dioxide
dB	Decibel
dB(A)	A-weighted decibels
EV	Electric Vehicle
EU	European Union
FIP	Feed-In Premium
FIT	Feed-In Tariff
HVDC	High Voltage Direct Current
GW	Gigawatt
GHG	Greenhouse Gas
kWh	Kilowatt-hour
Lden	Day-evening-night sound level
MW	Megawatt
MWh	Megawatt-hour
NECP	National Energy and Climate Plan
PPA	Power Purchase Agreement
RES	Renewable Energy Source
TWh	Terrawatt-hour
TSO	Transmission System Operator

SYMBOL (ONSHORE WIND)					
DEFINITION	Minimum set-back distance to residential areas	Nature safeguarding distances / Natura 2000	Maximum noise limits to residential areas	Shadow flicker	Tip height restrictions

COUNTRY HIGHLIGHTS

LARGE MARKETS	HIGHLIGHTS
France	<ul style="list-style-type: none"> The Ministry for Ecological and Solidarity Transition presented its latest draft of the country's multi-year energy plan (PPE). France's parliament adopted a new energy and climate law that combines a number of initiatives to reach carbon-neutrality by 2050. France awarded 576 MW of onshore wind projects at an average weighted price of €66.5/MWh. France has launched a six month consultation for the 1 GW wind farm off Normandy on the North coast. France is preparing to launch the country's first commercial floating wind tender for a 250 MW project off Brittany on the northwest coast.
Germany	<ul style="list-style-type: none"> The German government presented an 18-point wind plan after a crisis meeting with sector representatives and citizens' groups in September including the 1000m setback distance rule to residential areas for new and repowered wind farms. The German government committed to increasing the 2030 offshore wind target from 15 GW to 20 GW by 2030. The new climate law, which entered into force in November, aims to ensure Germany hits its 2030 goals and paves the way to net-zero emissions by 2050. The draft coal exit law aims to spend €40bn on the planned coal exit. The draft law would allocate up to €14bn in grants to lignite mining regions. Another €26bn would be fed into research and development programs at the federal level. After six consecutive undersubscribed auctions, Germany's December onshore wind auction was oversubscribed, with 686 MW bidding in the 500 MW auction.
Poland	<ul style="list-style-type: none"> Poland's Ministry of State Assets has published in January a much-anticipated draft of legislation to promote offshore wind power, aiming to award more than 10 GW in the Baltic Sea by 2027. The Minister of Development Jadwiga Emilewicz announced a bill to liberalise the process of creating onshore wind farms for the first half of 2020 with an implementation date of 1 January 2021. A district court in Poznan ruled against the development of the proposed 1 GW Ostroleka coal-fired power plant, putting its future in question. The Polish government presented in November its updated 2040 energy plan. In December Poland auctioned over 2.2 GW of new onshore wind capacity.
Spain	<ul style="list-style-type: none"> In early January Spain's parliament confirmed Pedro Sánchez from the Socialist party as Prime Minister. Spain's new government has declared a climate emergency and pledged to unveil a draft bill on transitioning to renewable energy within its first 100 days in office. Spain's electricity transmission system operator Red Eléctrica de España has started to turn down 68 GW wind and solar PV projects amid an overwhelming number of applications. In the Canary Islands' technology-specific wind energy auction, 21 projects won for a total of 217 MW. In November Spain offered incentives to renewable energy investors to drop almost €10bn worth of lawsuits against the country after the previous conservative government cut renewables subsidies for a second time in 2013.
United Kingdom	<ul style="list-style-type: none"> In September the UK government awarded 5.46 GW of offshore wind at €46.63/MWh for delivery in 2023/2024, and at €48.92/MWh for delivery in 2024/2025. In December the UK had snap elections in which the Conservative Party received their biggest majority since 1987. The Conservative Party also promised to increase the 2030 offshore target from 30 GW to 40 GW. The UK government can continue with its capacity market scheme after the European Commission re-approved the scheme following a court-ordered investigation. Ofgem published the final report on the 9 August 2019 power outage sparked by the loss of 1.7 GW, including 737 MW from Hornsea 1, following a lightning strike on an onshore power line.

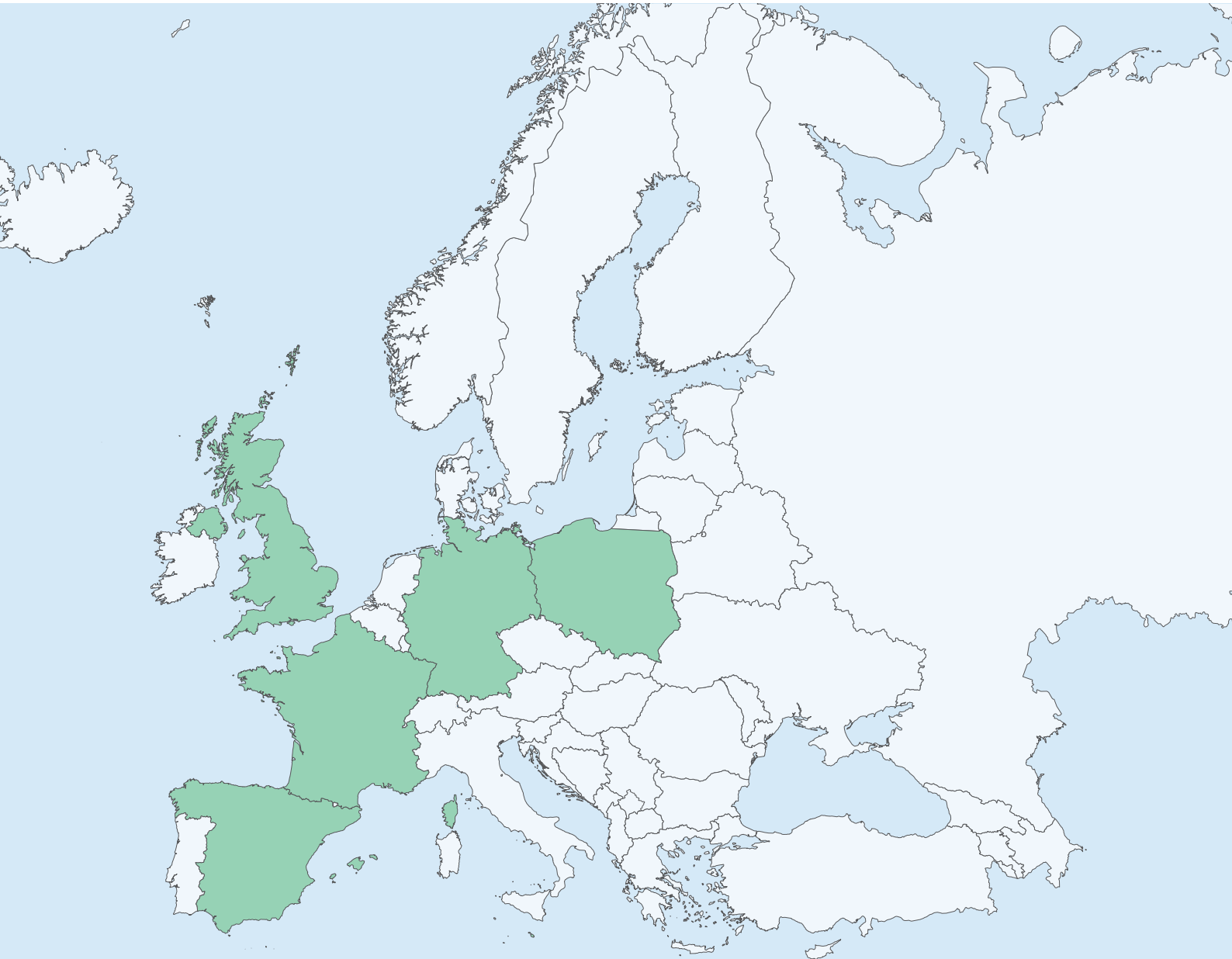
MEDIUM MARKETS	HIGHLIGHTS
Austria	<ul style="list-style-type: none"> After months of negotiations, in January 2020 the new coalition Government of the conservative Austrian People's Party and the Green Party was officially sworn in. The network charges for domestic electricity producers increased 36% compared to 2018/19.
Belgium	<ul style="list-style-type: none"> Since the elections in May Belgium still has no federal government. The new offshore wind zones in Belgium (1.7 GW) are currently under preliminary studies and the tendering of the zones is expected in 2023.
Denmark	<ul style="list-style-type: none"> The Danish government has allocated funding to begin research on whether it is possible to develop one or more energy islands supporting at least 10 GW of offshore wind. In September the Minister for Business Affairs altered an executive order with the removal of the 150m tip height restriction.
Finland	<ul style="list-style-type: none"> A new government was formed with the same coalition partners, with Sanna Marin from the Social Democrats as the Prime Minister. The Finnish NECP that was submitted to the EC in December 2019 increased the wind ambition from 10 TWh to 18 TWh by 2030, however no new support schemes nor auctions for renewables are envisaged.
Greece	<ul style="list-style-type: none"> In September the Greek government announced their phase-out of coal by 2028. In December Greece awarded 224 MW of wind capacity at an average price of €57.74/MWh.
Ireland	<ul style="list-style-type: none"> The government is revising the 2006 Wind Energy Development Guidelines. The country plans to hold its first technology-neutral renewable energy auction in June 2020 for projects to be online by the end of 2022.
Italy	<ul style="list-style-type: none"> In September Italy formed a new coalition government of the populist Five Star Movement and the centre-left Democratic party. The results of the September technology-neutral auction are still unknown at the time of writing.
The Netherlands	<ul style="list-style-type: none"> The Hollandse Kust Noord 700 MW+ tender planned for March 2020 will stick with the existing zero-bid comparative tender assessment model but has added new benchmarks to differentiate between bids. There will be an extra SDE+ round in 2020 in March to use unallocated budgets from previous rounds.
Norway	<ul style="list-style-type: none"> The Ministry of Petroleum and Energy announced in October its decision not to introduce a national framework for wind power. The government ruled out extending commissioning deadlines beyond 2021, which could impact 348 MW of projects.
Sweden	<ul style="list-style-type: none"> In mid-December the Moderates and Christian Democrats pulled out of the energy agreement that was signed in 2016, causing confusion on the long-term energy policy. Swedish officials are expected to draw up the scheme in which Sweden would also leave the joint certificate scheme on 31 December 2021.
Turkey	<ul style="list-style-type: none"> Turkey will announce the details about the new support scheme in the first quarter of 2020. Turkey is working with the Danish Energy Agency on a roadmap for offshore wind development in Turkey.

