



Key milestones in Lithuanian energy and offshore wind market

WindMission Lithuania 2022 – key information about offshore wind coming from Vilnius

Strategic Partner:



Paweł Wróbel, Managing Director, BalticWind.EU

Dear Readers,

It is my pleasure to present to you the next in a series of quarterly reports summarising the Lithuanian offshore wind energy market. In the passing quarter, energy topics were dominated by the Russian-induced war in Ukraine. Since the beginning of the Russian aggression, as BalticWind.EU, we declare our solidarity with fighting Ukraine.

The ongoing war has a huge impact on redefining the energy policy priorities of the European Union. Decisions made in Brussels and in member states' capitals, including Vilnius, indicate the necessity of accelerating decarbonization, which must first include a move away from fossil fuels from Russia. This is accompanied by plans for faster development of renewable energy sources, including offshore wind farms. The European Commission, in its REPowerEU communication, assessed that increasing the rate of wind and solar capacity commissioning across the EU by 2030, is key to reducing demand for Russian fuels, and will reduce consumption of more than 190 m³ of gas.

The priority of energy security becomes even more apparent. In this context, progressive work on the implementation of further projects is important, as well as the preparation of national legislation. We write about it, among others, in the interview with Rokas Masiulis, CEO of Litgrid, the transmission system operator, as well as in the articles prepared on the basis of statements received from the Lithuanian Energy Agency. We also publish interviews and statements of companies involved in offshore projects. Their point of view shows where Lithuanian offshore wind energy market is at the moment, and what are the main challenges.

I encourage you to read on it!

Paweł Wróbel
Managing Director, BalticWind.EU

Table of Contents



| | |
|---|----|
| Rokas Masiulis: Litgrid as a transmission system operator has a very clear task in offshore wind development ... | 04 |
| Ruslanas Sklepovičius: The offshore wind development is a great opportunity for the whole Baltic Sea region ... | 05 |
| Offshore wind in Lithuania | 06 |
| Background to legal developments / The timeline ... | 07 |
| Lithuanian Energy Agency on the path of offshore wind development in Lithuania | 08 |
| Rytis Kėvelaitis: Key milestones in Lithuanian energy and offshore wind market | 09 |
| Tomas Milašauskas: We hope to see more regulatory development to accelerate renewables projects ... | 10 |
| Gary Bills: Lithuania should benefit from its proximity to Polish and Nordic countries developing offshore wind | 11 |
| Wójcik: To overcome challenges in Lithuania it is necessary to think about offshore wind as a regional market ... | 13 |
| Urtė Daškevičiūtė: Lithuania takes a big step for offshore wind sector | 14 |
| Polish-Lithuanian alliance – Polenergia and Green Genius join forces in offshore wind sector | 15 |
| Lithuanian Energy Agency seeks a contractor for wind speed measurements and seabed surveys ... | 16 |
| Nordic operators will support the Baltic power system in case of failure | 16 |
| Polish-Lithuanian summit talks on development of offshore wind energy | 17 |
| Baltic RCC will be established to coordinate the development of the Baltic Power System | 18 |
| WindMission Lithuania 2022 – key information about offshore wind coming from Vilnius | 19 |
| First foundations for hydrogen era in Lithuania are being laid | 20 |
| Synchronization of Lithuania's system with the European continental grid will expand RES development opportunities | 21 |
| Lithuania launches consultations on elements of environmental impact assessment of wind turbines in the Baltic Sea | 22 |
| Dainius Kreivys: Record energy consumption and geopolitical tensions show that we need to accelerate green energy development | 23 |
| Baltic transmission system operators reduce energy imports from Russia | 24 |
| WWF: Baltic countries lead EU for sustainable sea space management, but still put nature at risk ... | 25 |
| Green Genius and Polenergia join forces for the first offshore competition in Lithuania | 27 |
| Lithuania holds talks with potential wind farm developers in the Baltic Sea | 28 |

| | |
|---|----|
| Lithuanian Parliament approves further offshore wind energy proposals | 29 |
|---|----|

| | |
|---|----|
| Litgrid: We are preparing for integration of offshore wind into the Lithuanian grid | 30 |
|---|----|

| | |
|---|----|
| Lithuanian Seimas gives green light for an offshore wind farm in the Baltic Sea | 31 |
|---|----|

CONTACT:
editorial@balticwind.eu

Rokas Masiulis: Litgrid as a transmission system operator has a very clear task in offshore wind development

13/04/2022

Litgrid as the transmission system operator in Lithuania plays one of the key roles in the development of the energy system, including renewable energy sources. Lithuania has ambitions for the development of offshore wind energy and is trying to implement them successfully. About the role of Litgrid in the process of offshore wind farm development in Lithuania we talk with Rokas Masiulis, CEO of Litgrid.

Rokas Masiulis underlined that offshore wind development, with all its complexity and strategic importance, cannot be perceived as only one country's project.

”It is important while developing the concrete project to see a bigger picture, how it fits to the wider system, and how today's actions might affect further developments of overall offshore wind potential integration. Our, as Litgrid's, role is to provide and prepare a connection point onshore for offshore wind farms and not only to assure that upcoming offshore wind projects would be integrated into the system in a most efficient way, but also to develop future proof solutions that allow full Lithuanian offshore wind potential to be incorporated to European energy system”, he said.

Masiulis added that TSO does not develop offshore wind farms but, looking at the closest perspective, Litgrid as a transmission system operator has a very clear task in this process: to connect first stage offshore wind park in the most efficient, economically and technically feasible way that assures system security and transparent market operations.

”This way, our main tasks are oriented towards applying the best practices from more experienced TSOs for the development of local activities”, the CEO of Litgrid explained.

”Additionally, together with Tepco Power Company we are evaluating different possible integration designs for overall Lithuanian offshore wind potential. We work with our European partners to assure that Lithuanian offshore wind development would be in line with necessary grid reinforcements not only in Lithuanian power system, but also in Baltic Sea region. Already in 2025 Lithuanian transmission system will be synchronised with Continental Europe Network, so we must prepare our own system to be secure, resilient, and adequate. Integration of high amounts of RES makes this task a bit more challenging, so we must prepare for it now”, he said.



Challenges for Litgrid

In 2020, when the European Commission announced the Offshore wind strategy, and later in 2021, “Fit for 55” package, it became clear that a breakthrough point for energy transition was reached - Rokas said.

”It was a point when everyone understood that offshore wind and other RES development and integration became a new MEGA project. Meanwhile, Baltic States and Poland already worked on the biggest and the most important regional MEGA project – Baltic Synchronisation with CEN. Having two MEGA projects in your portfolio for a small TSO as Litgrid is quite challenging. However, we see that regional support and cooperation allows us to unlock new knowledge and expertise more efficiently and creates huge opportunities for a fast-learning curve to steep up”, he explained.

How to balance the energy system with a large share of renewable energy sources?

Rokas said that balancing the system with a high renewables level might be challenging.

”For example, our Irish colleagues Eirgrid just announced that they will start testing system operation with 75% of renewables and a goal for 95% is set for 2030. So, adequate actions must be taken to prepare and it takes some time”, he said

”However, ambition in Lithuania to increase RES generation capacity to 7 GW (average peak demand now is up to 2 GW) by 2030 might lead to times of two extremes - overproduction or lack of production - depending on weather conditions in the region”, stated Rokas Masiulis.

Having a well-integrated transmission system, flexible distribution, and energy storage capabilities will be the backbone of a well-balanced system. Litgrid together with other market participants are actively working on that – CEO of Litgrid stressed in a commentary for BalticWind.EU.

Patrycja Rapacka

Ruslanas Sklepovičius: The offshore wind development is a great opportunity for the whole Baltic Sea region



4/04/2022

Green Genius has ambitions to get involved in the offshore wind sector. We asked Green Genius CEO - Ruslanas Sklepovičius - about the details in a special interview for BalticWind.EU.

Patrycja Rapacka: How big an opportunity is offshore wind development in the Baltic Sea for Green Genius?

” Ruslanas Sklepovičius: It’s an ample opportunity for any player in the market due to a couple of reasons. First of all, we’re talking of the first offshore project in the territory of Lithuania, which indicates progress in the local renewable energy market. The project is also ambitious in its size and capacity, which will definitely contribute greatly to energy independence of the whole Baltic region, sustainability, and progress. Moreover, the first offshore project in Lithuania refers to wind energy (and other renewables too) as not an alternative, but rather a traditional energy. Therefore, we see offshore wind development as a great opportunity for the whole region. Recently we announced that Green Genius signed an investment agreement with the largest Polish independent energy group Polenergia to collaborate on the offshore project. Green Genius has a local market presence in Lithuania, and Polenergia has strong wind project experience, making us a strong team with a deliberate competitiveness.

What steps has the company already taken in the offshore wind area?

” Green Genius and Polenergia have agreed on cooperation and signed the agreement to open a joint venture (JV). Currently, the JV establishment, subject to potential antitrust approval, is under the process. Green Genius relates to further analysis of the development of Lithuanian regulations aimed at adopting a legal framework for the development and construction of offshore wind farms and to take further actions.

How does Green Genius want to prepare for the development of offshore wind farms in the Baltic Sea? What concrete plans does it have?

” It will be the first offshore wind farm on the Lithuanian seaside. Right now, our team is working on all the necessary preparation work and research. Later on, we’ll decide on the exact solutions. However, our main goal is to employ strengths of both JV sides through close cooperation and know-how usage, so we could offer the smartest, most economically advanced, and long-term solution, which would contribute to two most important goals we see – sustainability and energy independence.

Will Green Genius want to involve Lithuanian companies in the projects? How does Green Genius view local content issues?

” We closely follow the content, and we are going to strictly obey any rules that will be established, indisputably.

What are the company’s upcoming plans for 2022 and in upcoming years?

” Green Genius will continue with its work towards a sustainable future, and energy independence, which has lately become the top priority. We see our role as a key one and we take this responsibility. Green Genius keeps developing 1.5 GW of renewable energy projects, which we aim to install by 2025. The most significant portfolios are in Italy, Romania and Lithuania.

However, 2022 is marked with many new milestones. Green Genius will start its first onshore wind farm (85MW) construction in Lithuania. We are also about to open our first biogas power plant in Poland this summer. Additionally, we’re finalising mature solar projects development in Spain (total capacity 217 MW) and Italy (757 MW) and re-entering new markets that were paused due to the pandemic, Latvia and Romania.

Apparently, joint venture with Polenergia for the first offshore project in Lithuania tender is a great objective for us too.

