GOVERNMENT OF MALTA
MINISTRY FOR THE ENVIRONMENT,
ENERGY AND ENTERPRISE

THE ENERGY & WATER AGENCY

National Policy for the Deployment of Offshore Renewable Energy

A DRAFT FOR PUBLIC CONSULTATION

The Maltese Government is committed to developing an offshore Renewable Energy industry supporting the transition towards a climate neutral island by 2050, creating new job opportunities, while delivering economic opportunities for all.

Foreword

The impact of recent geopolitical events on the European energy market has accelerated our decarbonisation ambitions and emphasised the requirement for transitioning to clean and renewable energy. The deployment of offshore renewable energy is at the core of delivering the European Green Deal, and the Maltese Government is committed to developing an offshore renewable industry supporting the transition toward a climate-neutral island by 2050. It is essential to ensure that industry, both locally and overseas, is ready to contribute to the delivery of renewable energy while also maximising the economic benefit which will arise from the availability of abundant clean, renewable energy. This will eventually create new jobs while delivering economic opportunities for all Maltese residents.

The National Policy for the Deployment of Offshore Renewable Energy aligns with the "EU Strategy on Offshore Renewable Energy". This Policy will guide the participation process of various economic players, administration and citizens who will be putting forward their contributions. Our collaboration with stakeholders in the sector will lead to a robust Policy aimed at tackling barriers, supporting innovation and maximising economic benefits for Malta.

The announcement of such a policy is an essential step towards developing new, regionally economic opportunities based on Offshore Renewable technologies. I very much look forward to working with colleagues across government and industry over the coming months as we deliver real long-term benefits to both the economy and society.

We are committed to being even more ambitious than before. The magnitude of change required to meet our targets is unlike anything we have seen so far. We must aim high and ensure that this transition is also sensitive to the possible impacts on people and businesses.

I am grateful to everyone who has taken part in the process that has led to this policy publication. This is only the beginning of Malta's offshore journey. We are faced with the opportunity of a lifetime to create a prosperous green future for future generations.

We can continue working collaboratively to turn this aspiration into a reality in the years to come.

Miriam Dalli
Minister for Environment, Energy, and Enterprise

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1. Introduction

1.1 Over the past two years, there has been a notable crisis unfolding in the energy markets. The economic recovery from the pandemic coupled with the Russian invasion of Ukraine has resulted in an unforeseen steep increase in energy prices. This situation has revealed Europe's reliance on Russian energy sources and has emphasised the urgency of seeking alternative sources of energy including the acceleration of adoption of renewables. Amongst other measures, this necessitated the acceleration of permitting procedures and the reconsideration of projects which, until recently, were deemed impractical.

1.2 While it is widely recognised that the Maltese Islands are limited by their spatial ground area of 316km^2, the country through its strategic geographical location in the centre of the Mediterranean Sea, has a potential Exclusive Economic Zone (EEZ) of over 70,000km^2, which is much larger than its land area. This makes Malta, as the smallest EU member state, suitably positioned to become one of the main beneficiaries of the blue economy driven by offshore renewables. The development of an offshore renewable energy policy aims at strengthening Malta's overall energy policy, contributing further to the country's already successful path in achieving a 'greener' balance between energy-use and impact on the environment. This evolution will ensure further diversification in the local energy mix and will also support the country to meet its ever-increasing challenging targets and objectives for achieving an affordable, reliable and clean source of electricity. Furthermore, it will present an opportunity for job creation and economic growth.

1.3 Energy harnessed through offshore renewables may contribute towards the decarbonisation of the power sector in line with the European Union's (EU) net zero target for 2050. The investment in offshore renewables can drive a blue economy, which is purely based on sustainable use of ocean resources. Tapping into this sector can also provide significant socio-economic opportunities including the creation of green jobs, improved local value chains, better quality of life and enhanced synergies among blue economy players.

1.4 The European legislative framework strongly promotes the deployment of renewable energy and requires the setting of mandatory national targets in order to achieve at least 42.5%[1] share of renewables in the EU's final energy consumption by 2030. The Governance Regulation[2] together with the Renewable Energy Directive[3] mandate that each country sets out pathways to reach sectoral targets by means of National Action Plans. The plans have to define the technology mix scenario, the trajectory to be followed and the measures and reforms needed to overcome the inhibiting barriers, to facilitate and ensure the full deployment of renewable energy technologies.