SMALL MARKETS	HIGHLIGHTS
Bosnia & Herzegovina	<ul style="list-style-type: none"> Construction started on the first wind farm in Republika Srpska, Bosnia and Herzegovina's northern autonomous entity.
Croatia	<ul style="list-style-type: none"> Croatia's maiden auction for renewable energy is set to be adopted in Q1 2020 and open for bids from April until June.
Czechia	<ul style="list-style-type: none"> The Czech government approved the creation of a coal commission to propose a timetable for the phase-out of coal.
Estonia	<ul style="list-style-type: none"> The Estonian government has kicked off the construction permit approval process for a 1 GW offshore wind farm in the Gulf of Riga.
Lithuania	<ul style="list-style-type: none"> Lithuania's National Energy Regulatory Council announced the winner of the 300 GWh technology-neutral auction from autumn 2019.
Portugal	<ul style="list-style-type: none"> The first WindFloat floating offshore wind turbine was successfully connected on 31 December.
Romania	<ul style="list-style-type: none"> The Romanian parliament approved in November a new transitional government led by the National Liberal Party (PNL).
Russia	<ul style="list-style-type: none"> The Russian government approved the allocation of €3.14 billion to support wind projects between 2022 and 2035.
Serbia	<ul style="list-style-type: none"> Serbia's renewable energy auction details are still unknown. The maiden auction should take place sometime in 2020.
Ukraine	<ul style="list-style-type: none"> In November the Ministry of Energy and Environmental Protection presented a draft law on changes to the current scheme of support for renewables.



Photo: Frauke Bungart

1. LARGE MARKETS



FRANCE

Political Developments

The Ministry for Ecological and Solidarity Transition presented its latest draft of the country's multi-year energy plan (PPE). This draft increases France's 2028 offshore wind target from 4.7-5.2 GW to 5.2-6.2 GW **which reflects the boosted target of tendered offshore wind from 750 MW to 1 GW per year by 2024.** The onshore wind figures remain in the 33.2-34.7 GW range for 2028.

As part of the PPE offshore strategy, there will be three floating wind tenders of 250 MW each. One will take place in 2021 in southern Brittany and two tenders in the Mediterranean in 2022. Regarding bottom-fixed offshore wind, there are 3 auctions of 1 GW each planned as follows: one in Normandy in 2020, one in the southern Atlantic coast in 2021-2022 and one at a currently undisclosed location in 2023. From 2024 on, the government plans annual offshore wind tenders of 1 GW per year which can be either bottom-fixed or floating.

France's parliament adopted a new energy and climate law that combines a number of initiatives to reach carbon-neutrality by 2050. France wants 33% of renewables in the energy mix by 2030 and plans to end coal-fired power generation by January 2022.

French President Emmanuel Macron has appointed Elisabeth Borne as the country's new Environment and Energy Minister after Francois de Rugy resigned on 16 July.

Energy Developments

In September the French government wrote to EDF asking for a construction roadmap of six nuclear reactors. Elisabeth Borne (Energy and Environment Minister) and Bruno Le Maire (Finance Minister) asked what would be required for EDF to be able to build three pairs of reactors at three different sites. Construction would be eighteen months apart for each reactor per pair and four years apart for each pair. The future of nuclear power in France remains unclear under the Macron presidency.

The French TSO RTE plans to spend €33bn by 2035 on updating and extending the national grid with up to €8bn dedicated for connecting offshore wind farms. The TSO is assuming 10 GW of offshore wind by 2035 and an

offshore link cost of €800,000/MW which could go down to €700,000/MW. RTE will also modernise and digitise onshore power lines as the grid needs to integrate an additional 20 GW of new capacity by 2028.

Wind Energy Policy

France awarded 576 MW of onshore wind projects at an average weighted price of €66.5/MWh. This was the fourth tender under an initial 3 GW program for 2018 to 2020. France has one more 700 MW auction round left for onshore wind and the successor scheme still has not been approved by European Commission DG Competition. The French government is considering the introduction of local content indicators in their onshore wind and solar PV auctions.

France has launched a six month consultation for the 1 GW wind farm off Normandy on the north coast. The public debate phase will run until 15 May. Recent regulatory changes now make it possible to consult the public to clarify the location of an offshore wind farm and its grid connection before appointing a developer. The consultation will identify any marine issues and study grid tie-in points as well as help define acreage for an initial 1 GW farm and one or more areas to develop in future. Normandy was selected due to favourable wind and seabed conditions and a thriving local industrial sector to support construction.

France is preparing to launch the country's first commercial floating wind tender for a 250 MW project off Brittany on the northwest coast. The General Directorate for climate and energy and regional authorities are discussing details of public consultations and environmental studies. The wind farm will be located in a 500km² zone with water depths of more than 100m. A so-called competitive dialogue procedure, where pre-selected candidates have a say in the final bidding conditions, will run in 2020. The project winner will be named by the end of 2021 with the farm going online in 2027 or 2028.

The Groix & Belle-Ile pilot floating wind farm (28.5 MW) in northern France upgraded from 6 MW GE wind turbines to MHI V164-9.5MW models. The Commissioning of the 70m deep wind farm is now planned for 2022, a year later than initially scheduled.

The European Commission approved the renegotiated feed-in tariffs of €131-€155/MWh for Round 1 and 2 offshore wind projects. The six wind farms (3 GW) won the auctions back in 2012 and 2014 and are now planned to become operational between 2021 and 2024. The feed-in tariffs are guaranteed for 20 years and give an internal rate of return for the projects of between 6.1% and 8.2%.



Permitting Wind Energy






Developing a wind farm in France takes up to 7-8 years, 2.5 years of which are for the authorisation process. Since 2017, the government has decided to streamline and simplify this process by setting up a one-stop-shop. This should shorten the authorisation process by half. So far, it still takes 12-18 months for this administrative procedure given the adaptation period to the new process. In addition, it takes around one more year to get grid access.

The recommended **set-back distance between wind turbines and residential areas is 500m**, but it is common to find longer distances set by the local authority on the grounds of noise and visual impacts.

Local authorities apply nature safeguarding distances or seasonal restrictions during construction. These requirements are not set by regulation but introduced during the permitting process. Distance can vary depending on the species and the Environmental Impact Assessment (EIA).

It is possible to develop a wind farm within a Natura 2000 site. However, it is difficult to do so due to opposition from nature conservation groups, some of which are even requesting a ban of wind farm development within and up to 1km around Natura 2000 sites.

SUPPORT MECHANISMS	
	<ul style="list-style-type: none"> • FiP for 20 years awarded via auctions. • Small projects with a maximum of 6 turbines and 3 MW per turbine can receive an FiP of €72/MWh without bidding in the auction. The tariff decreases to €40/MWh when a certain amount of production is reached within the year.
	<ul style="list-style-type: none"> • FiP contract covering 20 years. • Ceiling prices of tenders evolve tender after tender. • The criteria for the Dunkirk tender was based on a 100 point system: <ul style="list-style-type: none"> » A maximum of 5 points based on the project’s environmental footprint; » A maximum of 5 points based on the distance to shore (the farther, the better); » A maximum of 5 points for site surface (the smaller the site, the better); » A maximum of 5 points for turbine height (lower turbines are better); » A maximum of 10 points for project viability; and » A maximum of 70 points for the price of the tariff for the project.

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
500m	<ul style="list-style-type: none"> • Yes, set at project level. Can go up to 10 Km. • Yes 	<ul style="list-style-type: none"> • Day: 35 dB(A) + 5 dB(A) • Night: 35 dB(A) + 3 dB(A) 	<ul style="list-style-type: none"> • 30 h/yr • 30 min/day 	Yes due to aviation and military

GERMANY

Political Developments

The German government presented an 18-point wind plan after a crisis meeting with sector representatives and citizens' groups in September. The most important and unhelpful measure was a the 1000m setback distance rule to residential areas for new and repowered wind farms. Individual German States can apply lower distances if they want within 18 months after the law enters into force, while Bavaria can keep their "10h" distance rule. The 1000m rule could rule out the building of wind farms on 50% or even more of German territory. Several German States have already decided they would opt out. Schleswig-Holstein is proposing 1000m to residential areas and 400m to splinter settlements as well as an exemption for repowering projects. Other measures include simplified appeals processes and species protection regulations, as well as the introduction of regional wind growth targets.

The German government committed to increasing the 2030 offshore wind target from 15 GW to 20 GW by 2030. In addition to the three tenders planned for 2021/2022 and 2023, additional tenders should be introduced as from 2023. Additionally, the network development plan for electricity 2019-2030 has 3,600 additional kilometres compared to the applicable federal demand plan. Depending on the scenario between 7 and 8 further connection systems in the North and Baltic Seas will be confirmed as necessary by 2030, paving the way for the 20 GW offshore wind target.

The setback distance for onshore wind and the increased offshore wind target should be adopted in early 2020 as part of the coal exit law. However, December's draft law of the Germany coal exit does not include the setback distance rule. It does not include a proposal to increase to the 20 GW offshore wind target nor the cancellation of the 52 GW ceiling for solar PV. The draft coal exit law would spend €40bn on the country's planned coal exit. The draft law would allocate up to €14bn in grants to lignite mining regions. Another €26bn would be fed into research and development programs at the federal level. As part of the coal exit, hard-coal power plant closures would be via annual auctions with the first 4 GW auction scheduled for 2020. The aim is to decommission 15 GW of coal power plants by 2022.