Thank you

Patrycja Rapacka

Offshore wind in Lithuania



Potential:

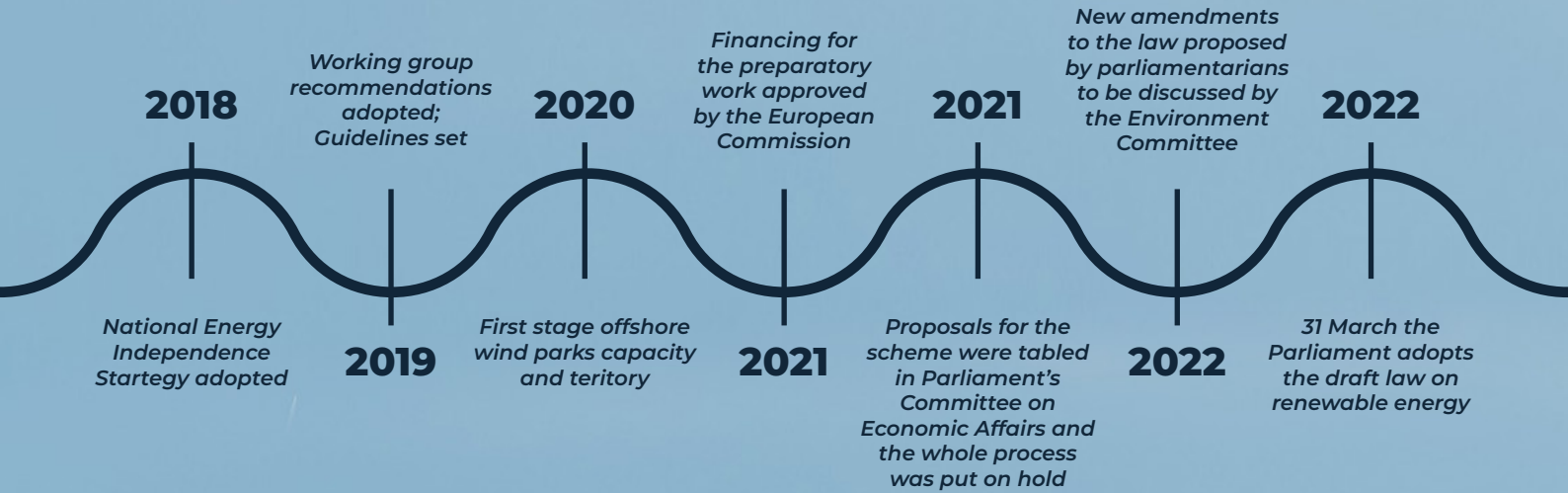
**3,35
GW**

Plan by 2030:

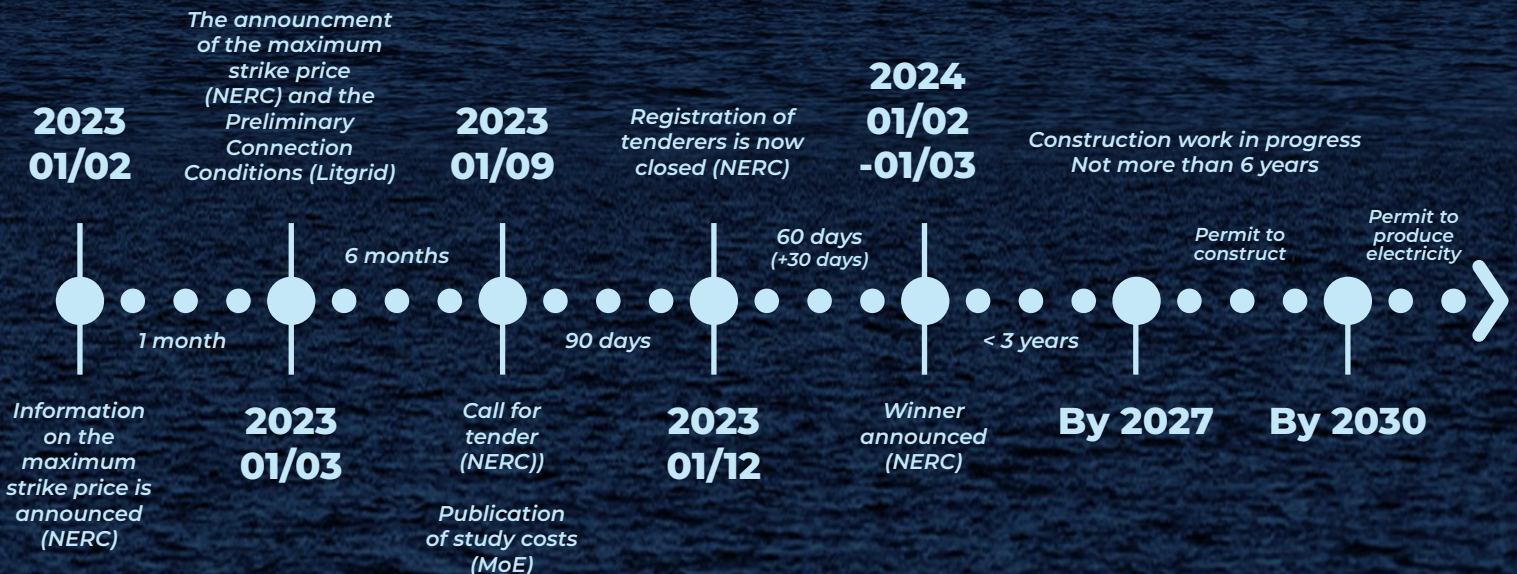
**1,4
GW**

**(two 700 MW
wind parks)**

Background to legal developments



The timeline



All data used in those graphics come from the Lithuanian Wind Power Association (Lvea).

Lithuanian Energy Agency on the path of offshore wind development in Lithuania

19/04/2022

Lithuanian Energy Agency (LEA) plays one of the key roles in the development of offshore wind energy in Lithuania. In response to questions, the agency tells BalticWind.EU its tasks, role, and challenges in 2022.

Lithuanian Energy Agency points out in its reply to BalticWind.EU's questions, that they have been involved in the development of the 1st offshore wind park in Lithuania since the end of 2020.

” *“Primary role of the Agency was to identify the initial scope of studies and works needed to be carried out within the approved by the Government territory in the Baltic Sea, as well as to develop necessary documentation and to carry out related international public procurements. As a result of this work, Lithuania initiated implementation of the needed Spatial Planning and Strategic Environmental Assessment as well as Environmental Impact Assessment in 2021. It is also worth mentioning that public procurements for geological seabed studies and wind speed measurement campaigns, which are critically important for the development of the offshore territory, are in the final stages and are planned to be commenced this Spring”, Agency informed.*

What about the challenges for the development of Lithuanian offshore wind farms? Agency indicated that as it has been already announced that Lithuania will be holding the country's first offshore wind auction for the capacity of 700 MW in September 2023, it goes without saying that the major challenge is to keep up with the set offshore project schedule and to have in hand all major studies completed and ready for the developers and investors by the auction date.

” *“Moreover, legislative aspects related to the auction and offshore development should be approved and adopted by the government before the auction”, LEA informed.*

Plans for 2022

” *“Surely enough, one of the major tasks is to initiate and get going the very much expected seabed studies and wind speed measurements, as the results of these processes are critical for the developers and investors to decide upon the offshore park's model and its possible output. No less important is the park's connection to the shore which is in the pipeline right now and the Agency is taking part in the work of an expert group which was set up to tackle the whole project's process. Finally, the Agency is involved in close monitoring and supervision of Spatial Planning and Strategic Environmental Assessment as well as Environmental Impact Assessment implementation within the set timelines”, LEA informed in response to BalticWind.EU's questions.*

Patycja Rapacka

Rytis Kėvelaitis: Key milestones in Lithuanian energy and offshore wind market



4/04/2022

Rytis Kėvelaitis, CEO of Energy Unlimited, summarizes for BalticWind.EU the first three months in the offshore wind sector in Lithuania. As he said, the key milestone is adoption of the renewable energy law amendments regarding offshore wind.

Breakthrough regulations for Lithuania's offshore wind sector

Rytis Kėvelaitis in the special commentary for BalticWind.EU indicated that the key milestone in Lithuanian offshore market in Q1 2022 is the adoption of the renewable energy law amendments regarding the offshore wind on March 31st by the Lithuanian Parliament. The law sets up the legal framework for the 700 MW offshore wind auction in September 2023. There have been some changes in the auction design after the discussions in the Parliament - he said. Kėvelaitis explained that the adopted model is the mixture of the double-sided contract for difference (CfD) and zero subsidy bid. If bid is higher than 0, the winner is defined by the lowest desired annual potential incentive volume (calculated by the formula = (strike price – the lowest reference price) x amount of annual electricity production for the strike price). If bid is equal to 0, the winner is defined as the highest development fee which is paid into the state budget in equal installments within 5 years from the date of receipt of the electricity generation permit. To sum up, the law amendments incentivise the developers to submit zero subsidy bids and offer the highest fixed development fee.

In addition, there are new requirements for the developers (financial capability & experience; local content, European and transatlantic integration compliance) as well as the increased bid bond from €10.5 million to €52.5 million - he said. The new requirements will be specified in the secondary legislation which is expected to be in place as soon as July 1st 2022.

Furthermore, Rytis Kėvelaitis added that regarding the site assessment for the auction, the Environmental impact assessment (EIA) programme for 700 MW site in Lithuania was published for the public consultation in March & procurement for the offshore

site geotechnical surveys was won by the consortia of two Lithuanian companies - „Geobaltic“ and „Garant Diving“ – and Polish company „Lotos Petrobaltic“. From market news, the Green Genius – Polanergia announced the partnership for the offshore wind & plans to participate in the Lithuanian 700 MW auction in 2023 - he added.

War in Ukraine and impact on wind energy:

The world was surprised by the outbreak of war in Ukraine, which also affected international energy markets. Rytis Kėvelaitis on this issue said that the war in Ukraine highlighted the long-existing weaknesses of European energy security which is the reliance on imported oil & gas, especially from Russia.

In the short term there are ongoing efforts to diversify the oil & gas import sources. Baltic states – Lithuania, Latvia and Estonia - already announced the end of importing gas from Russia on April 2nd 2022 and use of the Klaipėda LNG terminal instead.

However, the long term solution to improve energy security is the increase of the locally generated electricity by renewable energy sources, developing Power-to-X solutions and electrifying the sectors which use the most oil & gas like transport, heating oraz heavy industry.

As Lithuania imports more than 50% of its electricity, this means development of the new renewable energy capacities, including wind, even at the faster pace and on a bigger scale to substitute the imported oil & gas. The rapid scale of renewable energy development might also cause dependency on the critical minerals & commodities used in solar and wind generators whose supply is already affected by the war in Ukraine, and actions to preserve the well-established wind energy industry & supply chain in Europe must be taken - Rytis Kėvelaitis explained.

Rytis Kėvelaitis

Tomas Milašauskas: We hope to see more regulatory development to accelerate renewables projects



31/03/2022

2022 is a landmark year for the offshore wind sector in Lithuania. At the end of March, Lithuanian Parliament gave a green light for the regulations necessary for the emergence of first wind farms in the Baltic Sea. The regulations are being adopted, while in the background the countries of the Baltic Sea region are accelerating their actions for RES development. Tomas Milašauskas, Renewable Energy Investments Fund Manager at Lords LB Asset Management, comments on the matter for BalticWind.EU.

On 31 March 2022, the Seimas of Lithuania adopted a package of laws concerning the development of offshore wind energy in the Baltic Sea. As a result, it gave a green light for the construction of the first offshore wind farm in Lithuania. It is now certain - the first RES auctions for an offshore wind farm in Lithuania will take place in the second half of 2023. The Ministry of Energy of Lithuania holds consultations with potential developers of offshore wind parks.

We asked Tomas Milašauskas about the most suitable financial support system for offshore wind development in Lithuania. BalticWind.EU interviewee said that as is typical for long term infrastructure projects, a cheap revenue hedge tool such as no floor no cap CfD system would be an important factor for reducing project risk and cost of financing it.

” “Transparent auction system, preferably organised by a reputable independent advisor, could also provide a confidence boost to potential project investors. Finally, timely implementation of key major development milestones and staying on or ahead of announced schedules on the Government side would also provide confidence in the process and would allow optimizing process costs on all sides”, he said.

Lithuania should also not have problems with financing offshore wind projects.