1 On 30 March 2023, the European Parliament and the Council reached a provisional agreement to raise the binding renewable energy target to at least 42.5% by 2030.

2 Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council.

3 Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast)

1.5 Electricity generation from renewable energy sources is an important element of the Maltese energy strategy. The uptake and installation of renewable energy installations, in particular solar thermal and photovoltaics, has flourished.

1.6 In 2021, the overall energy generated from photovoltaic installations in Malta accounted for nearly 9.4%[4] of the overall electricity demand. Furthermore, by the end of 2022 the overall nominal capacity of photovolatic installations, exceeded 221.2MW[5]. This figure is at par with both the capacity of the Interconnector and that of the D4 generating plant at Delimara, albeit operating at a much lower capacity factor[6]. In 2020, the Maltese government launched the largest Renewable Energy support package, earmarking financial aid for up to 51MW of capacity. Such measures and mechanisms have proven essential to support the increase of renewable energy generation on the Islands.

1.7 The Low Carbon Development Strategy (LCDS) and the updated National Energy and Climate Plan (NECP) due in 2023/2024, should be reflecting a higher renewable ambition in line with the Fit-for-55[7] and REPowerEU[8]. A higher ambition will require the consideration of alternative technologies; in particular offshore wind and solar.

1.8 Within the context of the NECP adopted in 2019, it was confirmed that there were inhibiting factors to onshore wind energy. These factors are still there today. Similar restrictive factors are present for the possibilities of fixed bottom offshore wind technologies. The few nearshore coastal and reef locations with depths of under 50m constituting potential areas for the development of fixed bottom wind farms were, and still are, burdened with significant environmental and economic concerns.

1.9 Although other renewable technologies may be plausible in the long term, it is very likely that in the short to medium term, only floating offshore wind and solar energy would be technically feasible for Malta. Hybrid systems comprising of both offshore wind and solar technologies may also be considered. Although not precluded, wave and tidal energy potential for Malta is considered very limited.

1.10 Most of the areas which could potentially host offshore renewable energy development have deep bathymetry and therefore, sea-bed mounted turbines are not suitable. This leaves the option of floating structures as the most appropriate technical option for offshore renewable generation in Maltese waters.

4 Eurostat-https://ec.europa.eu/eurostat/cache/infographs/energy_portal/enviz.html
5 Source: Enemalta
6 The capacity factor of an electricity generation plant is the number of full load hours of operation in a year.
7 European Parliament, 'Briefing: Towards Climate Neutrality', https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733513/EPRS_BRI(2022)733513_EN.pdf, Accessed: 07/08/2023
8 European Commission, 'REPowerEU: Affordable, secure and sustainable energy for Europe', https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en, Accessed: 07/08/2023

1.11 Significant technology advances in offshore wind floating technologies have now opened a possible local alternative for feasible offshore renewable projects located further away from the coast. Compared to onshore/near shore wind farms, such projects should have less impact on the environment and possibly inflict less burden on different economic activities competing for the same sites. Larger offshore wind structures capable of operating at high- capacity factors, advancement in floating technologies and economies of scale in production, result in lower Levelized Cost of Electricity (LCOE), and positions offshore floating as a reasonable option for harnessing renewable energy in Malta. This offshore policy follows up on the statement in the NECP (2019) whereby the government pledged to 'continue to monitor developments in floating solar or wind' and act accordingly 'in view of their potential in the longer term'.

1.12 In 2021, in line with the Regulation on the Governance of the Energy Union and Climate Action (EU/2018/1999), Malta communicated its national LCDS until 2050. Renewable Energy (RE) installations are an essential component in the LCDS in view of their impact on the reduction of greenhouse gases when compared to their fossil-fuelled counterparts. Backed by the advances registered in worldwide floating offshore technologies the LCDS considered offshore floating renewables on the high priority list of implementations in Malta.

1.13 With these directions and commitments in mind what will be proposed moving forward will ensure that Malta's offshore renewable energy policy is fully aligned with LCDS and NECP's objectives.

1.14 With the introduction of this offshore renewable energy policy, the Maltese government is setting the foundation to venture into a new arena of renewable energy. This initiative will complement the success of onshore photovoltaic rooftop and solar farms, contributing further to the 'green' energy transition in line with the EU legislative packages of the European Green Deal[9], Fit-for-55 initiatives and the REPowerEU plans.