The new climate law, entered into force in November, aims to ensure Germany hits its 2030 goals and paves the way to net-zero emissions by 2050. The law sets unprecedented

and binding emissions reduction targets for the next decade, setting out annual carbon budgets for the energy, industry, transport, building, agriculture and waste sectors. As a part of the climate law the German CO₂ price mechanism for transport and buildings will, as of 2021, have a rate of €25 per ton instead of the original €10 proposed. The price will then rise to €55 by 2025, up from the original forecasted rate of €35.

In December during the SPD Congress the party elected Norbert Walter-Borjans und Saskia Esken as the leaders of the party. The two are very critical of the grand coalition with CDU/CSU and were suggesting that Germany could go to snap elections. However, there are no current indications that Germany will see a change in government.

Energy Developments

Many German conventional power plants do not react to negative power price signals, according to the German grid regulator BNetzA. Technical issues and heating obligations are key reasons for the lack of flexibility. Combined Heat & Power plants would still generate power, even if hourly prices dropped to minus €100/MWh. In addition to heat contract obligations and self-generation incentives, grid bottlenecks between the high-voltage and distribution grids are a contributory factor.

Tennet has completed the second stage of the West Coast power link in northern Germany. The 380 kV link between Brunsbüttel near Hamburg and the Danish border should be completed by 2023. The link is vital in transporting wind energy because the grid saturation zone limits new wind turbine installations. Grid expansion has been lagging behind the rapid expansion of wind turbines especially in northern Germany, with many key lines delayed and vital north-south grid links unlikely to be completed before 2025.

Germany ran its capacity reserve tender in late 2019, with results scheduled by mid-February. Generation, storage units and adjustable loads outside the power market bid for two-year contracts running from 1 October 2020 to 30 September 2022. Germany's new 2 GW capacity reserve auction is capped at €100,000/MW/year. The capacity reserve is separate from the existing lignite (climate) reserve and the winter power plant reserve (also known as the grid reserve) with both of them scheduled for phase-out in the coming years. The lignite reserve comprises 2.7 GW of old lignite plants taken out of the wholesale market between 2016 and 2019. The winter reserve is fixed at 6.6 GW for winter 2020/21 with the amount reviewed each spring for the upcoming winter.

Wind Energy Policy

Germany's December onshore wind auction was oversubscribed, with 509 MW awarded. Around 686 MW applied for 500 MW and the average winning price was €61.1/MWh, with the lowest bid being €57.4/MWh.



- Before the December's auction, another 6 onshore wind auctions had been held and all of them were undersubscribed. Undersubscribed auctions led the winning projects to receive the ceiling price of €62/MWh. August: 208 MW awarded out of 650 MW. Volumes not allocated are to be retendered in 2022.
- September: 187 MW out of 500MW.
- October: 204 MW out of 675 MW.





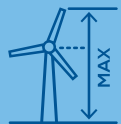
Besides the technology specific auctions, Germany also held a technology-neutral one in November, which was oversubscribed. **Germany awarded 203 MW of solar PV with no wind projects competing in the auction.** The average price was €54/MWh.

Permitting Wind Energy

Aviation and military restrictions as well as appeals by nature-conservation groups and local residents are the **main challenges for German onshore wind projects** according to a survey by consultancy FA Wind. Over 10 GW of projects are reportedly stuck in permitting. 4.8 GW of this are blocked due to aviation concerns, regarding proximity of turbines to air control radio masts and the interference this can cause to radio signals. Another 3.5 GW is currently blocked by military restrictions, of which 32% relate to low-flying helicopters. The third biggest factor holding back projects were legal appeals by nature and wildlife groups, amounting to 60% of the 1 GW of approved capacity currently in the appeal phase.

In general **there are not enough designated areas for wind energy developments.** In fact, administrative bodies often lack the necessary capacities to efficiently develop land use plans. Moreover, a lot of the existing designated areas are not suited for modern, higher turbines. This creates delays in permitting processes and increased costs to project developers.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> • Wind farms > 100 kW receive an FiP. Wind farms <= 100 kW receive an administratively-set FIT. • Once a bid has been accepted, the project must be completed within two years. • Ceiling price of €62/MWh in 2020. • Wind farms up to 750 kW and prototypes with a maximum capacity of 125 MW/year are exempted from participating in auctions. • Support lasts for 20 years. • One bidder can submit more than one bid per auction round, but not for the same project. • No support payment when the wholesale electricity price is negative for more than 6 consecutive hours. There are exceptions for small installations and demonstration projects. • Seven technology-specific auctions in 2019. And 6 planned for 2020 • Technology-neutral auctions twice a year of 200 MW. • Innovation auction tender of 250 MW per year but the date is still not specified.
	<ul style="list-style-type: none"> • Flexible market premium given via tenders. • Next auction (700-900 MW) is scheduled in September 2021.

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
400m to 10xH	<ul style="list-style-type: none"> • Yes • Yes 	Pure residential areas: <ul style="list-style-type: none"> • Day: 50 dB(A) • Night: 35 dB(A) Small housing areas: <ul style="list-style-type: none"> • Day: 55 dB(A) • Night: 40 dB(A) 	<ul style="list-style-type: none"> • 30 h/yr • 30 min/day 	Yes

POLAND

Political Developments

Poland's Ministry of State Assets has published in January a much-anticipated draft of legislation to promote offshore wind power, aiming to award more than 10 GW in the Baltic Sea by 2027. Up to 4.6 GW from pre-developed wind projects could be granted support by Polish energy regulator ERO by the end of 2022 under a Contract for Difference scheme with a fixed price set by the government. The fixed price would be awarded only to mature projects, such as the ones with a grid link permit and a valid environmental permit (pending approval by European Commission DG Competition). The remainder of the capacity is to be tendered in competitive CfD auctions of at least 500 MW in 2023, and 2.5 GW each in 2025 and 2027. Support will be granted for 25 years.

Following a win in October's parliamentary elections, the Law and Justice party announced its governing cabinet line-up. The responsibilities for energy and mining companies will be transferred to a new Ministry of State Assets led by Deputy Prime Minister Jacek Sasin. The new Climate Ministry went to the COP 24 president Michal Kurtyka.

The Minister of Development Jadwiga Emilewicz announced a bill to liberalise the process of creating onshore wind farms for the first half of 2020 with an implementation date of 1 January 2021. Among the topics of liberalisation will be the 10H rule, which was established as a minimum distance between wind turbines and buildings and protected areas. Wind turbines could not be built closer than 10 times the turbine height.

The Polish Parliament revised the renewable energy law which allowed for extended deadlines for grid connection deals to improve the viability of projects bidding into the upcoming auction and strengthening the guarantees of origin scheme to open the door to corporate renewable power purchase agreements.

During the summer, Poland's ministry of energy proposed support for 1.5 GW of new PV capacity but none for onshore wind in auctions to be held in 2020.

The Polish government presented in November its updated 2040 energy plan. The draft plan calls for renewables to account for 28.5% of the country's energy mix by 2040. The 2030 renewables target was increased from 21% to 23% although the European Commission had previously estimated Poland's fair share at 25%. However, the draft plan sees the offshore target being reduced to 8 GW, instead of the 10 GW earlier announced coming as a concern to the offshore wind industry.

Energy Developments

A district court in Poznan ruled against the development of the proposed 1 GW Ostroleka coal-fired power plant, putting its future in question. Polish state-owned utility Energa has difficulties closing the financing for the €1.4bn project, which energy ministry officials say will be Poland's last large investment in a conventional coal power plant. The utility is considering financing the project from outside the EU.

In September the European Commission approved Poland's plan to compensate energy-intensive companies for higher power prices from indirect costs resulting from soaring carbon prices in the Emissions Trading System. The scheme will cover 2020 with a provisional budget of approximately €417 million and will partially refund electricity costs to eligible companies.

Wind Energy Policy

In December Poland auctioned over 2.2 GW of new onshore wind capacity. The minimum auction price was €37.24/MWh, while the maximum bid was €55.1/MWh. The average price of €49.2/MWh was below the current wholesale energy price of €52/MWh.

Permitting Wind Energy

Poland currently applies a 10 times tip height rule (10H) to calculate the minimum distance to housing. This planning requirement is very restrictive for the development of onshore wind power in Poland and is equivalent to a ban on new investments.

In the current legislation the 10H rule also applies inside Natura 2000 areas. Before the adoption of the rule, there was technically no legislation banning wind farms from Natura 2000 areas. Nevertheless, they were conventionally considered as no-go areas and development was challenging. This is not expected to change.






The Regional Directorate of Environmental Protection establishes buffer zones for sensitive species. The setbacks from nesting of endangered species are recommended in guidelines for wind developments. They are

species-specific and not mandatory – minor deviations can be compensated to some extent.

Noise limits are not specific to wind farms and have not changed since 2007. Health and safety regulations also set rules for low frequency noise in the workplace. On wind power facilities, these apply for wind turbine service technicians.

Regarding shadow flicker, there is no maximum duration set in legislation.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> • CfD awarded through competitive auctions. The date of the next auction is unknown. • Support lasts for maximum 15 years. • Ceiling price of €66.24/MWh in the last auction.
	<ul style="list-style-type: none"> • A support mechanism for offshore wind pending approval of the Offshore Wind Act. • Non-competitive CfD model would apply for the first few projects. • Subsequent CfDs awarded via tenders. • Support lasts for maximum 25 years.

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
10xH	<ul style="list-style-type: none"> • Yes, 10xH rule from certain protected areas + buffer zones for sensitive species • No 	<ul style="list-style-type: none"> • Day: 45 to 55 dB(A) • Night: 40 to 45 dB(A) 	No set limit value	No

SPAIN

Political Developments

In early January Spain's parliament confirmed Pedro Sánchez from the Socialist party as Prime Minister. In a very tight vote 18 crucial abstentions by Catalan and Basque separatist lawmakers were secured by agreeing to an open dialogue with Catalonia's separatist regional government. Sánchez will lead a minority government in a coalition with the left-wing Unidas Podemos, which has never governed nationally. The pro-renewables Teresa Ribera will remain as Minister for the Ecological Transition and Demographic Challenge. She is the Vice-president along with another 3 Ministers.