” “As of now it does not seem like there will be any major financing problems as the project development follows a quite standard process and has a revenue stabilization structure which makes it attractive for many renewable energy infrastructure investors and financiers. However, if we will see any major deviations from the market standards this could still cause the financing availability to decrease”, said Milašauskas

War in Ukraine and the development of offshore wind energy.

The war in Ukraine has become an important context in the development of offshore wind in the Baltic Sea region. Milašauskas explained that war in Ukraine is a good reminder of our dependence on Russian energy sources.

” “This reminder is already working and we see Governments in the Baltic Sea region accelerating their actions towards removal of red tape from renewable energy development, offshore wind included. We hope to see more regulatory development that will cut cost and time needed to bring renewable energy projects to operation”, Tomas Milašauskas commented.

Patrycja Rapacka

Gary Bills: Lithuania should benefit from its proximity to Polish and Nordic countries developing offshore wind



12/04/2022

Gary Bills, Regional Director for EMEA, said in an interview with BaticWind.EU about K2 Management's involvement in Lithuania. - We have been following the market in the Baltic region quite carefully and have been actively contributing towards maturing the market to a place where it can begin to meet its potential. K2M has sponsored several conferences regionally to enable active participation and market discussion. By 2050, the Baltics have the potential to install 93GW of offshore wind capacity, and it's great to see the market preparing itself for this - Gary Bills commented.

Patrycja Rapacka: How is K2 Management involved in the development of the offshore wind sector worldwide, especially in the Baltic Sea region and Lithuania?

” K2 Management supports offshore wind projects and developers globally, through a range of consultancy within engineering, planning, project management, and due diligence spanning the entire value chain of an energy project. We have the expertise to take developers that we work with through the auction process or support them in developing greenfield sites.

We have worked on some of the largest and most innovative projects in offshore wind – from full owner's engineer and project management for Deutsche Bucht in Germany, to Lender's Technical Advisor for all three phases of what will be the largest offshore wind farm in the world – Dogger Bank.

The company began operating in the Baltics in 2008, with several projects in Poland together with surrounding areas and two North Sea projects in Germany. We have been following the market in the Baltic region quite carefully and have been actively contributing towards maturing the market to a place where it can begin to meet its potential. K2M has sponsored several conferences regionally to enable active participation and market discussion. By 2050, the Baltics have the potential to install 93GW of offshore wind capacity, and it's great to see the market readying itself for this.

Right now, we have an agreement with Estonian developer, Sunly, to consult on the development of its pipeline of offshore wind projects, providing the

” engineering support for feasibility and concept as well as energy analysis and actively engaging in the environmental and permitting aspects of their portfolio, specifically in the Baltic Sea. We are currently conducting pre-development studies and research for those projects and we will also advise them on how best to enter the Baltic regional market successfully, including the upcoming auction announcement in Lithuania in 2023, where we see many strong developers positioning themselves for entry.

How does K2 Management assess the potential of offshore wind development in Lithuania? Which technology has better prospects - traditional foundations or floating wind farm technology?

” It is an exciting time for offshore wind development in Lithuania, with so much potential for growth. Although this will be the first offshore wind auction in the Baltics; Estonia and Latvia are going to be hot on Lithuania's heels with their own developments and routes to market. The combination of the three neighboring countries developing at the same time is going to increase the local volume significantly, allowing projects in Lithuania, Estonia, and Latvia to share facilities such as ports and encourage demand for investment in the common, local supply chain.

There is strong demand for development in the region, and we expect this first auction to be highly subscribed. Lithuania has taken an approach similar to that of the Netherlands, where most of the early development processes have already been completed, speeding up the construction timeline, and allowing local developers the opportunity to bid. However, this auction round is only for a 700MW single site, so competition will be fierce.

Lithuania is blessed with reasonable water depths and suitable seabed conditions, so is able to use traditional fixed bottom monopiles meaning that most of the region can rely on tried and tested technology while enjoying the economic benefits that monopiles present over jackets or newer technology like floating foundations. There will be later projects that require more innovative approaches; however, the fortunate early entrants will be able to reap the benefit of the stable conditions.

The rising raw material costs and geopolitical turmoil (e.g. war with Russia) will affect offshore wind development? In what way?

” Generally speaking, the continued increase in costs of raw materials, impacted by long term commodity issues, is going to notably impact project costs now and in the future. More recent geopolitical issues are hard to determine as we cannot foresee the length of time that the impact will be felt. The rise in costs across the entire supply chain, including transportation and installation, will be challenging to manage as these projects move forward, and forecasting costs early in the project will need careful and regular attention.

Paucity of supply may also become an issue for these projects. While having so much activity across Europe in a short space of time, both in formal auctions but also is speculative development, might seem positive for overall offshore wind development, it does put pressure on manufacturers to be able to deliver large quantities of supply in short periods of time. Developers are going to have to push manufacturers to guarantee that they can keep up with the demands of the market

However, Lithuania should benefit from its proximity to Polish and Nordic territories, where the wind market is also advancing. The auction for the Thor project in Denmark has already been completed, and the likes of Sweden and Finland are looking for more avenues to develop offshore. This activity could release potential savings in sharing local production facilities, ports and shipping.

Neighboring Poland has set high benchmarks in its seabed leading round for local content, creating a demand for production in the country. There are large turbine manufacturers who have expressed interest in opening factories in Poland, and this would benefit Lithuania as transportation and import costs would be significantly reduced for its upcoming offshore wind projects.

Thank you

Patrycja Rapacka

Offshore events calendar

- The most important events concerning offshore wind energy events in one place
- An excellent place to promote events
- Access to the calendar is free of charge

BALTIC
WIND.EU

Visit us: BalticWind.EU/events

Wójcik: To overcome challenges in Lithuania it is necessary to think about offshore wind as a regional market

01/04/2022

Lithuania is mobilizing for the development of offshore wind. Mariusz Wójcik, Director Project Development & Advisory for Offshore Wind, Poland and Baltics in Ramboll Polska, in his comment for BalticWind.EU points out the challenges Lithuania is facing, the opportunities arising from the development of offshore wind in Lithuania and explains the aspects of financing wind projects in the Baltic Sea.

Lithuania has recently accelerated its efforts to develop offshore wind energy. This type of technology is expected to cover Lithuania's significant electricity demand. At the end of March, the Lithuanian Parliament adopted key regulations for the offshore wind sector. Mariusz Wójcik pointed out in commentary for BalticWind.EU that offshore development plans in Lithuania are quite clearly defined. An auction for a 700 MW farm is to be held in September 2023, with a possible auction for another 700 MW in 2024. The total potential is estimated at 3,500 MW by 2050.

”This is a very good and important step towards the energy transition of the whole region. However, if one looks only at the Lithuanian market, it is relatively small compared to, for example, the Scottish market, where proceedings for a round of projects with a total capacity of nearly 25,000 MW have already been decided this year”, our commentator noted.

He adds that the limited volume of projects is associated with several challenges.

”First, there may be difficulties in establishing a domestic supply chain due to the limited development perspective. Another challenge will be to create such auction conditions to ensure the right level of competitiveness and attract the right investors”, Wójcik pointed out.

”In order to overcome any challenges, it will be necessary to start thinking about the development of the offshore regional market, the Baltic market, with a total potential of 93 GW. It is important to create conditions in which individual Baltic markets will not compete with each other, but will cooperate in order to provide an appropriately distributed portfolio of projects to create and maintain local content”, the expert explained.

Opportunity for Power-to-X technology in Lithuania

Industry and experts are also considering how much chance Lithuania has of implementing Power-to-X technology in conjunction with offshore wind.

Mariusz Wójcik underlined that limited cross-border exchange opportunities mean that Power-to-X could be an important element of offshore development in Lithuania, due to the use of excess energy at times of low demand and maximum production from wind. He adds that the key, however, is the profitability of the whole process, which will be fostered by rising gas prices related to the prolonged war in Ukraine.

”It all stems from the limited capacity of cross-border connections to take excess power from offshore farms abroad during peak production. Looking at the numbers, the power demand in Lithuania is about 2000 MW at peak and about 1200 MW in the valley. If the weather is windy, 500 MW from existing onshore wind farms and 700 MW from an offshore wind farm will be enough to fill this demand. Add to this other sources of generation and it turns out that there will be too much power and it will be necessary to store it, convert it to hydrogen, transfer it abroad or turn off the wind power plants”, Wójcik explained.

The BalticWind.EU commentator added that one should also remember that after synchronization of the Baltic countries' power systems with the European system (planned for 2025) the cross-border exchange with Belarus and Russia will be limited, the Harmony Link connection will be added (700 MW), but the possibility of commercial exchange via LitPol Link (500 MW) will disappear.

”Lack of sufficient capacity for such connections may cause limitations in offshore development not only in Lithuania, but also in Latvia and Estonia”, Wójcik predicts.

Financing projects

According to some experts there are not enough financial instruments available for offshore wind projects in the Baltic countries. According to Wójcik, first of all it is necessary to be aware that Lithuanian projects will compete for access to financing with other markets (American, British, Asian).

”For financial institutions the key issues are return on investment and risk, therefore it will be crucial for Lithuanian authorities to create such a system of investment support, that on one hand will secure national interests and ensure low energy costs for consumers, and on the other hand will be attractive for investors”, Mariusz Wójcik commented for BalticWind.EU.

Patrycja Rapacka

Urtė Daškevičiūtė: Lithuania takes a big step for offshore wind sector

01/04/2022

In the first months of 2022, Lithuania has made significant progress towards offshore wind energy in the Baltic Sea. Urtė Daškevičiūtė, Executive Director at Lithuanian Wind Power Association, speaks in a commentary for BalticWind.EU about key developments and the new reality after the outbreak of war in Ukraine. Lithuania, like other EU countries, has accelerated its energy transition efforts.

On 31 March, the Renewable Energy Act with new provisions on offshore wind farms was finally adopted by Parliament - said Urtė.

” “This is a big step for Lithuania as it provides clarity for potential bidders. The first offshore wind tender will be launched in September next year and will make a major contribution to our energy independence. We also have some important sub-legislation to come this year, which will detail the tender procedure and pre-qualification requirements”, she said.

In January, Lithuanian offshore wind industry and foreign parties met in Vilnius to discuss the future of wind energy in the country. What are the main conclusions of the WindMission 2022 conference? Urtė Daškevičiūtė said that whether onshore or offshore wind, the one thing businesses say is that a clear, supportive, and predictable regulatory environment is key.

” “At the time of the conference, the focus was on the fact that on that day it was not yet clear when the legislation necessary for offshore wind would be adopted and what lay ahead for onshore wind. Now we see that we are well advanced and things are slowly falling into place”.

” “However, dialogue between government and business is more important than ever. There is a lot of focus on renewable energy in Lithuania at the moment, with a lot of regulatory changes being proposed, but it is very important not to be too quick to choose solutions that do not stimulate renewable energy, but rather hold it back. While the war in Ukraine has made us all aware of the risks of energy dependence and we want quick solutions, it is important that they are not only quick but also sustainable and effective”.

Russia's invasion of Ukraine and Lithuanian perspective

The war in Ukraine has opened the eyes of politicians, businessmen, and the public.

” “We see that energy dependence, which has always been a major risk for Lithuania, is now one of the main areas of focus for the government. Not only the war, but also the rising cost of electricity, which increases inflation and energy poverty, is forcing us to turn to renewable energy”, Urtė said.

The Government has now submitted to the Parliament the so-called 'Breakthrough Package', which consists of a set of draft laws to promote the development of renewable energy in Lithuania. Of course, there are some very good changes, but there are also some quite risky ones. We hope that the comments of the developers will be taken into account in the Parliament and that the Breakthrough Package will really bring a breakthrough to Lithuania - Urtė Daškevičiūtė indicated.