[9] European Commission, 'A European Green Deal: Striving to be the first climate-neutral continent', https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en, Accessed: 07/08/2023

2. Title

2.1 This policy will be known as the National Policy for the Deployment of Offshore Renewable Energy and shall remain in force in its entirety unless withdrawn or suspended by the Government of Malta. The Government of Malta will undertake a review of this policy when and as required in view of any technological developments or any changes taking place in any related policy or goals.

3. Policy objectives

3.1 The scope of this Offshore Renewable Energy policy is to enable the Maltese Government to exploit the offshore potential in the country's best interest and to meet the following objectives:

- Support the implementation of offshore renewable projects, mainly wind and solar in areas lying beyond the territorial waters and within Malta's potential EEZ with focus on the sea area within 25NM from the baselines or the median line, whichever is closer to the shore.
- To promote investment in renewable energy infrastructure. This shall be done in a manner to reduce regulatory and financial risk.
- To provide a comprehensive framework to promote investment in renewable energy. The development of this policy includes an initial assessment of the wind resource and an assessment of the bathymetry to delineate areas earmarked for potential development.
- To effectively incentivise investment promotion towards renewable energy resources in line with maritime spatial planning and management of maritime resources.
- To direct potential investors towards efficient renewable technologies to increase the deployment of green energy technologies and shift away from carbon-intensive sources.
- To promote research, development and innovation in the offshore renewable energy sector.
- To ensure that offshore energy potential supports the country's energy security, by promoting the diversification of the energy mix while further reducing the dependence on imported energy and fossil fuels.
- To generate economic growth by creating the platform for new green employment opportunities and also the possibility of creating jobs in various areas including in manufacturing, construction, operation and maintenance of renewable energy infrastructures.
- To promote the development of coastal and port infrastructure, and supply chain facilities to support the services, transport, operation and maintenance activities associated with offshore technologies.
- To complement the regulatory and implementation framework which will support developers in materialising their offshore projects, reducing the time from concept to commissioning by assisting directly through effective governance and monitoring.

Notwithstanding that this policy is intended to support the development of offshore renewable energy installations beyond the territorial waters, it does not preclude that support will also be provided for offshore renewable projects within the territorial waters or within Malta's potential EEZ under a separate framework.

4. Consultation Process

4.1 An offshore renewable energy project that will essentially be occupying a sea area for the production of energy, will be in competition with other commercial activities already in operation or else potentially to come into business in the future. It is also recognised that if we are to tap into the potential of our renewable offshore resource, we must improve our understanding of the impact such developments may have on Malta's valuable marine environment and activities.

4.2 In this regard the Ministries, Authorities and entities listed in Appendix B have been consulted to provide a preliminary assessment of the proposed zones to ensure that they avoid or minimize conflict with other uses or interests. It is worth noting that this does not forego the need for further detailed studies once a project proposal is defined.

5. General Framework Structure for Offshore Projects

5.1 The development of renewable offshore projects is a very challenging endeavour, requiring a lot of resources and involving a multitude of stakeholders. Adopting the right framework from day one to address the critical issues that influence the speed of project development, the investment climate and finally the cost of the projects, is crucial for the effective promotion of such an energy development.

5.2 Different countries developed diverse frameworks to address the various stages of the project lifetime starting from its conception, moving to planning and operation, until finally closing at the decommissioning stage. While all contexts may be country-specific, the frameworks need to effectively guide potential investors to answer the following main questions namely:

i. Which are the sites best suited to host offshore renewable energy projects?

ii. Who allocates the sites for the offshore developments?

iii. What subsea rights are granted to project investors?

iv. Who carries out the offshore data measurements and geotechnical surveys?

v. Who carries out the necessary environmental and project development studies?

vi. Which licensing regimes are followed?

vii. How many and what kind of permits are necessary for the construction and operation of the offshore development?

viii. Who issues these permits?

ix. Who is responsible for the certification and the health and safety guidelines during the different stages of the project?

5.3 A general representation of the lifespan of an offshore renewable project is shown in **Figure 1** below:

Figure 1: Lifespan of an offshore renewable energy project

5.4 The success of any offshore development initiative lies on the correct establishment of the best effective framework. Given that these are based on the concepts of sustainable development, they are likely to put Malta at the fore in terms of harnessing the market opportunities presented by offshore renewable energy to achieve economic development, growth and jobs.