Spain's new government has declared a climate emergency and pledged to unveil a draft bill on transitioning to renewable energy within its first 100 days in office. The government is committed to bringing a draft bill to reduce greenhouse gas emissions with the objective of reaching climate-neutrality by 2050. They aim to have a 100% renewable-based power system by 2050. The government has committed to updating its NECP. The current draft NECP pledges to increase wind energy to 28 GW in 2020, 40.2 GW in 2025 and 50.3 GW in 2030.

The previous socialist government proposed a target of 2.2 GW of onshore wind per year as well as 3 GW of solar PV per year. They wanted to set a target for floating offshore wind, but the government deadlock prevented them from bringing new legislation, including the change from the old investment-based auction support mechanism to a 2-sided CfD.

The UN climate summit was set to take place in Santiago but the government of Chile decided to call it off because of protests in the capital. The Spanish government proposed to hold the COP25 in Madrid, where it took place in December.

Energy Developments

Spain's declared aim to close down coal plants and gradually phase out nuclear power in favour of wind and solar has led developers and other players to buy the rights to grid-connection points with the sole aim of reselling at higher prices to developers. Spain's electricity transmission system operator Red Eléctrica de España

has started to turn down 68 GW wind and solar PV projects amid an overwhelming number of applications. Also it has approved 102 GW in addition to the 31 GW already in operation, as of end November 2019. The market for grid access has become a lucrative one in Spain, with a secondary market valuing projects with an assured connection at around €150,000/MW. The government is looking to intervene by passing a new law to cancel older permits that have not been used. Meanwhile, Spain's National Authority for Markets and Competition is overseeing the possible auctioning of connection points at sites where nuclear and coal plants are due for closure. The first step to developing a project in Spain is to obtain a permit for grid access.

In November Spain offered incentives to renewable energy investors to drop almost €10bn worth of lawsuits against the country after the previous conservative government cut renewables subsidies for a second time in 2013. The retroactive changes affected around 64,000 plants and have left Spain facing 45 open lawsuits. So far Spain lost 10 cases but has not paid the €821 million penalty set by arbitrators denying it breached a contract with investors. Under the new decree passed, the government will offer subsidies which will allow investors that abandon litigation to maintain their current profitability rate of 7.39% until 2031. Profitability rates would have dropped sharply after 2020 under the previous legislation.

Wind Energy Policy



Over 8,500 MW of onshore wind and solar PV projects were awarded through three auctions held in 2016 and 2017. Some of the projects were in a rush to keep the guaranteed floor price, as well as millions in deposits (€60,000/MW). Parts of the deposit could be lost if the projects were not completed by the deadline. Projects from the 2016 auction have a March 2020 deadline but projects from the 2017 auction had to complete their projects by the end of 2019. Around 2,000 MW that missed the commissioning deadline will not have access to the floor price and thus will be forced to sign a power purchase agreement if they don't want to be fully exposed to wholesale market.






In the Canary Islands' technology-specific wind energy auction, 21 projects won for a total of 217 MW. All wind

farms are due by 2023. The auction had a pot of €80 million funded by the Spanish government and the EU. Each project will receive €448,000/MW. The government selected projects using several criteria including the wind resource and the extent to which sites are advanced in the permitting procedure.

Permitting Wind Energy

The Royal Decree Law 15/2018 extended the validity of grid permits obtained before the adoption of the electricity reform in 2013 until 31 March 2020.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> • Auctions, competing for upfront investment subsidies. In the last auction in 2017, participants bid at the maximum possible discount, meaning they did not obtain any investment compensation. • Awarded projects secure a rate of return of 7.503%, pre-taxes. Revenues are only from the wholesale market, but the government secures a floor price of around €30/MWh. • Indications that the support mechanism will change to a CfD.
	<ul style="list-style-type: none"> • No support mechanism for offshore wind.

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
500m	<ul style="list-style-type: none"> • Yes, regulated at regional level • No, but exemptions exist based on the Protected Area Management Plan 	<ul style="list-style-type: none"> • Day: 55 dB(A) • Night: 45 dB(A) 	No set limit value	N/A

THE UNITED KINGDOM

Political Developments

In December the UK had snap elections in which the Conservative Party received their biggest majority since 1987.

Such a large majority will help the Prime Minister Boris Johnson in finally confirming United Kingdom's withdrawal from the European Union took place on 31 January 2020. The December elections provided good news for offshore wind as the conservatives promised to increase the 2030 offshore target from 30 GW to 40 GW and pledged support for innovative floating offshore wind projects.

Scotland unveiled a low-carbon blueprint in its annual Programme for government aimed at accelerating their progress towards their net-zero target by 2045.

A €3.5bn green investment portfolio has already been launched and will help investment opportunities for wind farms, solar PV and energy storage projects. The measures will be supported by a new Scottish National Investment Bank which will lay out a minimum of €2.3bn over 10 years.

Energy Developments

The UK government can continue with its capacity market scheme after the European Commission re-approved the scheme following a court-ordered investigation.

Now the government needs to process around €1.2bn of deferred payments which were suspended since last November when the General Court of the EU annulled the Commission's clearance of the UK scheme. The UK electricity system operator National Grid is targeting reduced volumes in Capacity Market auctions which started on 30 January. The three-year-ahead (T-3) auction for delivery in 2022-23 has a target capacity of 44 GW while the four-year-ahead (T-4) auction for 2023/24 has a target of 43.3 GW. In the one-year-ahead (T-1) auction, National Grid is seeking just 300 MW for 2020-21.

Ofgem published the final report on the 9 August 2019 power outage sparked by the loss of 1.7 GW, including 737 MW from Hornsea 1, following a lightning strike on an onshore power line.

Ørsted has agreed to pay €5.3m into the Energy Industry Voluntary Redress Scheme over the wind farm's role in the blackout, which left more than 1 million people without electricity for up to 45 minutes. RWE will pay the same amount for issues at its 740 MW Little Barford combined-cycle gas plant. UK Power Networks, which owns local grid infrastructure in Britain, will pay £1.5 million.

National Grid is reassessing the network code governing offshore wind after UK regulator Ofgem criticised its handling of connection for the 1.2 GW Hornsea 1 project.

The system operator plans to complete an industry wide review of procedures for compliance and testing by May 2020. Findings will be sent to the government's Energy Emergencies Executive Committee.

National Grid has proposed to modify the grid code with a non-mandatory technical specification relating to what is referred to as Virtual Synchronous Machine ("VSM") capability.

The specifications (under consultation) will enable those utilising power electronic converter technologies (e.g. wind farms, HVDC interconnectors and solar parks) to offer an additional grid stability service under a commercial market-based mechanism. This is very good news for the industry who has been advocating for voluntary remunerated services instead of minimum obligations for all generators.

Wind Energy Policy

In September the results of the third CfD round were announced.

The UK government awarded 5.46 GW of offshore wind, out of which 2.6 GW of offshore wind capacity was awarded at £39.65/MWh (€46.63/MWh) for delivery in 2023/2024, and a further 2.85 GW at £41.61/MWh (€48.92/MWh) for delivery in 2024/2025. These prices are 2012 real prices, meaning the bids are a bit higher in today's prices. In total 5.775 GW were awarded in the auctions with 275 MW of remote island wind winning support at similar prices. Among the winners there was the Forthwind's 12 MW demonstration project using two-bladed turbine technology.

The UK's Crown Estate has cleared seven out of eight offshore wind power extensions for a total of 2.85 GW.

The estate has completed the Habitats Regulations Assessment (HRA) for the seven projects which will now progress to the award of rights. The HRA assesses the possible impact of the proposed wind farm extensions on relevant nature conservation sites of European importance. The developers of the seven extensions will now progress with project-specific environmental assessments and surveys before seeking planning consent for their projects through the statutory planning process.

The UK's seabed leasing round 4 offers four zones and a maximum of 3.5 GW per zone. The prequalification is run-

ning in January, where developers are assessed on the financial and technical robustness of each project proposal. Then there will be a multi-cycle bidding process, using option fee bids to determine site awards. This will start in September 2020, where the sites will be awarded with 60-year permits.

Marine Scotland published in December a draft offshore wind sectoral plan. The consultation will last for 12 weeks and the final plan should be adopted in 2020. The draft identifies up to 10 GW of offshore wind in 17 seabed areas.

Welsh ministers and the German developer Energiekontor launched a UK Supreme Court challenge to a ruling that limits post-consent variations of onshore wind farms. A decision by the Supreme Court should be taken in 2020 and it could have significant implications to onshore wind development in Scotland.

Permitting Wind Energy

In 2019 the UK government issued the revised National Planning Policy Framework introducing new requirements for the development of wind farms. Projects are no longer allowed a) in areas which have not been identified as suitable for wind development in a local or neighbourhood plan and b) if they cannot demonstrate that impacts identified by local communities have been addressed and there is local

community support for the project. Repowered projects are exempted from these requirements.

There is no minimum distance between wind turbines and residential areas in the national legislation. These are set during the EIA, following noise modelling assessment and the consideration of visual impacts.

Likewise, **there is no minimum distance to environmental receptors in the national legislation.** It is also possible to build wind farms in Natura 2000 sites but it is getting more challenging. Impacts are assessed on a case-by-case basis through EIA and Appropriate Assessment (AA).

Wind turbine noise specifications are not set in legislation either. Instead there is a non-statutory guidance implemented during the planning process (ETSU-R-97) with recommended maximum noise limits.

There are **informal tip height restrictions, often capped at 125m.** The restrictions are due in part to aviation constraints as wind turbines represent a risk of collision with low flying aircraft. Since August 2017 developers have submitted planning applications for projects with wind turbine tip heights of 150m and above. This reflects the state of the current technology available and suggests a possible relaxation of previous restrictions.