Polish-Lithuanian alliance – Polenergia and Green Genius join forces in offshore wind sector

04/01/2022

Polish energy company Polenergia S.A. has agreed key terms of a joint venture (JV) agreement with Lithuanian company Modus Energy AB (operating under the Green Genius brand) to develop offshore wind farm projects in Lithuania.

The tentative agreement was reached on December 31, 2021. Modus Energy AB will serve as a local partner, the announcement reads. The wind turbines will be built and operated using related infrastructure in the Lithuanian territory of the Baltic Sea. In addition, the anticipated project timeline (JV), roles of the parties, corporate governance issues, and impasse resolution mechanisms were agreed upon.

Polenergia and Green Genius have also agreed to extend their exclusive right to negotiate until February 15, 2022 to complete the documentation for the establishment of the JV, with the signing of the documentation and the establishment of the JV subject to, among other things, Polenergia obtaining the necessary corporate approvals.

The release further reads that the exclusivity right was originally granted for a period ending December 31, 2021. Information about the talks was provided by Polenergia with a delay.

” *“The decision of the Issuer (Polenergia – editor’s note) was due to the fact that the immediate disclosure of the information could infringe upon the legitimate*

interests of the Issuer and its group, by adversely affecting the possibility of carrying out the Project and the possibility of misleading the public through misinterpretation of the intentions of the Issuer and his group in the Project”.

Polenergia shall provide the Polish Financial Supervision Authority with information about the delay in disclosure of confidential information along with an indication whether the conditions for such a delay are met.

Polenergia is a Polish, private energy company, which in 2010 recognized the huge potential of offshore wind energy. In 2018, they started cooperation with Norway’s Equinor assuming joint implementation of the Baltic II and Baltic III OWF projects. In December 2019, it signed a cooperation agreement for the Baltic I offshore wind farm project. The total capacity of the projects developed by Polenergia together with Norway’s Equinor is 3 GW. Polenergia and Equinor have signed a letter of intent concerning cooperation in the development of offshore wind energy in Poland (Polish Offshore Wind Sector Deal).

Green Genius is one of the leading European players in the renewable energy market. Its portfolio includes projects with a capacity of 1.5 GW at various stages of development.

Patrycja Rapacka

Are you looking for specialists in the offshore wind industry?

Are you a specialist and looking for a job?

BalticWind.eu Offshore Jobs

is the place for you

Website for job advertisements
dedicated exclusively to
offshore wind energy
in countries around the Baltic Sea

BALTIC
WIND.EU

Lithuanian Energy Agency seeks a contractor for wind speed measurements and seabed surveys



05/01/2022

The Lithuanian Energy Agency has extended the previously announced deadline for submitting tenders for the implementation of wind speed measurements, water, and geological surveys of the seabed in the Lithuanian maritime territory until January 24, 2022.

As the agency's website reads, the postponement was made in response to requests from bidders due to the holiday season and the need for more time to submit bids. The original deadline was January 12, 2022.

The contracting authority for the study is the Ministry of Energy of Lithuania. The contract with the contractor will be signed for 16 months. The value of the contract

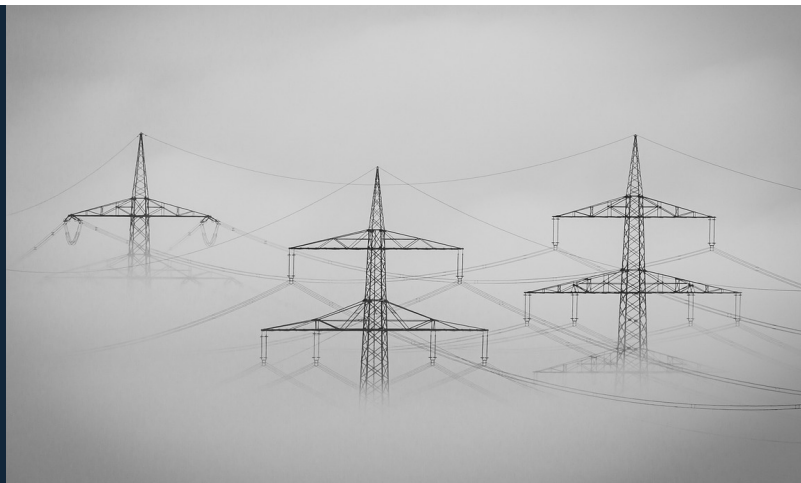
exceeds EUR 1.6 million.

The results of the tests and measurements will be crucial for future wind farm developers. Data is needed to assess the seabed structure and wind potential of the offshore area in Lithuania.

The planned wind farm, with a capacity of up to 700 MW in Lithuanian waters, is expected to be completed by 2028, with the main goal of increasing domestic electricity production from renewable energy sources and reducing the country's dependence on electricity imports.

Patrycja Rapacka

Nordic operators will support the Baltic power system in case of failure



29/03/2022

The CEOs of Scandinavian grid companies Energinet, Fingrid, Statnett, and Svenska kraftnät discussed the electricity system operators' preparation for a possible aggravation of the situation in the Baltic Sea region and its impact on the Baltic transmission system, according to a release from Finnish operator Fingrid.

Nordic and Baltic grid operators have jointly prepared for an operational scenario in which the Baltic region would be disconnected from the Russian grid and forced to operate as an island. Some challenges have also been identified, but here it is not specified which ones. In such a situation, support is needed in the form of providing adequate frequency from the Nordic system.

Baltic transmission system operators have already reduced imports from Russia to minimise the potential impact on the Baltic power system in the event of a sudden Russian disconnection from the grid, Fingrid reports.

The Finnish operator argues that the grid companies are well prepared and have practiced such a scenario in preparation for the synchronization of the Baltic countries with the electricity system of continental Europe in 2025

Patrycja Rapacka

Polish-Lithuanian summit talks on development of offshore wind energy



17/01/2022

Minister of Climate and Environment of Poland, Anna Moskwa, met with the Vice-Minister of Energy of Lithuania, Daiva Garbaliuskaitė. The meeting, which took place on January 13, 2021, concerned the possibility of cooperation in the area of gas energy and RES, in particular offshore wind energy.

The representatives of the Ministries discussed the possibility of cooperation between Poland and Lithuania in the area of renewable energy, including the development of offshore wind projects. During the meeting, both sides emphasised that the strategic partnership between Lithuania and Poland provides an effective basis for successful and timely implementation of strategic energy infrastructure projects that are important for Lithuania and the entire Baltic region – synchronisation of the Baltic power system with the European grids and the Lithuanian-Polish gas interconnection – GIPL. Vice-Minister of Energy, Daiva-Garbaliuskaitė, informed about the possibilities for Polish companies to import natural gas to Poland through the liquefied natural gas (LNG) terminal in Klaipėda. She urged companies from Poland to participate in the auction to be announced in the summer of 2022. The meeting also discussed opportunities to expand, and strengthen cooperation between Lithuania and Poland in the field of renewable energy on the basis of the Memorandum of Understanding on Enhanced Strategic Energy Cooperation signed between Lithuania and Poland in 2018. The two sides agreed to resume the activities of the bilateral working group on energy, which would be chaired by deputy ministers. Lithuania proposed that the next meeting of the working group be held in Lithuania in the first half of 2022.

Anna Moskwa pointed out that Lithuania, which consistently pursues the policy of transformation of its economy towards a low-emission one, is an important partner for Poland in strengthening regional energy security.

” “One of the pillars of this transformation is renewable energy, with a large role of offshore wind, which is also an important element of energy policy for Poland,” indicated the Polish Minister of Climate and Environment.

Wind turbines in the Baltic Sea will be one of the pillars of Poland’s future energy mix. According to Poland’s Energy Policy until 2040, offshore wind capacity will reach 5.9 GW in 2030 and increase to 11 GW by 2040. This will account for 10 percent of total offshore wind capacity in the Baltic Sea by 2050, estimated at 93 GW.

The Lithuanian side expressed willingness to cooperate with Poland also in the field of hydrogen development, including the exchange of experience and knowledge.

” “We have similar goals in the hydrogen area, successful cooperation in the natural gas sector or the threat to energy security from the use of energy as a means of geopolitical leverage are important bases for working together to develop hydrogen economies. Poland can share its experience in this area with the Lithuanian side”, Garbaliuskaitė pointed out during the meeting.

Lithuania also has the ambition to develop offshore wind energy. The first offshore wind farm with a capacity of 700 MW could provide 25% of energy demand. There are also plans to build a second wind farm with a similar capacity of 700 MW. Lithuania is aiming to produce at least 50% of electricity from renewable energy sources by 2030, and 100% by 2050.

We recently reported on BalticWind.EU that Lithuania’s energy ministry is seeking a contractor for a broad, and in-depth study, on the development, and use of hydrogen by 2050. This country is watching other countries in the Baltic Sea region develop, among other things, offshore wind energy and plan to use energy from the farms to produce hydrogen.

Patrycja Rapacka

Baltic RCC will be established to coordinate the development of the Baltic Power System

03/02/2022

Latvian electricity system operator AS Augstsprieguma tīkls (AST) has announced that a Regional Coordination Center for the Baltic region will be established this year. A special company, Baltic RCC, will be established for this purpose.

As required by the European Parliament and the Council, Regulation (EU) 2019/943, of 5 June 2019, on the internal market for electricity, all transmission system operators in the operating region shall jointly establish a Regional Coordination Center (RCC) by 1 July 2022.

The transmission system operators of the Baltic states are the Latvian transmission system operator (TSO) Augstsprieguma tīkls AS (AST), the Lithuanian operator LITGRID AB, and the Estonian operator Elering AS. The main functions of the Coordination Center (RCC) are to ensure that operators have a common approach to regional capacity calculation methodology, monitoring, development of new networks, and development of support instruments.

Currently, all Baltic TSOs are taking the necessary actions as required by national legislation to establish the RCC by 1 July 2022 and successfully start its functions.

Necessary steps are being taken to obtain governments' approval for the acquisition of shares in order for AST to establish a dedicated company, Baltic RCC, together with LITGRID AB and Elering AS.

We have also reported on BalticWind.EU that another coordination centre, the Nordic RCC, will be one of 6 regional centres in Europe to support national TSOs in optimising the operation of the European electricity system both in terms of security and capacity utilisation. It will include system operators Statnett, Svenska Kraftnät, and Fingrid.

Patrycja Rapacka

Newsletter

- Once a week
- Summary of the most important topics
- 8 EU Member States around the Baltic Sea
- The only such newsletter focused on offshore wind energy

Visit BalticWind.EU and sign up today!

BALTIC
WIND.EU

WindMission Lithuania 2022 – key information about offshore wind coming from Vilnius



14/02/2022

The next edition of the international conference WindMission Lithuania 2022 was held in January. The event was devoted to Lithuania's energy policy, in particular to the development of wind energy. Here are the key findings on offshore wind development from Lithuania.

The conference was attended by the representatives of Lithuanian business and government, experts from Lithuania and abroad, and representatives of foreign investors. The event was organized by the Lithuanian Wind Energy Association and The Voice of Renewables. During the conference the following issues were discussed: transformation of Lithuanian electricity sector, regulatory environment of auctions in Lithuania, attractiveness and availability of wind energy for end-users, decommissioning, and dismantling of wind farms. Much attention was paid to the opportunities, procedures, and risks for offshore wind farms.

When will the legal framework for offshore wind in Lithuania appear?