5.5 This activity has to be done in the context of increased awareness, opportunities and societal benefits of developing offshore renewable energy, keeping in mind, the need to incorporate measures to eliminate or minimize adverse impacts on the rich marine environment and its resources, alongside any developments.

6. Challenges

6.1 Without any doubt, building and operating offshore projects is considerably more expensive than onshore ones. On the other hand, taking as an example one specific technology such as wind turbines; wind conditions are typically better out at sea with higher wind speeds and more stable wind conditions, than on land. The primary challenges that exist in any offshore renewable energy power deployment relate to a number of elements which need to be factored in when looking towards the commercialisation of such a sector initiative.

6.2 These challenging aspects may be even more significant for very small countries with limited related industries and port facilities like Malta. Challenges range from resource availability, increased competition amongst various economic sectors, subsea cabling, and operation logistics. Treatment of conservation areas, oil/gas exploration, network connection and operation, and reinforcement of network infrastructure, also play an important role in any offshore assessment exercise. Another challenging aspect is related to issues of security during both the project construction and operation periods. Finally, the eventual decommissioning of any offshore plant at the end of its operational lifetime may also present challenges which need to be addressed and factored into the project plan. In this respect, ensuring circularity of materials following the life cycle of the development is also important for the overall sustainability of the project.

6.3 Introducing large capacities of offshore generation - particularly of such an intermittent nature - into a relatively small power system as that of Malta requires detailed in-depth considerations and reliable integration to the grid.

7. Global and European Offshore Wind

7.1 While the Maltese offshore policy will not be limited to one specific technology, it is expected that major developments will initially take place in offshore wind technology.

7.2 Globally, wind energy is accepted as one of the most developed, cost effective and well-proven renewable energy technologies to meet the ever-increasing electricity demands in a sustainable manner. Wind is already meeting around 15% of the continent's electricity and the International Energy Agency (IEA) expects wind to become the number one source of power generation in Europe by 2027[10]. While onshore wind energy technologies have nowadays reached a stage of large-scale deployment and have become price competitive when compared to fossil fuel-based electricity generation, exploitation of offshore wind energy is yet to reach a comparable scale.

7.3 In 2021, 93.6GW of new wind power capacity was added worldwide. This increased the cumulative total installed global wind capacity to 837GW. This figure signifies a growth of 12.4% compared to 2020. The offshore wind market status at end 2021 shows that over 57.2GW of offshore wind capacity has already been installed around the world. The main contribution to this figure comes from China with 48%, followed by the United Kingdom (UK) at 22%. The year 2021 was a record year for deployment with 21.1GW of new projects commissioned. Once again the leader in this deployment was China with 80% of the installations followed by the UK at 11%[11]. The global generating capacity potential of the project pipeline for all offshore wind energy projects reached 368GW in 2021[12].

[10] Wind Europe, 'Wind energy today', https://windeurope.org/about-wind/wind-energy-today/ , Accessed: 07/08/2023
[11] GWEC, 'Global Wind Report 2022', https://gwec.net/wp-content/uploads/2022/04/Annual-Wind-Report-2022_screen_final_April.pdf
[12] US Department of Energy, 'Offshore Wind Market Report: 2022 Edition', https://www.energy.gov/sites/default/files/2022-09/offshore-wind-market-report-2022-v2.pdf

7.4 In recent years offshore wind has proven its maturity with drastic cost reduction and with its rapid pace of deployment especially in the markets of Northern Europe and mainland China. The European offshore wind industry has become more attractive following the number of large wind farm projects being installed in the North, Baltic and Irish seas. These areas have the benefit of obtaining high productivity with wind speeds averaging 10m/s or higher, and the availability of low sea depths (<30m) at long distances from the shore. A map showing the European Offshore Wind resources over open sea at various heights above sea level is shown in Appendix A. The targets for offshore wind in the EU are 60GW by 2030 and 300GW by 2050[13]. **Figure 2** shows the global offshore wind installed capacity outlook by 2050 by region[14].