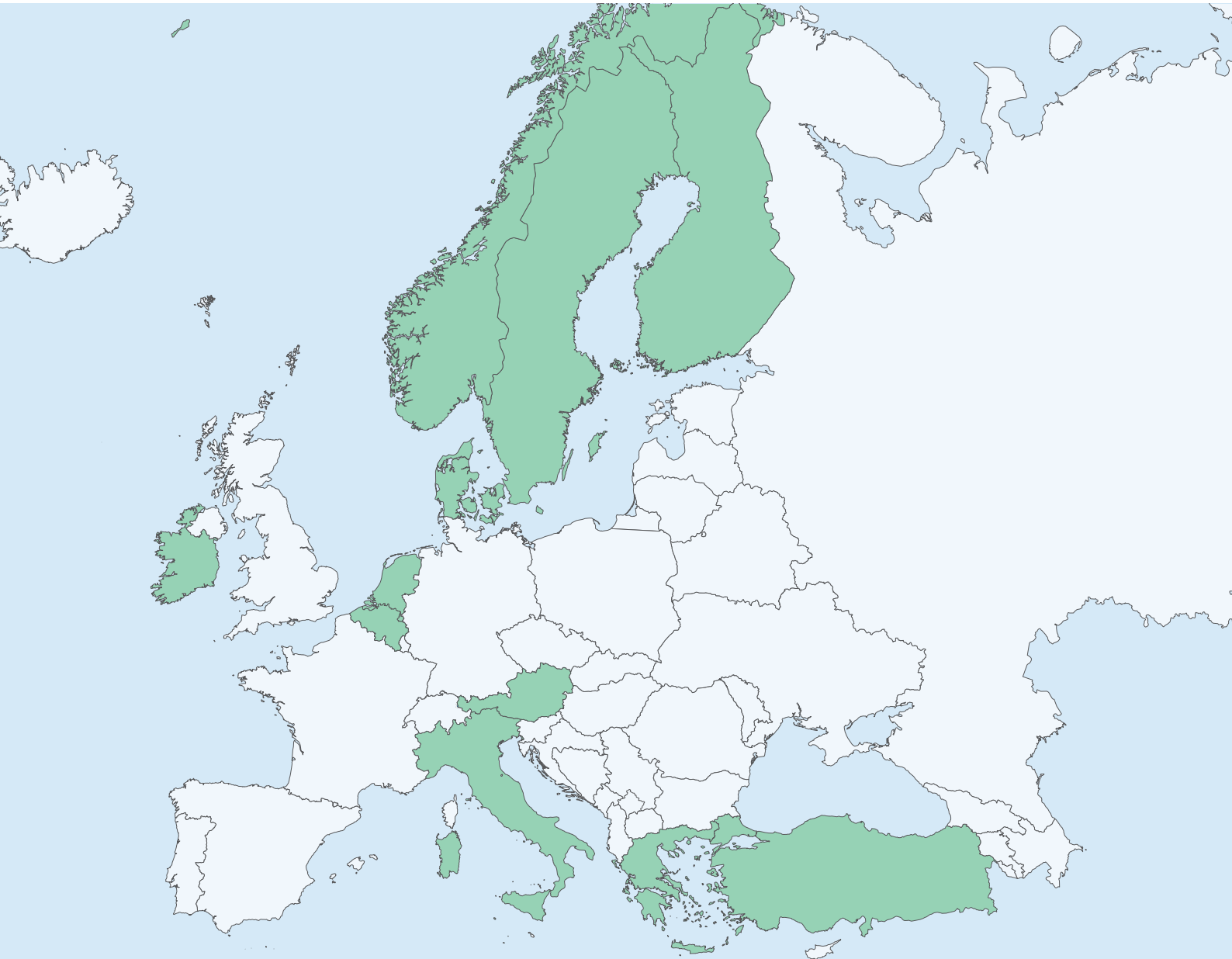
SUPPORT MECHANISMS FOR NEW PROJECTS				
	<ul style="list-style-type: none"> No CfD auction since 2015. 			
	<ul style="list-style-type: none"> CfD auction every 2 years. The next auction will take place in May 2021. The auctions are held on a pay-as-clear basis, with a cap price for every specific technology. CfD contract lasts 15 years. 			
PERMITTING WIND ENERGY (ONSHORE WIND)				
				
Set at project level	<ul style="list-style-type: none"> No Yes 	<ul style="list-style-type: none"> Day (>30 dB(A)): 5dB(A) above background noise Day (<30 dB(A)): 35 to 40 dB(A) Night: 43 dB(A) 	No set limit but common practice is: <ul style="list-style-type: none"> 30 h/yr 30 min/day 	Yes 125m (informal)



Photo: Paul-Henri Durand

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MEDIUM MARKETS



AUSTRIA

Political Developments

In September Austria went for snap elections after a right-wing coalition collapsed in May 2019. **After months of negotiations, in January 2020 the new coalition Government of the conservative Austrian People’s Party and the Green Party was officially sworn in.** The new Government will aim for carbon-neutrality by 2040 and put a price on CO₂ emissions. The Green Party hold four ministries, including the Ministry for Tourism and Sustainability in which they have control over environment, energy, tourism, transport and infrastructure.

In September the Austrian parliament decided to declare a climate emergency, making climate change a priority issue. This comes after the European parliament declared a state of climate emergency, in a move by municipal officials aimed at prioritising climate goals and environmental measures at a local level.

Because Austria did not have a government for the majority of 2019, the Austrian NECP did not significantly increase in ambition. There has been a lack of concrete actions and frameworks for the expansion of wind energy,







but the new government’s programme mentions the revision and improvement of Austria’s NECP. At the time of publication, the NECP has a RES target of 46-50% by 2030.

Energy Developments

The network charges for domestic electricity producers increased 36% compared to 2018/19. In addition, balancing energy cost allocation among grid users was changed in 2019, which led to an additional increase in balancing energy costs for electricity generators.

Wind Energy Policy

The Austrian FiT was originally approved until 2022. And the available budget was brought a year earlier in order to reduce the backlog of permitted wind farms that have been waiting for an FiT since 2016. Around 200 wind farms, amounting to about 600 MW, will now be able to receive the FiT, but there will be a cut in the price of the FiT (previously at €81/MWh). Further funding for new wind farms remains unclear.

SUPPORT MECHANISMS FOR NEW PROJECTS				
	<ul style="list-style-type: none"> • FiT granted for 13 years. • Developers make a one-time payment of €135,000/MW for grid connection costs. • Balancing costs are paid for by the wind farm operator. 			
PERMITTING WIND ENERGY (ONSHORE WIND)				
				
750m-2000m	<ul style="list-style-type: none"> • Yes. Distances to natural parks exist, focused on sensitive species and close location of bird nests. • Yes 	<ul style="list-style-type: none"> • Calm region (night time background < 35 dB(A)): +5 dB(A) day and night • Middle region (night time background 35-40 dB(A)): + 3dB(A) day and night • Loud region (night time background >40 dB(A)): + 1dB(A) with maximum limit of 45 dB(A) day and night 	<ul style="list-style-type: none"> • 30 h/yr • 30 min/day 	Project level

BELGIUM

Political Developments

Since the elections in May Belgium still has no federal government. The coalition negotiation process is still ongoing between the Francophone socialists (Parti Socialiste) and the Flemish nationalists (Nieuw-Vlaamse Alliantie). According to a leaked coalition document, the new government would like to slow down the closure of nuclear power plants, currently planned for 2025.

In September a coalition of Socialists, Greens and Liberals reached an agreement to form the government of the French-speaking region of Wallonia.

The Flemish government coalition of Conservatives and Liberals increased their wind energy target to 2.5 GW by 2030, which amounts to at least 100 MW of new wind farms per year between 2020 and 2030. The regional government will offer green certificates to wind farms as of April 2020 (designed to offer an Internal Rate of return of maximum 6.5%). The system will be phased out for new projects by 2025 via gradual reduction in maximum support.



Energy Developments






Belgium is going to replace its strategic reserve by a capacity market, planning its first auction in October 2021. The aim is to procure 3.6 GW of new generation capacity from 2025 in order to tackle the nuclear phase-out expected between 2023 and 2025.

Wind Energy Policy

The new offshore wind zones in Belgium (1.7 GW) are currently under preliminary studies and the tendering of the zones is expected in 2023. The tender design is still unknown, but it could be either a zero-subsidy bid, pay-to-build or a 2-way CfD.

In Flanders the government is planning to move the competence of permitting from the regional and provincial governments to municipalities, arguing these would be better placed to tackle local opposition.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> Producers receive green certificates per each MWh produced. No support during negative hours in Flanders, while the Internal Rate of Return for wind projects is 6.5%. No support at federal level.
	<ul style="list-style-type: none"> No tenders scheduled so far. The federal government is still assessing a post-2020 support mechanism for offshore, and a date for a possible tender.

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
Flanders				
Project level	<ul style="list-style-type: none"> Yes, set at project level. No 	<ul style="list-style-type: none"> Day: 44 dB(A) Night: 39 dB(A) 	<ul style="list-style-type: none"> 8 h/yr 30 min/day 	122m in zones with aeronautical constraints
Wallonia				
400m to 4xH	<ul style="list-style-type: none"> Yes, 1km from nests of endangered species. No 	<ul style="list-style-type: none"> Day: 45 dB(A) Night: 43 dB(A) [all year]; 40 dB(A) [summer] 	<ul style="list-style-type: none"> 30 h/yr 30 min/day 	122m in zones with aeronautical constraints

DENMARK

Wind Energy Policy

The Danish government has allocated funding to begin research on whether it is possible to develop one or more energy islands supporting at least 10 GW of offshore wind.

An initial investment of €8.7 million included in Denmark's Finance Act for 2020 will fund feasibility studies for the project and development of technologies capable of converting large amounts of electricity. Sites will be examined in the sea off the east coast of Denmark's central Jutland region, the Baltic Sea and the North Sea.