First ideas for offshore wind in Lithuania appeared about 15 years ago, but it is in recent years that these plans have started to become concrete. The first offshore wind farm in Lithuania will have a capacity of 700 MW (there are plans to build another farm, also with a capacity of 700 MW). The first will provide a volume of 3 TWh per year of green energy, which will cover 25 percent of energy demand in Lithuania.

Lithuania is at a very early stage of preparation for offshore wind energy development and still, the region itself is becoming increasingly popular among foreign investors (some of them are already active in Lithuania). For Lithuanians, the current challenges are regulatory issues and timely execution of RES auctions, tenders, and other key processes. For now, it is unclear when the basic law on offshore wind energy will be implemented, but Lithuanian officials hope it will happen quickly. According to experts, ideally it would be 2022 to start with the necessary proceedings.

In particular, the industry is waiting for auction regulations for offshore wind in Lithuania. The first auction for offshore wind should consider the criterion not only on price, but also on the basis of criteria related to innovation, social benefits, and sustainability.

Lithuania has a fairly efficient transmission system, but further investments are needed

Representatives of, among others, Lithuanian Energy Agency and operator Litgrid, discussed the opportunities and challenges of transforming Lithuania into a RES energy exporter. Lithuania has a fairly strong transmission system. The goal is to install 7 GW in RES by 2030, but as experts have pointed out, this is not the upper limit of possibilities. Interconnection is key. Work is currently underway on the Harmony Link submarine cable link that will connect Lithuania to Poland. The new connection will increase the capacity to absorb more energy from RES. Is the Harmony Link project enough? More interconnectors are needed to stabilise in the future – among other things potential energy price fluctuations and energy security.

What to do with surplus energy? If there are any...

Surplus energy from RES should be stored, which is obvious, but the action is key. Lithuania is building 200 MW storage facilities and an additional plant at Kruonis to maintain system stability. In addition, the excess energy can be used for hydrogen production or sold on the market. The Ministry of Energy of Lithuania will soon present key guidelines (roadmap) for the development of the hydrogen sector and an action plan for the development of the hydrogen economy. A pilot project to produce green hydrogen has already begun in Lithuania.

It is worth noting that Lithuania may not even have an energy surplus, as energy consumption in Lithuania may increase by up to 25 percent within a decade, which means that RES energy can be consumed entirely by Lithuanians.

Not enough talk about local content and funding challenges

As the development of the offshore wind energy sector in Lithuania is at a very early stage, not much was said about local content, building supply chains, project development in other markets like Latvia and Estonia. In terms of financing, the Baltic Market is overlooked by institutional investors from Western Europe due to the small size of the projects. This is expected to change in the future. There are not enough financial instruments available for offshore wind projects in the Baltic States.

Patrycja Rapacka

First foundations for hydrogen era in Lithuania are being laid

15/02/2022

Lithuania is preparing a national map of hydrogen technology development. The Ministry of Energy of Lithuania informs that after a comprehensive analysis, independent foreign experts, working with Lithuanian institutions and companies, will present possible solutions for the hydrogen value chain. This is an opportunity to implement green hydrogen production technology using energy produced by wind farms in the Baltic Sea.

The Lithuanian ministry notes that almost all major European countries have developed and published hydrogen strategies. Recent studies indicate that demand for hydrogen in Europe will outstrip supply over the next ten years. Therefore, it will be important to buy and transport hydrogen from the Baltic States and Scandinavia, which are seen as potential hydrogen producers due to favourable conditions for RES development, such as offshore wind farms in the Baltic Sea.

To develop the hydrogen roadmap, an agreement was signed between Baringa Consulting Limited, a UK-based international consulting firm working with Civitta, an international management consulting firm, Amber Grid, the Lithuanian gas transmission system operator, and EPSO-G. A contract worth 145,000 euro was signed by representatives of Baringa Consulting Limited after they won the public tender launched in the summer of 2021.

The Lithuanian hydrogen sector development plan to 2050 and the action plan for its implementation until 2030 are expected to be ready in spring 2022.

” “Green hydrogen is essential for decarbonizing the energy, industrial, and transportation sectors. Therefore, Lithuania also needs to assess what role hydrogen should play in achieving its decarbonization goals and what benefits it can bring to Lithuania. The study should serve as a roadmap for further plans related to green hydrogen”, explains Dainius Kreivys, Lithuanian Minister of Energy.

The plan to create a strategic hydrogen value chain was included in the declaration of the Lithuanian Hydrogen Platform, created in November 2020 at the initiative of the Ministry of Energy. Launched with the participation of 19 representatives from the public sector, business, and academia, the platform now brings together more than 45 participants who actively interact in various working groups on hydrogen applications in industry, transport, and energy.

The Ministry of Energy of Lithuania informs that in order to prepare a roadmap for hydrogen development in Lithuania, it will be necessary to review the situation in the EU regarding the factors influencing the development of the hydrogen sector. It is the reduction of CO₂ emissions, the development of RES, the implementation of new technologies, the development of transport, the interaction between different systems. Long-term recommendations, visions and strategies for the development of the hydrogen sector developed by international organisations in the fields of energy, transport, industry, and households will be analysed. The region's potential for hydrogen development will also be assessed as well as proposals from state institutions, companies, organisations, and members of the Lithuanian Hydrogen Platform related to the development of the hydrogen sector.

Source: Ministry of Energy of Lithuania



Synchronization of Lithuania's system with the European continental grid will expand RES development opportunities



16/02/2022

Litgrid, the Lithuanian electricity transmission system operator, is receiving an increasing number of requests from developers to investigate the possibility of connecting new wind or solar power plants to the transmission grid. The operator argues that Litgrid's preparations for the synchronization process and other system development projects will help ensure transmission grid reliability as more renewable generation capacity becomes connected to the grid.

Electricity generation from renewable energy sources is facing a surge, reports Litgrid. They point out that the number of applications to build power plants is growing exponentially. As of January 2022, Litgrid has received 22 applications from RES developers for pre-connection conditions for wind and solar projects – 10 are wind projects with a total capacity of 304 MW and 12 are solar PV projects with a total capacity of 668 MW. This is more than from the first five months of 2021, when a total of 20 applications were submitted.

”We have seen an increase in activity since, approximately, the middle of last year. Large renewable energy projects, especially wind, no longer require government subsidies and are a profitable investment in their own right. That's why developers are rushing to take advantage of the opportunities to connect power plants to the transmission grid – we have different capacities in different areas. Therefore, we need connection conditions issued by us as an operator, which help us to assess whether a power plant of a given capacity can be connected to the transmission grid, or whether at this point the transmission grid still needs to be reinforced by investments made by the developer under the current legal framework”, explains Rokas Masiulis, CEO of Litgrid.

He adds that in western Lithuania, for example, space for new wind farms is practically non-existent, and developers have started applying to build power plants in the east of the country. Although wind indicators tend to be somewhat weaker here, the changing market situation is increasing interest in installing power plants in other regions of Lithuania as well.

To provide greater transparency to developers, and thereby encourage investment in renewable power plants, Litgrid plans to develop a virtual connectivity map where developers can see how much generating capacity can be installed and in which areas.

RES investments are driven by the integration of international markets

According to Masiulis, investment in new RES capacity is driven both by falling technology prices, declining competitiveness of thermal power plants due to rising costs of fossil fuels and emissions permits, and a general public push for sustainability solutions.

”Investment is also being driven by increasingly integrated markets, with international links such as LitPol Link, NordBalt, and the emerging Harmony Link playing an important role. We increasingly trade with other European countries, and our markets are increasingly subject to the same trends. For example, as Germany moves away from nuclear power and all of Europe embraces the Green Deal and tries to consume as much renewable electricity as possible, wind-generated electricity is becoming even more in demand throughout the region, including in Lithuania”, Masiulis explains.

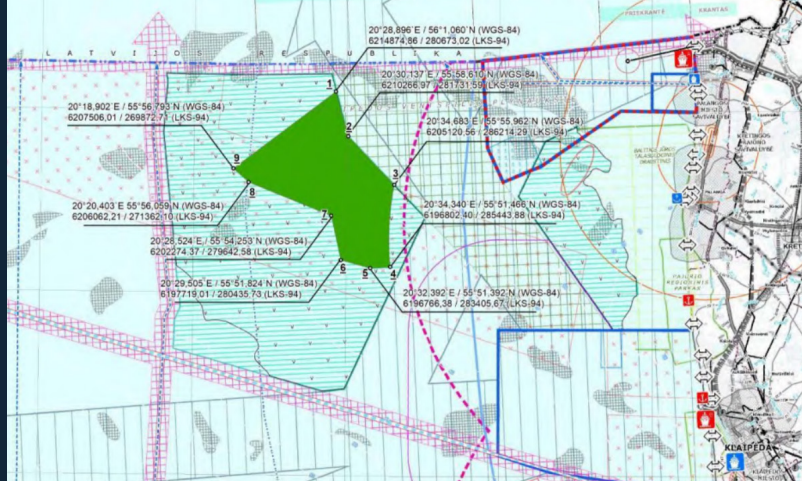
Currently, there are 20 renewable energy power plants under construction (i.e. with signed letter of intent, connection conditions or agreement with Litgrid) in Lithuania: 18 wind, 1 solar and 1 biomass. By comparison, as recently as 2020, the total capacity of all renewable power plants in the country was 936 MW, Litgrid reports. Litgrid is currently implementing a project to synchronize Lithuania's system with the grid of continental Europe, as part of which it is strengthening the country's transmission grid and building a new marine connection to Poland – Harmony Link. This work will facilitate the connection of additional 960 MW of onshore renewable energy capacity to the transmission grid. The country will also install 3 synchronous compensators in preparation for synchronization.

In September 2022, a unique test will be conducted when the entire Lithuanian power system will be temporarily disconnected from the IPS/UPS synchronous zone for the first time and will operate in island mode. Currently, Lithuania, Latvia, and Estonia, along with Russia and Belarus, operate under the IPS/UPS system, in which the frequency of electricity is centrally regulated in Russia. Connection to the networks of continental Europe and synchronous operation with Poland, Germany, and other countries of continental Europe will be realized by 2025 at the latest.

According to the targets set by the Ministry of Energy of Lithuania, by 2030 the total solar and wind power generation capacity in Lithuania could reach 7000 MW, of which 3600 MW will be for onshore wind power, 1400 MW for offshore wind power, and 2000 MW for photovoltaics.

Source : Litgrid
Patrycja Rapacka

Lithuania launches consultations on elements of environmental impact assessment of wind turbines in the Baltic Sea



21/02/2022

The Ministry of Energy of Lithuania invites to participate in public consultations on the elements relevant for the environmental impact assessment of wind farms to be constructed in the Lithuanian part of the Baltic Sea.

The Ministry of Energy has entered into an agreement with the “Pajūrio tyrimų ir planavimo institutu” to conduct an environmental impact assessment of wind power plants with a capacity of up to 700 MW. The results of the environmental impact assessment are needed to prepare tenders for permits and support for wind farm development in the Lithuanian maritime area.

In particular, the Ministry invites wind power generators, wind power developers, and all interested parties to submit proposals regarding the technical and physical parameters of wind power plants to be selected for environmental impact assessment, as well as possible alternatives. The collected proposals will help to assess the needs and expectations of stakeholders in assessing the environmental impact of offshore wind farms. Proposals can be submitted until Saturday, March 3. The online consultation will take place on March 8 at 10.00.

The Ministry recalls that on 22 June 2020, a resolution of the Government of the Republic of Lithuania was adopted, indicating the part of the Lithuanian maritime territory where a tender for the development

and operation of wind power plants with a capacity of up to 700 MW should be organized.