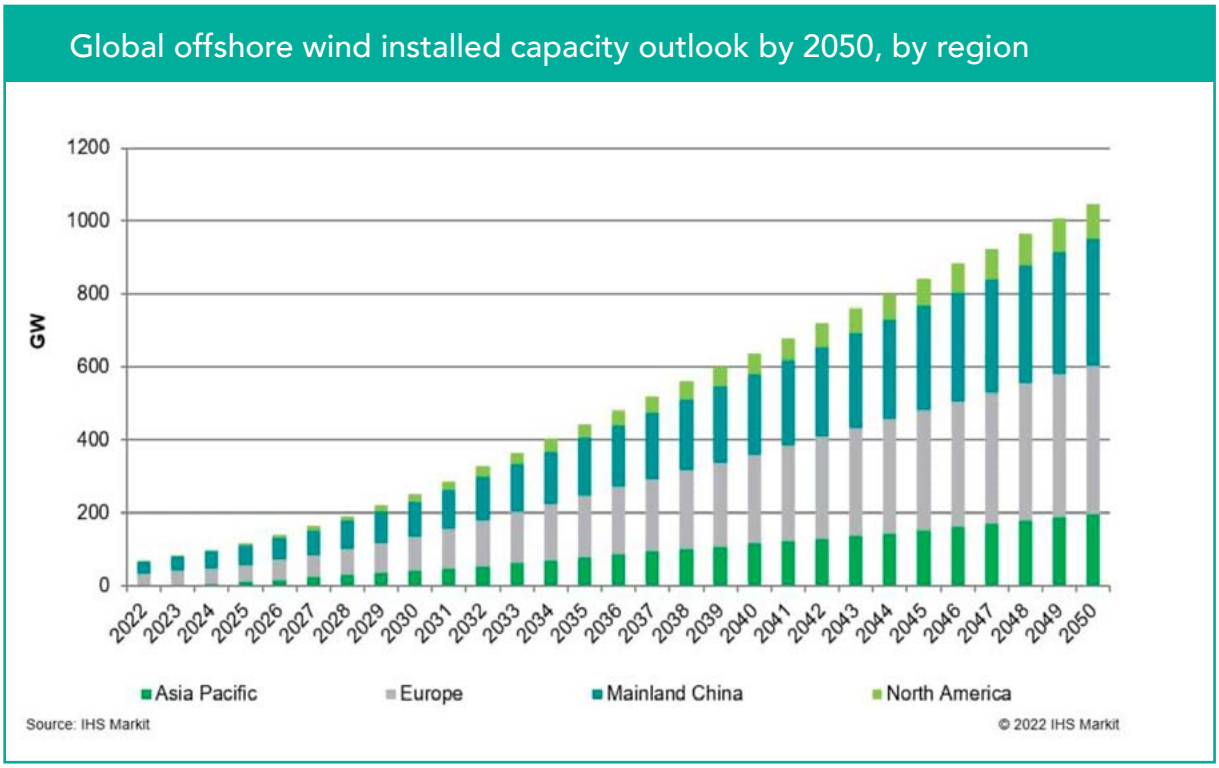


Figure 2: Global offshore wind installed capacity outlook by 2050

7.5 When it comes to floating offshore developments, the global reported figures are still low. The total global floating offshore wind energy capacity by the end of 2021 was 123.4MW with almost half of the amount, namely 57.1MW of new capacity coming online in 2021. Although the trend is encouraging, it is evident that while the technology is available, it is still considered less competitive than alternative green technologies. Nevertheless, looking ahead, it is positive to note that the overall global floating offshore wind energy project pipeline now stands at around 60.8GW thanks to several new projects in South Korea, Brazil, the UK and Australia beginning their planning phase during 2021[15].

13 EU Communication: An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future -COM/2020/741 final

14 S&P Global, 'Mapping policy and legal framework for the offshore wind energy development' https://www.spglobal.com/commodityinsights/en/ci/research-analysis/policy-and-legal-framework-for-the-offshore-wind-energy.html, Accessed: 07/08/2023

15 US Department of Energy, 'Offshore Wind Market Report: 2022 Edition', https://www.energy.gov/sites/default/files/2022-09/offshore-wind-market-report-2022-v2.pdf, Accessed: 07/08/2023

7.6 Floating offshore wind offers unique opportunities for Europe. Apart from the fact that if properly planned and designed, these can have a lower impact on the environment when compared to onshore projects; floating turbines can produce electricity further offshore and in deeper waters than bottom-fixed turbines. This opens up offshore wind for countries that don't have shallow waters. Norway is presently building an 88MW wind farm while France will have four small projects of around 30MW each up and running within 2 years. The total capacity of floating wind turbines in Europe is expected to reach 330MW by 2024[16].