The Danish government reallocated €45.4 million from the budget set aside for the technology-neutral renewable energy auction in December 2019 to other initiatives. The original budget for the latest renewables in auction was roughly €80 million. The results of the auction ranged between DKK 10/MWh (€1.34/MWh) and DKK 19.7/MWh (€2.64/MWh) with the average price of DKK 15.4/MWh (€2.06/MWh).

A total of seven renewable energy projects, amounting to 252 MW, secured the FiP. This includes two wind projects totalling 72 MW and two wind-solar hybrid sites for 97 MW.

New rules were announced on compensation for residents living close to renewable energy plants. Residents living






within a distance up to eight times the wind turbine's height, or within 200 metres of a solar farm, will receive an annual cash tax-free bonus.

The long-awaited Thor offshore wind farm will be tendered under a 20-year two-sided Contract for Difference structure. The total budget for the project has a ceiling of €870 million, while excess payouts by the winning bidder are capped at €370 million. The wind farm is due online by 2027. Pre-qualification of bidders will begin in Q3 2020. Bids are due in early 2021. The 20-year CfD will have a grid connection window between 2024 and 2027.

The Danish Energy Agency will now require strategic environmental assessments for offshore wind farms to be completed prior to submission of final rights bids by prospective developers. The change of approach starts with the up to 1 GW Thor project, where a Strategic Environmental Assessment is expected to be completed by the second quarter of 2021.

In September 2019 the Minister for Business Affairs altered an executive order with the **removal of the 150m tip height restriction.** Previously the central government had to approve exceptions since the introduction in 2009.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> • Pay-as-bid fixed-premium awarded via a technology-neutral auction where onshore wind, solar PV and open door offshore compete. The previous auction was in Q4 2019 and the next one is still not defined. • Premium valid for 20 years. • Premiums will not be granted for production during hours when the spot price for electricity is negative. • Grid connection within 2 years from contract signing.
	<ul style="list-style-type: none"> • Tender of up to 1 GW to start in 2021, which should be built between 2024 and 2027. • Two additional offshore wind projects of minimum 800 MW will be tendered out in 2021 and 2023. • Grid connection within 4 years from contract signing for open-door offshore wind.

PERMITTING WIND ENERGY (ONSHORE WIND)						
						
4xH	<ul style="list-style-type: none"> • Yes, set at project level. • Yes 	Wind speed	Residential area	Houses in open landscape	• 10h/yr	No
		6 m/s	37dB(A)	42 dB(A)		
		8 m/s	39 dB(A)	44 dB(A)		

FINLAND

Political Developments



In December Finland’s prime minister lost the support of a coalition ally following a postal strike dispute. The prime minister had to resign amid the Finnish presidency of the Council of the European Union. A couple of days later **a new government was formed with the same coalition partners, with Sanna Marin from the Social Democrats as the Prime Minister.**






The Finnish National Energy and Climate Plan that was submitted to the European Commission in December 2019 increased the wind ambition from 10 TWh to 18

TWh by 2030, however **no new support schemes nor auctions for renewables are envisaged.**

Wind Energy Policy

Onshore wind is expected to be the main driver for the shift to carbon-neutrality by 2035 and **the government wants to improve the conditions for building offshore wind** by eliminating administrative, planning and other barriers to project construction, including the reduction of the property tax to be closer to the level of onshore wind.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> No support scheme for onshore wind. New projects are expected to be merchant projects or have a PPA.
	<ul style="list-style-type: none"> The same conditions apply as for onshore wind.

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
Project level (1000m is common practice)	<ul style="list-style-type: none"> No, but unofficial 2km distance from nests of eagles and osprey rule. Yes 	<ul style="list-style-type: none"> Day: 45 dB(A) Night: 40 dB(A) 	<ul style="list-style-type: none"> 8 h/yr 30 min/day 	Project level

GREECE

Energy Developments

In September the Greek government announced their phase-out of coal by 2028. Around 4.9 GW of lignite power plants should be closed by 2028, while gas power plants are expected to cover the missing capacity..

The Greek Energy Minister Kostis Hatzidakis announced a plan for **state-controlled utility Public Power Corporation to get rid of 3.4 GW of coal assets by 2023** and instead invest in renewable energy to boost earnings.

The Greek Environment and Energy ministry has set up a working group to find ways to simplify permitting. They target spring 2020 as a date for new environmental licencing laws. Separately, the Greek Regulatory Authority for Energy opened a consultation on how to simplify criteria for evaluating wind applications in auctions.

The latest Greek NECP increased RES ambition from 31% to 35% and renewable electricity from 56% to 61-64% by 2030. Most of these increases are due to energy efficiency measures, but wind capacity is forecasted to



increase additional 400 MW, summing up to a total of 7 GW by 2030. Around 250 MW of offshore wind are included in the NECP by 2030.

Three south eastern European power transmission system operators have agreed to set up a Regional Coordination Centre (RCC) by the end of the year for calculating capacity and assessing regional generation adequacy. Bulgaria’s ESO, Greece’s IPTO and Romania’s Transelectrica have signed a memorandum of understanding that envisages them incorporating the RCC company. ESO will provide the capacity calculation services and IPTO will provide the coordinated security analysis until the separate RCC company is incorporated.






Wind Energy Policy

In December Greece awarded 224 MW of wind capacity at an average price of €57.74/MWh, while the prices ranged from €55.77/MWh to €61.94/MWh. Bids were submitted for a total 491 MW, making it Greece’s first oversubscribed wind auction.

SUPPORT MECHANISMS FOR NEW PROJECTS

	<ul style="list-style-type: none"> • Technology-specific auctions for wind and solar projects in 2020 of 300 MW each. • Sliding FiP, with a strike price determined through auctions. • Bidders must have environmental and grid connection permits in place. • For wind, projects must be 3-50 MW, with a ceiling price set before each auction. • Support lasts for 20 years. • At least 75% of the auctioned capacity needs to be awarded in order for a winning project to get the premium. • For projects smaller than 3 MW an FiT of €98 per MWh will apply. • Technology-neutral auctions for wind farms above 50 MW and solar PV above 20 MW, with the same conditions as for technology-specific auctions, to take place once a year for 600 MW. A 40% oversubscription rate is needed in order to get all of the auctioned capacity. Provisions have been made for hybrid wind and PV projects of at least 50 MW in total capacity, and sharing substations to enter the auction.
	<ul style="list-style-type: none"> • In principle, the same sliding feed-in premium as for onshore wind. However, there is no clear plan as to how the strike price will be defined (e.g. auctions or individual notifications).

PERMITTING WIND ENERGY (ONSHORE WIND)

				
<p>500m</p>	<ul style="list-style-type: none"> • Yes, set at project level. • Yes 	<p>45 dB(A)</p>	<p>No set limit value</p>	<p>No</p>

IRELAND

Energy Developments

With United Kingdom’s exit from the EU, Ireland no longer has a direct electricity connection with the rest of the EU.

This is propelling projects like the proposed Celtic power cable between Ireland and France to the top of the region’s energy security agenda. The €1 billion interconnector of 700 MW is expected to start construction in 2022 and to be completed by 2026.

Ireland announced the results of the latest capacity T-1 auction held in November 2019. A total of 7.6 GW will receive one payment of €46,150/MW/year for providing capacity in 2020/2021. Most of the support goes to existing gas and steam turbines. 23 MW of wind were also approved.



Wind Energy Policy

The country plans to hold its first technology-neutral renewable energy auction in June 2020 for projects to be online by the end of 2022. The 3,000 GWh auction has a heavy emphasis on local payback and involvement. Successful projects will have to pay €2/MWh annually to a community benefit fund, and there will be a community investment

scheme. Out of the 3,000 GWh auctioned, there is a cap of 2,670 GWh for onshore projects. Pre-qualification for the auction will start in March 2020.

Only one of 16 large-scale wind projects got awarded grid rights in last summer’s ECP1 processing round. The other 15 projects (500 MW in total) will have to wait for the next processing rounds, which will take place in 2020, 2021 and 2022. Applications will be prioritised based on GWh per year in order to swiftly reach their 70% renewable electricity target by 2030. The next round will take place after the first renewable energy auction in June. A separate exercise is expected for offshore wind.

The government is revising the 2006 Wind Energy Development Guidelines. These are open to consultation until 19 February 2020. The draft revised guidelines proposes increased setback distances to housing (four times the height, subject to a mandatory minimum 500m), new community benefit measures, the elimination of any shadow flicker and new noise restrictions (5 dB(A) above existing background noise within the range of 35 to 43 db(A), with 43 dB(A) being the maximum noise limit permitted during day and night.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> Technology-neutral auctions for all renewable technologies under the Renewable Electricity Support Scheme (RESS). Auctions originally scheduled in 2020, 2021, 2023 and 2025. First confirmed one is in June 2020. 2-way CfD awarded under a pay-as-clear bidding process where the reference price is to be based on Ireland’s day-ahead Single Electricity Market price. Single technology cap on GWh in each auction for different technologies. Financial support for community-led projects in early phases and development studies. Mandatory investment opportunities for communities and citizens in all RESS projects. Project developers have to provide priority investment opportunities to those living to the proposed development area within a 5 km radius. In case of refusal or undersubscription, the investment opportunity is open to residents within a 10 km radius. There is no minimum level of community investment needed, provided the offerings have been made in a fair and transparent matter.
	<ul style="list-style-type: none"> Offshore to be eligible under the technology-neutral auctions, with the same conditions as for onshore wind. Under the Climate Action Plan there should be a separate support scheme for offshore wind, which is still unknown.