”It is planned that the first tender will be organized at the end of 2023, after all necessary actions and studies have been carried out, a detailed plan for the development of renewable resources for the Lithuanian maritime area has been prepared, an environmental impact assessment of the wind farms is done, measurements of wind speed and other parameters, as well as studies of the seabed, have been carried out”, the ministry indicates.

The EIA program that has been prepared and coordinated anticipates that the proposed wind farm site may include wind farms with installed capacity ranging from 8 MW to 16 MW, with heights ranging from 140 m to 300 m, and the number of wind farms may range from 87 to 43, depending on the capacity selected.

In order not to limit the optimal distribution of wind farms in the area approved by the government resolution, the EIA program stipulates that the wind farm model to be used in the EIA, the location of wind farms, and their number will be determined after detailed wind power measurements, which are scheduled for 2022-2023.

Patrycja Rapacka

Dainius Kreivys: Record energy consumption and geopolitical tensions show that we need to accelerate green energy development

28/02/2022

In the current tense geopolitical situation in the region, the development of local electricity generation becomes even more important not only for energy independence but also for national security, Lithuania's Energy Ministry points out. Energy Minister Dainius Kreivys says, bearing in mind the growing demand for energy, that Lithuania needs to increase its domestic electricity generation capacity as soon as possible.

According to the Lithuanian Energy Ministry's announcement, Lithuanian businesses and residents consumed a record amount of electricity in 2022, almost 12 TWh, of which 40% was produced in Lithuania, according to data from Litgrid, Lithuania's electricity transmission system operator.

This decreased from 2020, when locally generated electricity accounted for 46% of final electricity consumption, which is why Energy Minister Dainius Kreivys says Lithuania needs to increase its domestic electricity generation capacity as soon as possible as energy demand increases.

Kreivys points out that last year's record electricity consumption is a sign of economic recovery from the pandemic, but Lithuania generates less than half of its electricity needs.

”

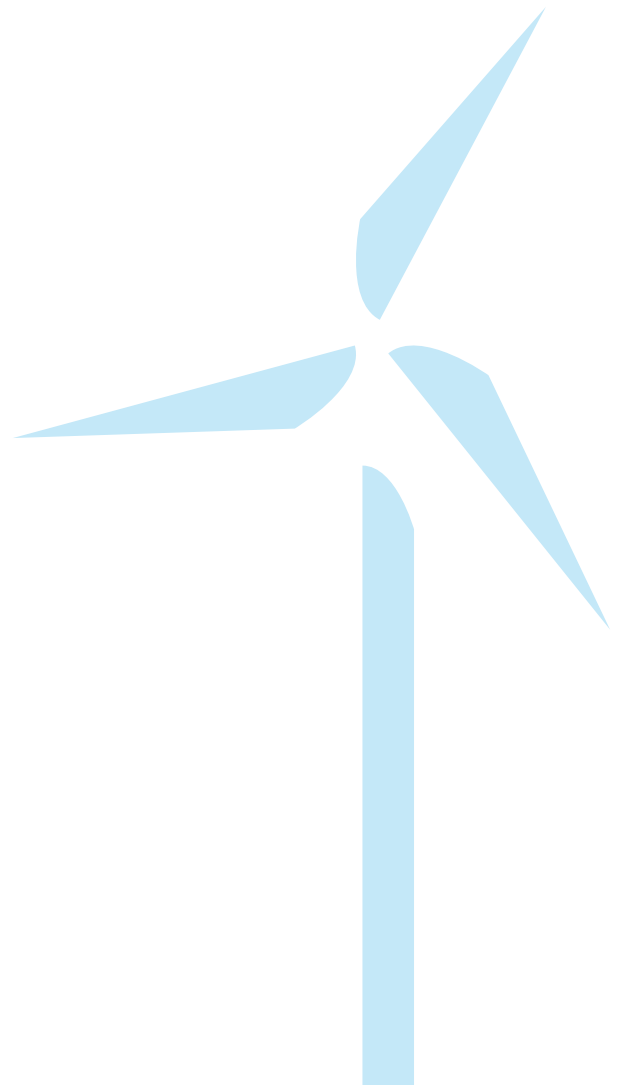
“Our long-standing and consistent energy policy and investments in energy security have ensured system stability and reliability, but only generating 100% of our electricity locally can ensure full energy independence”, the minister stressed.

Kreivys said that the only sustainable solution is the rapid development of green energy production is creating favourable conditions for businesses and residents to invest in their own electricity generation capacity. Last year, 48% of Lithuania's total electricity production came from renewable energy sources. In 2021, solar power plants produced 0.16 TWh, and wind power plants produced 1.36 TWh. Meanwhile, Lithuania aims to achieve 1.8 GW of onshore wind power capacity and 1 GW of solar power capacity by 2025.

It should also be recalled that Lithuania is planning to develop wind farms in the Baltic Sea waters. The first of these will have a capacity of about 700 MW and will provide about 25% of Lithuania's annual energy demand. There are also plans for a second wind farm project, also with a capacity of 700 MW.

To ensure rapid development of green energy, a package of legislative amendments to encourage investment in renewable energy and simplify regulations to speed up development will be presented as early as the spring session of the Seimas, the Lithuanian ministry reports.

Patrycja Rapacka



Baltic transmission system operators reduce energy imports from Russia

03/03/2022

In the wake of Russia's military aggression against Ukraine, the operators of the Baltic transmission systems – Augstsprieguma tīkls of Latvia, Litgrid of Lithuania, and Elering of Estonia – have agreed to limit the total capacity of electricity imports from Russia.

As we read in the announcement of one of the operators, in order to reduce the risk of possible negative impact on the reliability and stability of the Baltic electricity transmission systems, the transmission system operators agreed to reduce the total capacity of electricity imports from Russia to the Baltic States.

The agreement stipulates that as of 3 March 2022, the total electricity import capacity from Russia to the Baltics will be limited to 300 MW, with a separate limit of 150 MW on the Russia-Latvia border and 150 MW on the Kaliningrad-Lithuania border.

The Baltic TSOs informed the electricity market participants about the decision by posting a message on the NordPool market announcement platform.

Representatives of the Baltic system operators met on Tuesday (2.03) in Vilnius, where they discussed the main common priorities. Among them are the connection of the Baltic electricity system to the continental European electricity grid and the corresponding frequency band from 2026, the integration of renewable energy sources and energy security. While the stability of our energy systems is not currently affected by the conflict in Ukraine, system operators are in constant communication and ready to respond quickly to any changes.

Patrycja Rapacka

PODCAST:

***This week in
Baltic Offshore Wind
in 5 minutes***

hosted by
Krzysztof Bulski

BALTIC
WIND.EU



WWF: Baltic countries lead EU for sustainable sea space management, but still put nature at risk



21/03/2022

Baltic countries' plans to sustainably manage human activities at sea lack harmony across borders, and measures to restore and protect ecosystems are inadequate – that's the conclusion of WWF's Baltic Ecoregion Programme, which has evaluated Baltic EU Member States' Maritime Spatial Planning (MSP) strategies for sustainably managing marine areas and resources.

The Baltic is the first EU sea basin to establish regional structures (namely the Baltic Marine Environment Protection Commission – HELCOM, and the Vision and Strategies Around the Baltic – VASAB) that support the implementation of the EU MSP Directive at Member State level and to establish an action plan for achieving good environmental status of the sea by 2030 at the latest, as required by EU law. Overall, however, MSP in the Baltic region has only been partly successful: WWF's assessment reveals that the integration of an ecosystem-based approach – which maintains ecosystems in a healthy, productive and resilient condition against human pressures – is uneven across Member States.

” *“An ecosystem-based approach to maritime spatial planning can truly transform how sea spaces are assessed and managed,” says Valerie de Liedekerke, WWF Baltic Ecoregion Programme Interim Director and Programme Manager. “It is necessary in order to secure a sustainable blue economy, to define the carrying capacity of our sea areas, and to conduct robust environmental assessments using up to date data in order to reduce current environmental degradation. Our report shows there is a long way to go before ecosystem-based approaches are fully integrated into the regions' marine management.”*

When put together, the areas Member States have designated for marine protection do not abide by the EU Biodiversity Strategy target of protecting at least 30% of marine and coastal areas, of which 10% should be strictly protected (meaning human access and impacts are strictly controlled and limited). Furthermore, not one Member State plan sets aside space for nature restoration activities in the Baltic and

only two countries have partially addressed temporal and spatial uncertainties in the era of climate change.

Where national plans have designated space for offshore renewable energy, which is necessary for achieving climate neutrality by 2040 as per the European Green Deal, the majority of countries failed to consider the impacts of offshore renewable energy infrastructure on ecosystems and wildlife.

” *“While the Baltic Member States have taken the regional lead in Europe for submitting plans to sustainably manage their sea, significant gaps in these plans show how crucial it is for all Member States to work across sectors and align with EU policies, such as the Common Fisheries Policy and Marine Strategy Framework Directive that seek a sustainable and secure future for all,” says Dr. Antonia Leroy, Head of Ocean Policy at WWF European Policy Office. “A sustainable blue economy in the EU depends on harmony across borders, space for nature and legally-binding maritime spatial plans.”*

WWF's assessment lands just ahead of the European Commission's 31 March deadline to assess the EU Member States' implementation of the MSP Directive and their national plans. The plans detail their respective strategies for sustainably managing marine areas and resources.

WWF is calling for the Baltic and all EU Member States to ensure their maritime spatial plans, secure sufficient space for nature to recover and thrive. This includes leaving offshore renewable energy development out of Marine Protected Areas, and establishing transboundary cooperation between Member States to reduce harmful impacts to nature from this type of infrastructure. Finally, stakeholders must be involved and consulted in all phases of MSP, with national plans covering all sea areas and continuously adapted as new data becomes available and new pieces of legislation come into force.

Key results

A total of nine maritime spatial plans belonging to eight EU Baltic Sea countries — Denmark, Estonia, Germany, Latvia, Lithuania, Poland, Sweden, and Finland — and the autonomous region of Åland, were reviewed to determine the degree to which they are ecosystem-based.

A core element of WWF's work has been translating the EU's MSP Directive's requirements into a set of 33 measurable indicators across four categories, upon which the assessment was based. A national maritime spatial plan is considered to be successfully delivering an ecosystem-based approach to MSP once all indicators are achieved (i.e., scoring 100%).

At the Member State level, the analysis reveals that Latvia's performance was strongest in the Baltic. This is because Latvia embraced an ecosystem-based approach to MSP, making full use of existing scientific knowledge, conducting robust environmental assessments and including procedures for monitoring the implementation of environmental, social and economic goals in its final national plan. It has also successfully translated EU renewable energy targets for carbon neutrality into spatial designations that respect biodiversity recovery and resilience.

At the opposite end of the spectrum, Denmark's planning failed to designate any space for essential blue corridors or areas for nature restoration and blue carbon ecosystem protection. Since the beginning of the MSP process, the nation has neither prioritised nor invested in adopting an ecosystem-based approach, despite data being available to facilitate these processes. Denmark was also the only Member State that failed to address conflict risks in its national plan.