7.7 All this activity and ambition is reflected in recently announced floating wind targets for 2030 in various countries. Greece aims at 2GW by 2030, Spain 1-3GW and the UK 5GW. Italy is considering a 2030 target of 3.5GW while Portugal is looking to auction 3 sites which could host up to 2GW. Scotland has recently awarded seabed development rights for a massive 15GW of floating projects while France and Norway are finalising their large-scale auctions. Taking all this ambition into account, it is not unreasonable to expect that Europe will have over 10GW of floating offshore wind in operation by 2030[16].

7.8 While the cumulative offshore wind energy numbers look promising, it is believed that there needs to be an eleven (11) fold scale-up factor in deployment by 2030 if the 1.5^{o}C world threshold is to be followed.[17] This is a challenge which has to be undertaken in the background of a highly interconnected energy system characterised by increased complexity, that is struggling to meet the pressures of transition, in the midst of geopolitical tension with the wind industry facing higher costs.

7.9 Wind energy has a primary role and contributes massively to the energy transition. Still, certain barriers like permitting, issues with grid connection and grid investment need to be addressed to pave the way for further growth in the implementation of this clean and green technology.

7.10 In the coming 2-3 years, the implementation of the offshore strategy will determine whether the EU sets the right framework to meet the 25-fold increase of capacity expected by 2050[18]. In the short term up to 2030, large uncertainties remain on the ability of Governments to expedite permitting, including the coordination of their maritime spatial plans and on the pace of grid development for both onshore and offshore projects.

7.11 Analysis indicates that the future growth of offshore renewable (wind) power in Europe, and the speed of growth will be driven by two (2) main factors above all else:

- The cost competitiveness of energy production by the offshore wind industry.
- The level of policy support for the development of renewable energy in Europe.

16 Vidi Energy, 'Europe can expect to have 10GW of floating wind power by 2030',g https://vidi.energy/news/europe-can-expect-to-have-10gw-of-floating-wind-power-by-2030/, Accessed: 07/08/2023

17 IRENA, 'World Energy Transitions Outlook 2022', *www.irena.org*

18 Wind Europe, 'Press releases 19 November 2020', https://windeurope.org/newsroom/press-releases/industry-ready-to-deliver-on-eus-plan-for-25-fold-increase-in-offshore-wind/, Accessed: 07/08/2023

8. Offshore Solar

8.1 Blessed by the abundance of solar radiation received by the Maltese Islands and its waters, the possibility of looking at solar PV technology offshore is also an area of interest for Malta. A large number of installation projects using floating photovoltaic systems (FPVs) technology have been operated in water bodies such as lakes and dams/reservoirs. However, deployment of FPVs offshore is still limited because of the existing characteristics of marine/sea environments which are different from onshore conditions, such as wind loads and wave loads.

8.2 The offshore renewable energy policy is technology neutral. As such, any technology which meets the criteria will also be considered on the merits of its cost effectiveness, technology readiness, and suitability of operation.

9. Renewable Energy Sector in Malta

9.1 The current electrical energy mix in Malta consists of 70% local generation from gas-fired plants, 20% direct imports over the Malta-Italy Interconnector, and 10% of local generation from renewable energy sources; mainly small-scale rooftop PV installations.

Malta's regulatory and policy framework on renewable energy can be divided into the following:

- Binding Legislative Acts and Subsidiary Legislation (SL);
- European Union (EU) Directives, Regulations and Frameworks;.
- International treaties; and
- Local Policy which signals the political will of the Maltese Government in achieving its targets. These include the National Energy and Climate Plan, the Low Carbon Development Strategy, the R&I Strategy for Energy and Water, and the Solar Farm Policy.

9.1 Renewable energy in Malta is regulated by the following Acts and Subsidiary Legislations:

- The Regulator for Energy and Water Services (the REWS Act) chapter 545 of the Laws of Malta:
- SL 545.27: Feed-in Tariff Scheme (Electricity Generated from Solar Photovoltaic Installations) Regulations
- SL 545.29: Sale of Electricity Generated from Cogeneration Units Regulations
- SL 545.30: Dispute Resolution (Procedures) Regulations
- SL 545.32: Competitive Bidding Rules for Renewable Sources of Energy Installations (capacity between 400kWp and less than 1000kWp) Regulations
- SL 545.33: Energy Efficiency Regulations
- SL 545.34: Electricity Regulations
- SL 545.35: Promotion of Energy from Renewable Sources Regulations
- SL 545.36: Guarantees of Origin of Electricity from High Efficiency Cogeneration and Renewable Energy Sources Regulations
- SL 545.37: Biofuels, Bioliquids and Biomass Fuels (Sustainability Criteria) Regulations
- SL 545.39: Competitive Bidding Rules for Installations Producing Electricity from Renewable Energy Sources Regulations
- The Climate Action Act 543 of the Laws of Malta
- The Environment Protection Act, Chapter 549 of the Laws of Malta