PERMITTING WIND ENERGY (ONSHORE WIND)				
				
500m	<ul style="list-style-type: none"> Yes, SAC and SPA protections Yes 	<ul style="list-style-type: none"> Day (>30 dB(A)): 45 dB(A) or background noise + 5 dB(A) Day (<30 dB(A)): 35 to 40 dB(A) Night: 43 dB(A) 	<ul style="list-style-type: none"> 30 h/yr 30 min/day 	No



Photo: Iñaki Antoñana Plaza

ITALY

Political Developments

In September Italy formed a new coalition government of the populist Five Star Movement and the centre-left Democratic party. Giuseppe Conte continued his role as Prime Minister after the nationalist League party had tried to bring him down by filing a no-confidence motion against him.



Energy Developments






Environment Minister Sergio Costa announced a draft environmental decree to slash environmentally harmful subsidies by 10% per year from 2020 and get rid of them by 2040. Italy in 2017 spent €19.3 billion on environmentally harmful subsidies, of which €16.3 billion went to fossil fuels. There is a favourable tax regime for diesel compared to petrol, as well as tax exemptions for shipping, aviation and agricultural fuels. However, there was no support from the coalition government for the decree.

In Italy's four year ahead (T-4) capacity market auction in December around 4 GW of new capacity was accepted at the full €75,000/MW/year with a delivery date for winter 2023. All the new capacity will receive support under 15-year agreements. Out of the 4 GW, 2.6 GW are combined cycle gas turbine plants, 860 MW single cycle turbo-gas plants, while the remaining capacity was for other thermal power plants, batteries and hydro-power. Out of the total 4 GW around 2.6 are to be built in the North Zone.

Wind Energy Policy

The results of the September technology-neutral auction are still unknown at the time of writing. The next one will take place in January for 500 MW, followed by a 700 MW auction in May.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> CfD for plants larger than 1 MW awarded via a technology-neutral auction. Onshore wind competes with non-rural solar. The next auction is in January for 500 MW. Reference price for each technology subset, broken down by installed capacity, with bidders competing by offering a discount to that reference price to a maximum of 70%. Special bidding group for refurbishment and lifetime extension. The wind power plant has to become operational 31 months after the official award notification. Registry for power plants smaller than 1 MW. In case not all the capacity is awarded, the residual capacity can be allocated in the next auction round. Support lasts for 20 years. No support given when wholesale electricity prices are below zero for more than 6 consecutive hours.
	<ul style="list-style-type: none"> No support mechanism for offshore wind.

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
200m to 6xH (Regions can introduce different limits)	<ul style="list-style-type: none"> Yes, set by Regions. Yes, but usually considered as unsuitable areas 	<ul style="list-style-type: none"> Day: 55 dB(A) Night: 45 dB(A) 	No set limit value	Project level

THE NETHERLANDS

Political Developments

The Netherlands faced delays in onshore projects after the country's highest court ruled in May that regulations governing nitrogen emissions are inadequate, forcing construction works in a variety of sectors (new highways, housing blocks, airports, wind farms, etc.) to be put on hold until new rules are devised.

Energy Developments

Dutch regulator ACM designed congestion zones in which distribution system operators will be able to refuse connection requests from projects seeking subsidies. The congestion zones were implemented for the autumn SDE+ auction, which for the first time required from applicants a proof of a connection agreement.

Wind Energy Policy

The Hollandse Kust Noord 700 MW+ tender planned for March 2020 will stick with the existing zero-bid comparative tender assessment model but has added new benchmarks to differentiate between bids. The assessment of annual energy yields was updated. Developers that pledge



to bring projects online ahead of commissioning times can get extra points. Projects will also be evaluated on how developers plan to integrate variable power to the grid.






The Dutch government introduced changes to the Offshore Wind Energy Act, paving the way for the Netherlands Enterprise Agency (RVO) to choose between pay-to-build, beauty contest and 2-sided CfD on a site-by-site basis for the next four projects to be tendered.

In the previous SDE+ auction round in autumn 2019, around 640 MW of new onshore wind capacity and 4.7 GW of solar PV applied for the €5 billion budget. The results on the SDE+ 2019 autumn round are expected mid-February 2020.

There will be an extra SDE+ (Stimulation of Sustainable Energy Production) round in 2020 in March to use unallocated budgets from previous rounds. As of autumn 2020 the new SDE++ support scheme based on CO₂ reductions (instead of installed capacity) should start.

The draft Dutch North Sea Agreement is close to finalisation where different sectors agree on how to allocate and share space in the Dutch part of the North Sea.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> SDE+ (Stimulation of Sustainable Energy Production): pay-as-bid FiP . Support for maximum 15 years. No SDE+ support is given when the wholesale price is negative for six consecutive hours. Until autumn 2020, there is a technology-neutral tender every six months (excluding offshore wind); the spring budget totals €2bn. When replacing wind turbines, support can only be requested if: a) the power rating increases by at least 1 MW and b) the wind turbine has been in use at the relevant location for 15 years at the time of replacement and has been in use for at least 13 years before the grant application.
	<ul style="list-style-type: none"> Next tender opens in March 2020. The scheme is based on a zero-bid process using a comparative assessment model. Bids will be assessed by an independent panel according to qualitative and quantitative criteria. Tenders for new wind power plants (from the new roadmap) to start in 2021, with a size of between 1 and 1.5 GW for each tender. Developers could be forced to pay transmission operator TenneT upfront for grid infrastructure. Discussions ongoing

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
400m to 600m	<ul style="list-style-type: none"> No Yes 	<ul style="list-style-type: none"> Day: 47 dB(A) Evening: 42 dB(A) Night: 37 dB(A) 	<ul style="list-style-type: none"> 6 h/yr 20 min/day 	Yes in certain areas due to aviation constraints

NORWAY

Political Developments

The Ministry of Petroleum and Energy announced in October its decision not to introduce a national framework for wind power. The Ministry has also reiterated its earlier claims that construction deadlines will become stricter. The same goes for the detailed planning process. Regional plans will become more important in the licensing process as recently required by the Parliament.



Wind Energy Policy

The lack of land licenses is becoming the most important bottleneck for continued build-out since the Norwegian regulator (NVE) stopped issuing licences in April when the Government announced a national onshore wind framework. Now it should start issuing licences in Q1 2020.






The government ruled out extending commissioning deadlines beyond 2021, which could impact 348 MW of projects. Developers unable to meet the cut-off date will be required to apply for a new licence. Only exemptions are given to under-construction projects where unforeseen events have caused delays in commissioning.

In October Equinor made the final investment decision on the Hywind Tampen project (88 MW). The 11-turbine floating project is to be connected to offshore petroleum installations. The total cost is thought to be around €498 million and the state-owned investment fund Enova is providing €229 million. The project should be completed in 2022.

SUPPORT MECHANISMS FOR NEW PROJECTS

	<ul style="list-style-type: none"> The green certificate system has been fully subscribed. The 2030 target of 46.4 TWh/year has been covered by investment decisions up to November 2018 and will likely be achieved by 2021. As a result, the Norwegian Energy Agency extended its certificate system until the end of 2021.
	<ul style="list-style-type: none"> Same rules as for onshore are applied for offshore.

PERMITTING WIND ENERGY (ONSHORE WIND)

				
N/A	N/A	N/A	N/A	N/A

SWEDEN

Political Developments

Sweden’s government presented a climate policy action plan to integrate climate into all relevant policy areas.

The plan contains more than 100 measures that the government will implement over the coming years, in sectors such as manufacturing, transport, consumption, public procurement, agriculture, forestry, and financial markets. Sweden plans to achieve carbon-neutrality by 2045.

In mid-December the Moderates and Christian Democrats pulled out of the energy agreement that was signed in 2016, causing confusion on the long-term energy policy. That is due to pressure from the far-right Sweden Democrats, who are in favour of nuclear power.

Energy Developments

Because the majority of the new wind power projects are in the northern counties of Norrland, Västerbotten and Jämtland, the quick wind energy development in the country will require Sweden’s state-owned grid operator Svenska Kraftnät to rapidly improve transmission capacity, especially in central Sweden.



Wind Energy Policy






While Norway plans to prevent new projects from accessing the joint certificate scheme from 2021, Sweden has initially proposed a 2030 cut-off. In the meantime Swedish officials are expected to draw up the scheme in which Sweden would also leave the joint certificate scheme on 31 December 2021. The current value of the green certificates is around €5/MWh and forward prices are as low as €1/MWh.

Vattenfall and Wallenstam cancelled plans to build the 300 MW Taggen offshore wind farm following opposition from the military.

Permits can be vetoed by local municipalities, who rejected more than three quarters of proposed wind projects between 2015 and 2018, while the Swedish armed forces have declared that half of all land in the south of Sweden is off-limits to wind projects — despite the fact that a recent defence commission declared that increased levels of renewables would improve the country’s defence readiness.

Permits for grid connection are becoming increasingly difficult to get, especially as more and more projects are added to the grid. It generally takes more than a year for developers to be notified as to whether or not a grid connection is even possible.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> The green certificate system has been fully subscribed. The 2030 target of 46.4 TWh/year has been covered by investment decisions up to November 2018 and will likely be achieved by 2021. A stop rule to the system has been politically agreed and a proposal is being discussed. No stop rule means extremely low certificate prices and thus virtually no support mechanism for new wind projects.
	<ul style="list-style-type: none"> Same rules as for onshore are applied for offshore.

PERMITTING WIND ENERGY (ONSHORE WIND)				
				
Project level	<ul style="list-style-type: none"> Yes, up to 3 Km Yes 	40 dB(A)	<ul style="list-style-type: none"> 8 h/yr 30 min/day 	No

TURKEY

Political Developments

Turkey’s economic woes are causing serious problems for power companies. Turkey’s power companies are facing difficulties meeting debt repayments. Turkish banks hold outstanding loans for €42 billion made to generation and distribution companies, of which as much as €12 billion is classified problematic and needs to be restructured. There is a limited appetite for developing new power plants while the Turkish demand is estimated to grow by an average of 4% a year to 2023.

Energy Developments



Turkish plans to develop a civil nuclear power sector are looking unstable following the discovery of cracks in the foundations of the only plant under development. However, Turkey is still committed to developing three plants

as well as a domestic nuclear technology sector. Given these ongoing problems, it is questionable to what extent those power plants can be realised. The nuclear power plants have a guaranteed offtake price of €111/MWh for 70% of the power produced.