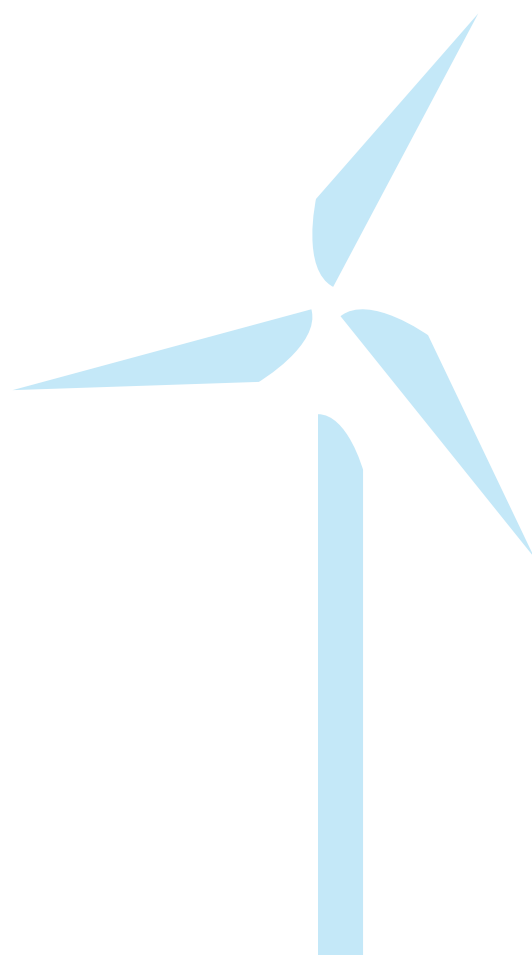
The Baltic is a vulnerable sea

The Baltic is the youngest sea on our planet and one of Earth's largest bodies of brackish water (water that is saltier than freshwater, but not as salty as seawater). Saltwater from the North-East Atlantic blends with fresh water from the rivers and streams that run through 14 different countries into the sea basin, resulting in a delicate mixture that yields a highly sensitive and interdependent marine ecosystem with unique flora and fauna. These special qualities make the Baltic Sea especially vulnerable to environmental pressures.

The physical damage and disruption caused by maritime sector activities threaten the health of marine habitats and wildlife, including populations of species that Baltic fisheries depend on. The cost to citizen well-being from the deterioration of the Baltic marine environment was already estimated to have surpassed €9 billion in 2015, making the annual cost of marine degradation nearly double the value of the region's blue economic growth. In short, the dire state of play of marine ecosystems makes it imperative to succeed in implementing and assessing ecosystem-based MSP in the region.

Between 2009 and 2018, the Baltic blue economy grew by over €5 billion, becoming the third fastest growing regional blue economy in the EU. The increasing needs for space at sea and underwater, as well as for resources, adds pressure to the Baltic's fragile ecosystems, compromising the very resources on which this economy depends.

Source: WWF Baltic



Green Genius and Polenergia join forces for the first offshore competition in Lithuania

22/03/2022

Renewable energy company Green Genius, which develops solar, biogas, wind, and green hydrogen energy projects in 8 European countries, has signed a cooperation agreement with Poland's largest private energy company, Polenergia. Together, they will seek to win a tender by the Lithuanian state for a wind farm in the Baltic Sea.

It will be the first offshore wind farm in Lithuania in the Baltic Sea. The investment agreement between "Green Genius" and "Polenergia" (under which a joint venture will be established to develop the Baltic project in Lithuania) is subject to the approval of the relevant competition authority.

” *“The significance of renewable energy is increasing in days, not in years anymore. To make the tangible change for energy independence in the region, as well as sustainability, we have to act faster and smarter. Therefore, I'm more than excited to go for this partnership, which may offer efficiency and advantage to the whole electricity market in the Baltic Sea region”, says Ruslanas Sklepovičius, CEO of “Green Genius”.*

” *“We see the need to show the world that strengthening the economies of this part of Europe is a historical necessity. In this way, we want to emphasize the strategic importance of cross-border cooperation and prove that wind energy is no longer an alternative energy, but traditional energy that will build energy independence”, says Michal Michalski, Ph.D., President of the Management Board of Polenergia.*

“Polenergia” has solid investment experience in Central Europe. Meanwhile, “Green Genius” is well acquainted with local Lithuanian regulations. The joint forces will create an optimal strategy and competitive technical and business preconditions for an offshore wind farm project.

The first offshore wind power project in Lithuania is expected to start operating in 2030 and will have a capacity of 700 MW. The competition for the implementation of this project is planned for September 2023.

Source: Green Genius

Launching soon...

TECHNOLOGY CORNER

BALTIC WIND

Lithuania holds talks with potential wind farm developers in the Baltic Sea

23/03/2022

Lithuania's Energy Ministry said they have started consultations with potential wind farm developers in the Baltic Sea. The talks started in March 2022.

The consultations will be conducted in preparation for an auction related to the selection of an offshore wind farm developer. Meetings with potential investors are scheduled until April 18, 2022. Talking with Lithuanian authorities, the companies are expected to discuss the issues of connecting the wind farm to the Lithuanian transmission grid, interconnection, width of the interconnection corridor, and other technical issues of the project, as well as legislative changes related to the project, project schedule, and future construction of the wind farm – logistics and material supply.

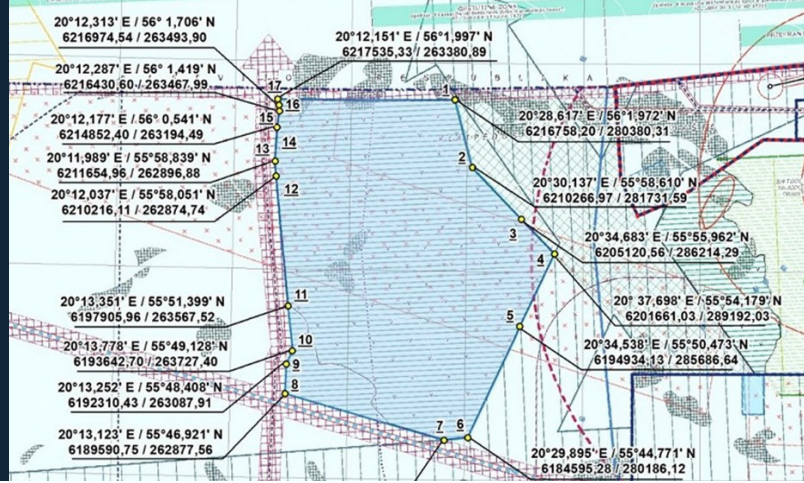
Lithuanian Energy Agency, by the instruction of the Ministry of Energy of Lithuania, has initiated an international procurement process related to the offshore wind farm project to select service providers to perform the anticipated studies and services.

An infrastructure development plan will be created

In connection with the construction of wind turbines in the Baltic Sea, there will be an engineering infrastructure development plan. The document will identify areas for phased development and operation of offshore wind farms. The contractor shall prepare a concept (at least 2 variants) of solutions for the connection of the offshore wind farms with the substation in the Baltic Sea, including preliminary locations of the offshore wind farm connections with the seabed cables and the offshore substation.

Environmental Impact Assessment 2023

Environmental studies and impact assessment of the wind farm will be carried out in accordance with the Resolution of the Government of the Republic of Lithuania dated 22 June 2020 on Environmental Impact Assessment. An EIA report will be prepared for the construction of the first wind farm with an installed capacity of up to 700 MW and to determine the final installed capacity. In 2021, the Lithuanian Energy Agency conducted public procurement procedures



and selected a qualified supplier, Pajūrio tyrimų ir planavimo institutas (CORPI), who will conduct the environmental impact assessment procedure and prepare the EIA report of the wind farm by the end of the third quarter of 2023.

Results of geological surveys the following year

The development of wind farms in the maritime area of the Republic of Lithuania in the Baltic Sea is inextricably linked to both the characteristics of the seabed and the geological structure of the subsurface. Seabed topography and geological structure have a unique impact on the selection of structures and foundations for wind farms.

In 2021, the Lithuanian Energy Agency prepared the necessary documents and initiated an international public procurement to select a service provider to conduct geophysical and geotechnical surveys of the seabed in the area of the planned wind farm construction in the Baltic Sea. The selected vendor is expected to be able to conduct the study within 11 months, with results available in mid-2023.

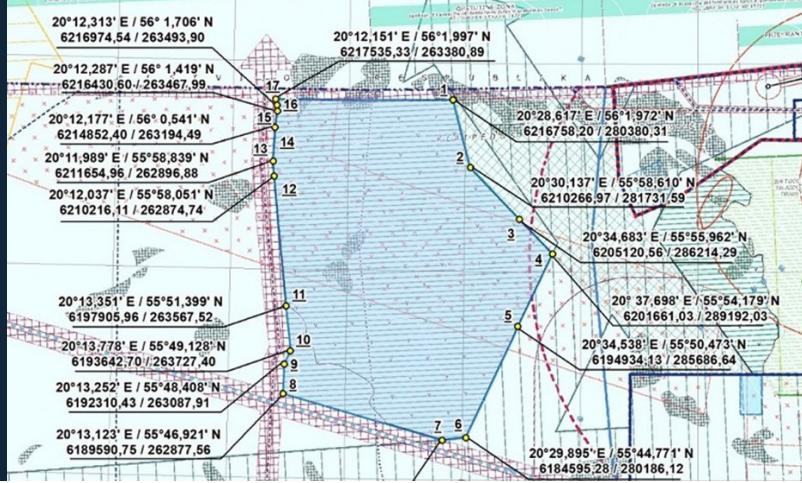
Wind speed measurements will last until mid-2023

Wind speeds in the Lithuanian marine area have not been measured or studied in detail before. Preliminary data (from mathematical modeling) suggest that the average wind speed in the area of the planned wind farm may be around 9 m/s. The Lithuanian Energy Agency has prepared the necessary documents and started an international procurement procedure in 2021 to select a competent supplier to carry out measurements of wind speed, water, and other meteorological parameters in the planned area. The potential contractor is expected to conduct the necessary measurements by mid-2023.

Sea depths at planned wind speed measurement station locations range from 36 m to 44 m. The data obtained will be used to assess wind energy production potential and sea hydrometeorological conditions in the area of wind farm development in the Baltic Sea.

Patrycja Rapacka

Lithuanian Parliament approves further offshore wind energy proposals



30/03/2022

During the discussion at the meeting of the Parliament of the Republic of Lithuania, the proposals of the Committee for Environmental Protection, on the development of offshore wind farms in the Baltic Sea, were accepted. This is a big step closer to offshore wind in Lithuania, comments the Lithuanian Wind Power Association (LVEA).

This is a great day for offshore wind and our energy independence, but Parliament has yet to vote on the proposals, the industry organisation comments on LinkedIn. The new offshore wind bill will allow for better preparation for offshore wind auctions. The legislation also includes a stronger mechanism to protect Lithuania's national security interests.

What changes were adopted? The auction for offshore wind in Lithuania will be announced on 1 September 2023. Participants in the auction for offshore wind in Lithuania must have guarantees of adequate financial capacity and experience. In turn, the auction winner is required to comply with greenhouse gas emissions, environmental investment, and community support

requirements. He will be held financially responsible in the event of a violation. The performance bond increased from €15 per kW to €75 per kW. The RES developer will also be responsible for ensuring that offshore turbines are dismantled.

Minimum and maximum levels for CFDs have also been set. – The winner of the auction will be the one who asks for the least amount of support. If the developer doesn't ask for support, the highest development fee bidder wins, the organization's post reads.