9.3 The EU's Renewable Energy Directive (EU) 2018/2001 (RED) and Energy Efficiency Directive 2012/27/EU (EED) as amended by Directive 2018/2002, have been reviewed to reflect the higher ambition presented by the Fit-for-55 package and the REPowerEU. The new Renewable Energy Directive[19] requires Member States to collectively ensure that the share of energy from renewable sources in the Union's gross final consumption of energy in 2030 is at least 42.5%. Member States shall also collectively endeavour to increase the share of energy from renewable sources in the Union's gross final consumption of energy in 2030 to 45% and set an indicative target for innovative renewable energy technology of at least 5% of newly installed renewable energy capacity by 2030.

9.4 EU regulation 2018/1999 on the Governance of the Energy Union and Climate Action (EUCA) Regulation was adopted in 2018. This established the legislative foundation, governance mechanism, strategies and measures to meet the targets of the energy union and the long-term EU greenhouse gas emission commitments. By 2021, Malta has already exceeded its 11.5% renewable objective for 2030 set in the first NECP, but now looks forward to embarking on initiatives to seek more ambitious targets for renewables. These targets together with plans and measures to achieve them shall feature in the update of the NECP due for submission by June 2024.

[19] At the time of writing an inter-institutional agreement has been reached on an EU Directive amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652

10. Maritime zones

10.1 There are two main maritime areas in which offshore renewable projects, primarily structures such as offshore wind farms, could be located. These are:

- Malta's territorial waters, which extend up to 12 nautical miles (NM) from the baseline; and
- Malta's potential EEZ.

10.2 This policy framework is aimed specifically on Malta's potential EEZ. In 2021, the Government of Malta enacted the Exclusive Economic Zone Act (Cap 625 of the laws of Malta). This legislation allows Government to designate, adjacent to Malta's territorial waters, EEZ areas within the limits of Malta's potential EEZ without prejudice to Malta's final EEZ designation. Government's preference is that any large-scale offshore renewable energy development would take place outside Malta's territorial waters in designated EEZ areas.

10.3 Government is currently discussing a Bill in Parliament which aims to amend 38 laws to regulate activities in exclusive economic zone areas or environment protection areas outside Malta's territorial waters. Most of the laws of Malta currently only apply up to the territorial waters and therefore it is necessary to extend the applicability of certain laws to exclusive economic zone areas or environment protection areas, in accordance with the provisions of the 1982 United Nations Convention on the Law of the Sea (UNCLOS). In this way, activities taking place in such areas can be regulated in the same manner as if they were taking place within Malta. In some of the laws, it was only necessary to give power to the Minister to make regulations for activities within exclusive economic zone areas or environment protection areas, if and when required. Such amendments to the legislation would give both Government and operators the necessary legislative framework for conducting the operations.

10.4 In addition, minor amendments in accordance with UNCLOS are also being proposed to the Exclusive Economic Zone Act (Cap. 625), which is the enabling act for the licensing and regulation of activities in Malta's Exclusive Economic Zone including the designation of exclusive economic zone areas and environment protection areas.

10.5 In May 2022, the Maltese Government through the Ministry for Finance and Employment issued a *Preliminary Market Consultation (PMC) for The Proposal of Economic Activities within Malta's Exclusive Economic Zone*[20]. The outcome of this consultation and the submission of interested economic operators was assessed. This exercise enabled the Government to gauge the interest of potential investors to undertake activities and projects in the exclusive economic zone area in line with the rights and obligations provided under UNCLOS and the Malta EEZ Act. Following the positive response from economic operators to the PMC, the Government will be preparing a contracting procedure that would address a preferred activity or activities within the EEZ designated areas.