Wind Energy Policy

Turkey will announce the details about the new support scheme in the first quarter of 2020.

Turkey is working with the Danish Energy Agency on a roadmap for offshore wind development in Turkey. The cooperation has been ongoing since 2018 and prioritises advancing Turkey’s knowledge of tendering procedures and maritime spatial planning issues.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> • New projects compete in auctions with a ceiling price where winner-takes-all. • The winner will get an FiT for 15 years. • The Wind turbine size must be of at least 3 MW. • 55% of the turbine nacelles for the onshore project must be manufactured in Turkey, while 65% of the turbine towers and 60% of blades should be built in Turkey. Local content for other parts is a minimum of 51%. • Renewable energy generation facilities benefit from the General Investment Incentive Scheme, which covers exemption from VAT and Customs Duties for all relevant machinery and equipment used in the power plant.
	<ul style="list-style-type: none"> • There is no indication when the next offshore YEKA tender will take place






PERMITTING WIND ENERGY (ONSHORE WIND)				
				
250m to 1000m	<ul style="list-style-type: none"> • Yes 	<ul style="list-style-type: none"> • Day: 65 dB(A): • Night: 55 dB(A) 	None	Yes, around airports



Photo: René Rud Budtz

3.

SMALL MARKETS



BOSNIA AND HERZEGOVINA

Construction started on the first wind farm in Republika Srpska, Bosnia and Herzegovina’s northern autonomous entity. The 50 MW wind farm will be commissioned by mid-2022 and have 15 wind turbines.

Bosnia and Herzegovina’s capital Sarajevo is one of the most polluted cities in Europe, while Bosnia is the home

of Europe’s most polluting coal power plants. Three coal power plants should face closure over the next three years, but Bosnia and Herzegovina are still building a **450 MW coal power plant in the north-eastern town of Tuzla**. The loan for the project comes from the Export-Import Bank of China.

SUPPORT MECHANISMS FOR NEW PROJECTS



- Bosnia and Herzegovina provide incentives for wind at the level of the two entities – the Federation of Bosnia and Herzegovina and Republika Srpska – that make up the country.
- FiT for 12 years in the Federation of Bosnia and Herzegovina.
- FiP for 15 years in Republika Srpska. For wind farms larger than 10 MW, the developer has to find an off-taker.

CROATIA

Croatia’s maiden auction for renewable energy is set to be adopted in Q1 2020 and open for bids from April until June. The first round of the technology-neutral auction will include a technology basket of 250 MW for wind. There will be three more rounds each year of 250-300 MW for wind until 2023.

In August the Croatian energy exchange CROPEX organised its first auction of guarantees of origin. Electricity from incentivised producers for the first quarter of 2019 reached €0.31 per guarantee of origin.

SUPPORT MECHANISMS FOR NEW PROJECTS



- Technology-neutral auctions with technology baskets for different renewable energy sources.
- FiP for 12 years determined by auctions, which are run by the Croatian Energy Market Operator (HROTE).
- Pay-as-bid auctions – which depends on the maximum reference value determined for each technology (not yet set by government).
- Auctions should be held once every year from 2020 until 2023.



- No support mechanism for offshore wind energy.

CZECHIA

The Czech government approved the creation of a coal commission to propose a timetable for the phase-out of coal. By the end of September 2020 Czechia will give its first indication of how fast coal-fired generation should be phased out. Coal provided 43% of the electricity produced in Czechia in 2018.

Czech officials are struggling to create a new framework for renewable energy support. So far the **new draft law plans auctions for wind farms above 6 MW**, while solar PV will be excluded from operating support due to the negative experience during the 2009/10 solar boom in Czechia.

SUPPORT MECHANISMS FOR NEW PROJECTS



- FiP awarded via technology-specific auctions.

ESTONIA

The Estonian government plans to invest in new radar systems and lift tip height restrictions for wind turbines allowing around 300 MW of consented projects to go ahead.

The Estonian government has kicked off the construction permit approval process for a 1 GW offshore wind farm in the Gulf of Riga. The wind farm could become the first joint Estonian-Latvian renewable energy project. The Latvian offshore wind development area is just 10km away from the Gulf of Riga.

SUPPORT MECHANISMS FOR NEW PROJECTS



- FiP awarded via technology-neutral auctions.
- 600 GWh annual production cap for wind energy.
- No clear auctions timetable.



- No support mechanism for offshore wind energy.

LITHUANIA

Lithuania's National Energy Regulatory Council announced the winner of the 300 GWh technology-neutral auction from autumn 2019. There were three projects competing with zero-bids but in the end the 75 MW Windfarm Skmenė One was the winner because they bid for the entire 300 GWh.

development in the Baltic Sea, which found potential for 3.35 GW. Now the Lithuanian Energy Agency will initiate the preparation of a special plan for the territory and a strategic environmental assessment. Once these preparatory works are done, preparation will begin for proposals regarding the parts of the marine territories and the power capacities proposed for development, as well as permits and tendering procedures.

The Lithuanian government commissioned Klaipėda University to conduct the analysis of offshore wind

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> • FiP awarded via technology-neutral auctions. • Pay-as-bid auctions for a 12-year contract. • 700 GWh to be auctioned in Q2 2020, followed by an additional 700 GWh in both 2021 and 2022.
	<ul style="list-style-type: none"> • Tenders for offshore wind are expected in 2022-2023.

PORTUGAL

The Portuguese government intends to allow battery systems and other dispatchable generation to bid into an upcoming renewable energy auction. The auction, initially planned for January, is set to take place in the first quarter of 2020. Portugal plans to auction 1.4 GW of renewable capacity via a series of auctions.

The first WindFloat floating offshore wind turbine was successfully connected on 31 December. The next two turbines are expected to be connected in the coming weeks.

SUPPORT MECHANISMS FOR NEW PROJECTS	
	<ul style="list-style-type: none"> • No support scheme for new projects since 2012.
	<ul style="list-style-type: none"> • No support scheme for offshore wind.

ROMANIA

The Romanian parliament approved in November a new transitional government led by the National Liberal Party (PNL). Romania's previous Social Democrat government of Viorica Dăncilă collapsed in October after losing a no-confidence vote in parliament spearheaded by PNL.

Romania plans to increase its RES target from 27.9% to 30.5% by 2030 in its NECP. Earlier in the year the EC said Romania should increase its renewable energy target to 34% from 27.9% by 2030 in order to contribute to the EU's renewable goals.

SUPPORT MECHANISMS FOR NEW PROJECTS



- No support mechanism for new projects.



- No support mechanism for offshore wind energy.

RUSSIA

Russian Prime Minister Dmitry Medvedev announced that he and the entire government are resigning after President Vladimir Putin proposed constitutional amendments that would weaken the power of his successor. Putin also nominated Mikhail Mishustin to replace Medvedev as prime minister while the rest of the ministerial Cabinet is expected to remain until their replacements are determined.

The Russian government approved the allocation of €3.14 billion to support wind projects between 2022 and 2035. However, Russia plans to increase local content requirements. The draft bill by the Russian industry and

trade ministry would limit the maximum share of foreign components in the production of converters to no more than 30%, starting from 2021. Generators should have no more than 10% of foreign-made components after 2024, while Russian-made magnets will be needed in direct-drive generators. The 10% limit will also apply to blades and towers. From 2022, manufacturers of turbine converters must use Russian power semiconductor modules and their control boards. Compliance with these requirements will allow investors to participate in various governmental support programmes in 2021-2024.

SUPPORT MECHANISMS FOR NEW PROJECTS



- Quotas for long-term capacity agreement awarded via auctions.
- Long-term capacity agreement lasts 16 years.
- 2018 auction awards bids for planned commissioning in 2019, 2020, 2021 and 2023.
- Each tender is held for 4 years ahead.
- Unawarded capacity is transferred to the next auction.
- Local content rules.

SERBIA

Serbia’s renewable energy auction details are still unknown. The maiden auction should take place some-time in 2020.

Serbia presented its proposition for the strategy of low-carbon development with an action plan, as well as the draft report on the strategic assessment of the proposition’s impact on the environment.

SUPPORT MECHANISMS FOR NEW PROJECTS



- New projects will most probably receive an FiP awarded via auctions.
- Details of the auction are yet to be defined.
- Balancing responsibility is planned to be transferred to producers.

UKRAINE

In November the Ministry of Energy and Environmental Protection presented a draft law on changes to the current scheme of support for renewables. The changes dealt with provisions for the voluntary restructuring of the green tariff for renewable power plants commissioned before 1 January 2020 or having concluded PPA/pre-PPA by 31 December 2019.

In April the Ukrainian parliament approved changes to the law that would enable its pilot auction by 31 December 2019 and the first auction in April 2020. However, neither the pilot action nor annual quotas available for the auctions have been presented. This has delayed the first auction.

SUPPORT MECHANISMS FOR NEW PROJECTS



- FiT awarded via pay-as-bid auctions, which will be held twice per year, from 2020 until 2029.
- FiT lasts for 20 years.
- Auctions are mandatory for wind farms larger than 5 MW.
- Awarded capacity shall not be more than 80% of the capacity proposed by auction participants.
- Simplified FiT for wind farms smaller than 20 MW from 2020 until 2023.
- Simplified FiT for wind farms smaller than 3 MW or 1 turbine as of 2023.
- FiT bonus for local content for power plants commissioned before 2025, in addition to the auction bid.



- No support mechanism for offshore wind energy.

WindEurope is the voice of the wind industry, actively promoting wind power in Europe and worldwide. It has over 400 members with headquarters in more than 35 countries, including the leading wind turbine manufacturers, component suppliers, research institutes, national wind energy associations, developers, contractors, electricity providers, financial institutions, insurance companies and consultants. This combined strength makes WindEurope Europe's largest and most powerful wind energy network.

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