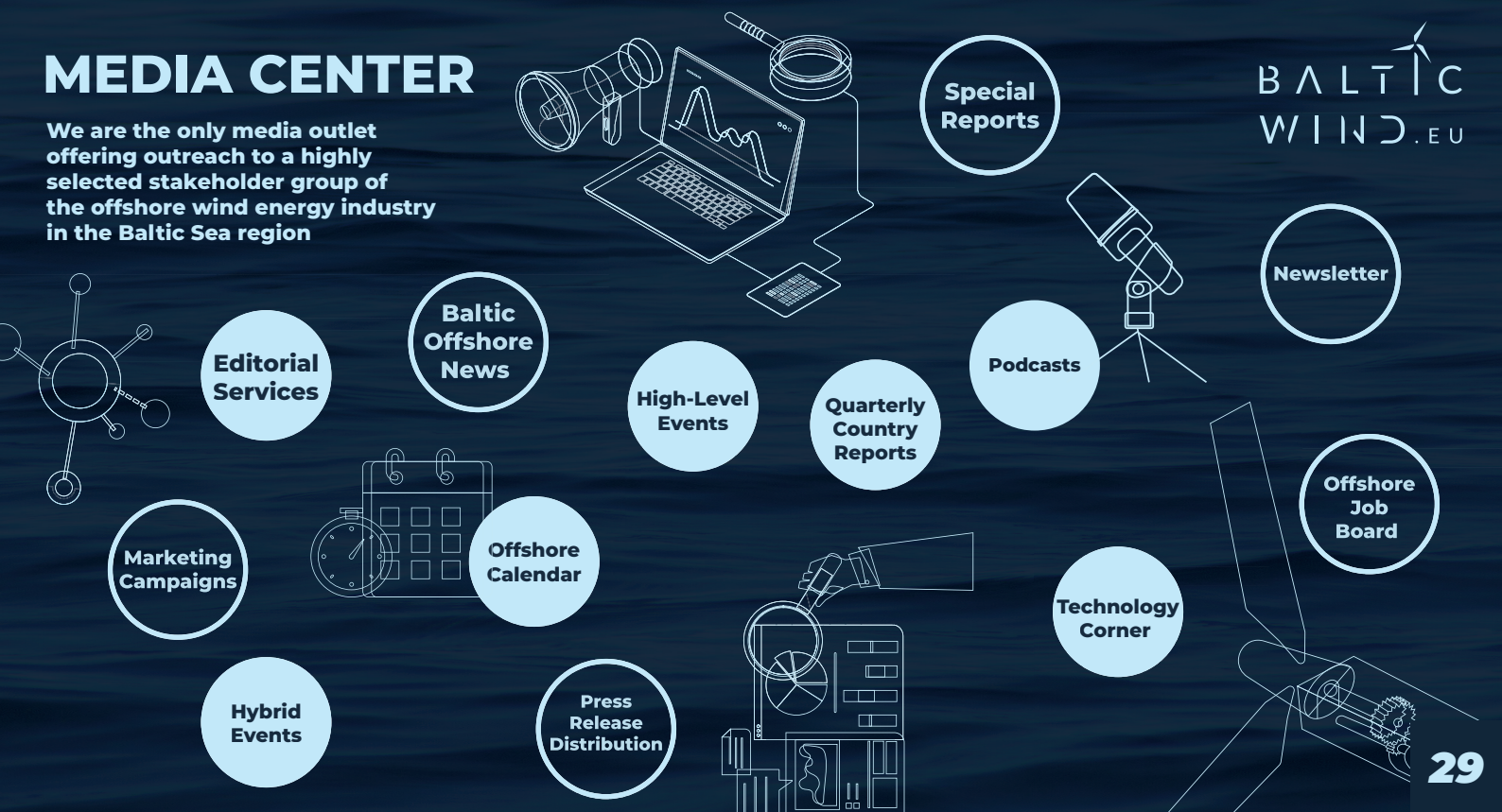
Recall that Lithuania plans to build two offshore wind farms with a capacity of 700 MW each. The regulations necessary for the development of offshore wind farms, including a major bill, are currently under development. Lithuanians hope that the offshore farm will cover about 25 percent of the country's energy needs.

Source: LinkedIn/LVEA

Patrycja Rapacka

MEDIA CENTER

We are the only media outlet offering outreach to a highly selected stakeholder group of the offshore wind energy industry in the Baltic Sea region



BALTIC WIND.EU

Litgrid: We are preparing for integration of offshore wind into the Lithuanian grid

31/03/2022

Lithuania's electricity transmission system operator has summarised 2021 and published a set of financial statements. Litgrid reports that they have successfully met their targets for electricity supply reliability and strategic project execution. Litgrid is also preparing for the integration of offshore farms that will appear in the Baltic Sea.

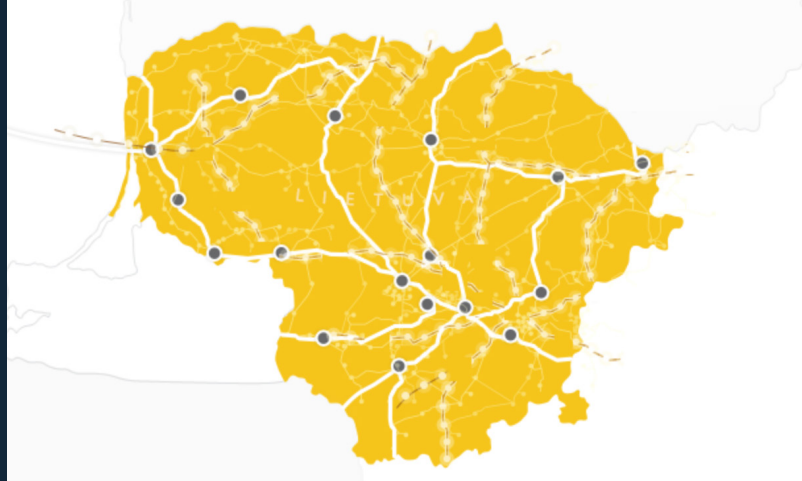
According to audited figures, Litgrid's revenues in 2021 were €270.6 million, 30 percent higher than in 2020. EBITDA amounted to EUR 46.2 million and was 11 percent lower than in 2020. The company's net profit was €20 million, 25 percent lower than in 2020, the release reads.

One of the most important works in the past year was the completion of the LitPol Link expansion project, which resulted in a ready synchronous power connection with Continental Europe. With the completion of the project, Litgrid successfully tested the Polish support system – Lithuanians made sure that strategic partners in Poland would help in case of need.

” *“The security of Lithuania's electricity transmission system is now assured”, the operator states.*

The operator will continue to implement synchronization projects this year, including the Harmony Link marine connection to Poland and the installation of synchronous compensators. Litgrid will also test the complete isolation of the Lithuanian electricity system.

Synchronization was completed for 6 of 20 projects, more than 40 percent of all necessary work. The Baltic countries plan to join the Continental European synchronous area in 2025.



” *“As we prepare for synchronization, we are conducting parallel research and projects that lay the foundation for the energy of the future. We are preparing for integration of offshore wind energy into Lithuanian grid and for development of other renewable energy sources”, comments Rokas Masiulis, CEO of Litgrid.*

Lithuania assumes that the planned offshore wind farm of up to 700 MW will consist of 43- 87 wind turbines of 8-16 MW and 140-300 m height. The plan is also to build a second wind farm with the same capacity – 700 MW.

Last year, Litgrid was the first in the Baltic States to connect a 1 MW pilot battery to the transmission grid, testing its potential not only for balancing electricity production and consumption.

In the past year, Litgrid also signed a contract for the purchase and installation of three synchronous compensators. These devices are designed to ensure reliable grid operation when a large portion of the electricity consumed in the system is generated by RES.

Source : Litgrid

Lithuanian Seimas gives green light for an offshore wind farm in the Baltic Sea



31/03/2022

On 31 March 2022, the Seimas of Lithuania adopted laws on offshore wind energy development in the Baltic Sea. As a result, they gave a green light for the construction of the first offshore wind farm in Lithuania, reports the Lithuanian Ministry of Energy.

It is now certain – the first RES auctions for an offshore wind farm in Lithuania will take place in the second half of 2023. The Ministry of Energy is currently consulting with potential developers of offshore wind parks.

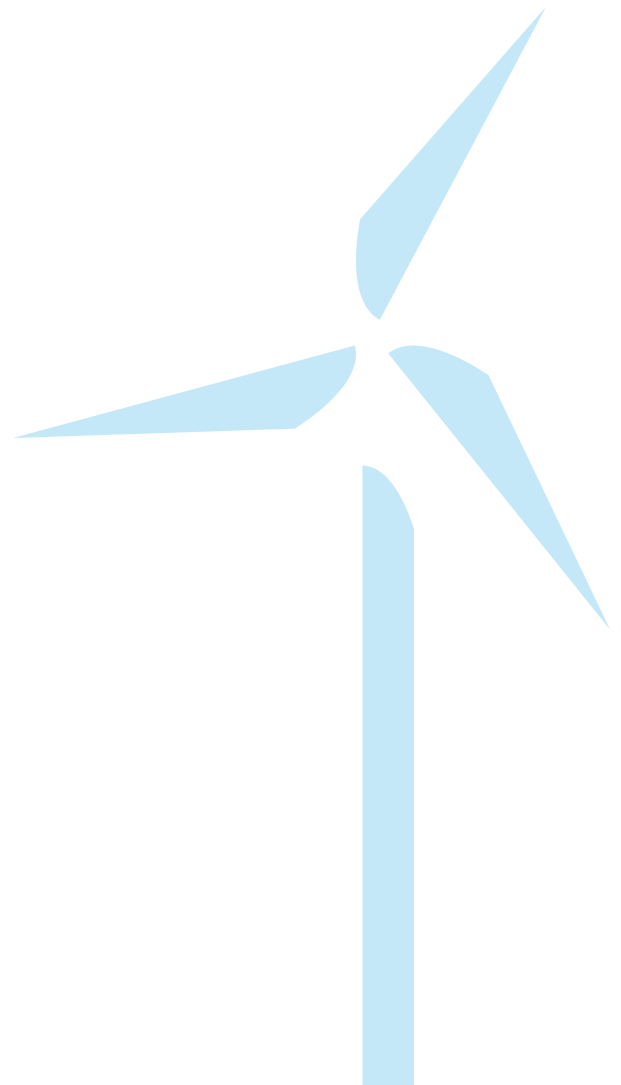
The adopted amendments to the RES and electricity act provide for an auction to be held next year for the benefit of a wind farm developer, making more specific technical conditions for the installation of a wind power plant, and rules for setting prices for energy produced in the future. The package of regulations will enter into force once signed by the President of Lithuania.

” *“The first wind farm in the Baltic Sea is one of the most important projects for Lithuania’s energy independence. This will significantly increase domestic electricity production from renewable energy sources and thus reduce Lithuania’s dependence on electricity imports”, said the Minister of Energy, Dainius Kreivys.*

The first energy from a wind farm in Lithuania will flow in 2028. It is estimated that a 700 MW offshore wind farm in the Baltic Sea could generate up to 2 TWh of carbon-free electricity annually. This would meet up to a quarter of Lithuania’s energy needs.

It is estimated that in total at least 4 offshore wind farms could be built on the Lithuanian coast. The capacity and timing of the remaining parks will depend on future studies and completion of infrastructure and other preparatory work. The Lithuanian government has already initiated proceedings related to, among other things, EIA as well as seabed and wind speed surveys.

Patrycja Rapacka



BALTIC
WIND.EU



Lithuania Q2 2022 Quarterly Country Report coming in July 2022!

BalticWind.EU is the only pan-Baltic media platform dedicated to covering offshore wind.

Our tailor made advertising solutions will help you reach the right targets.

Contact: business@balticwind.eu

All graphic content comes from private sources, government and investor sites as well as pixabay.