11. Maritime Spatial Planning

11.1 The main legislative act for development in Malta is the Development Planning Act of 2016 (Cap. 552). The Maritime Spatial Planning (MSP) Directive has been transposed into Maltese legislation through subsidiary legislation, 'Maritime Spatial Planning Regulations' (S.L.552.27) under the Development Planning Act. In essence the legislation states that the Strategic Plan for Environment and Development (SPED) and any replacement spatial strategy shall constitute the Maritime Spatial Plan for Malta. The competent authority for different provisions and purposes of the Maritime Spatial Planning regulations is the Planning Authority (PA). Any development in Malta and within its territorial waters requires a development permit from the Planning Authority. Meanwhile, any promotion of large-scale renewable energy infrastructure should be done in a manner which minimises user conflicts, does not accelerate coastal erosion, protects biodiversity and cultural heritage, safeguards landscapes while maintaining their visual and public access, and increases resilience to climate change impacts.

[20] https://eezmt.com/wp-content/uploads/2022/05/Preliminary-Market-Consultation-Document-Final-EN.pdf

12. Main elements for the Development of Offshore Renewable Energy projects

12.1 In order to provide a comprehensive framework for the promotion of offshore renewable energy projects, the development of this policy included the following elements:

- Initial resource assessment and the preliminary sea and bathymetric assessment for the delineation of areas earmarked for potential development into a renewable energy project. The areas were identified after taking into account the spatial constraints listed in section 13.4 and the feedback provided during preliminary consultation with a number of institutional stakeholders;
- Identification of all the applicable statutory clearances;
- Identification of possible grid connection points for both offshore (if applicable) and onshore tapping;
- Identification of acceptable renewable technologies;
- Considerations of how the energy produced by the project will be commercialised;
- Security of offshore installations and confidentiality of the data collected during studies and surveys;
- Necessary ancillary facilities;
- Decommissioning.

The policy shall also be subject to a Strategic Environmental Assessment (SEA) to assess the environmental impacts of the range of development scenarios. The SEA shall be conducted in accordance with the SEA Directive 2001/42/EC.

13. Areas Identified for Offshore Renewable Energy around the Maltese Islands – Wind

13.1 Determining Malta's technical potential for offshore renewable energy, specifically for offshore floating wind energy, is linked to two main technical study requirements which namely relate to:

- The identification of appropriate areas for the deployment of renewable energy generation technologies; and
- The determination of the wind resource potential within the identified areas.

13.2 The Energy and Water Agency (EWA) has conducted a preliminary exercise to determine the technical potential for offshore wind energy generation from a spatial and technological constraint perspective. This study has examined the availability of zones which have minimal impact on competing uses within Malta's Territorial Waters and the sea area beyond the territorial waters and within 25NM from the baselines. This was combined together with 33-year modelled wind resource data to identify preferred zones. These are intended to guide prospective project developers towards appropriate sites. This will not, however, exonerate the project proponent from carrying out all relevant studies to assess the severity of any impacts on competing uses and the environment.

13.3 To identify the potential areas of interest, three (3) risk-based scenarios were analyzed by EWA. These risk-based scenarios differ in the level of spatial constraints being included in the mapping exercise. The "High-Risk Scenario" reflects the more conflicting influence a renewable energy project in the area will have on the current designated marine areas and related activities.

13.4 The spatial constraints considered in the potential studies include:

- Airport buffer zone and Harbour approaches
- Aquaculture farm boundaries
- Submarine cables and pipelines
- Exploratory oil wells and potential oil and gas prospects
- Fishing aggregation devices zones
- Low waterline (Coastal areas)
- Marine facilities
- Vessel Traffic Density
- No berthing zones

- Special Areas of Conservation (SACs)
- Special Protection Areas (SPA's)
- Spoil Ground and Trawling zones

13.5 In addition to the constraints mentioned above other factors related to the current technological limitations have been taken into consideration. These include bathymetry and distance from the shore. Additional constraints such as segments of vessel traffic density, fishing activity and special areas of conservation have been included with different degrees of risk significance under the three scenarios.

13.6 Areas classified with a critically high degree of risk significance have been defined as No-Go areas and as such were not included or recommended as available areas for large floating setups. Specific designated areas of this type include Airport and Harbour approaches, anchorage and waiting areas, aquaculture farms, submarine cable and pipeline buffer zones, and subcategory areas related to vessel traffic density, spoil grounds, special areas of conservation, special protected areas and bathymetry.

13.7 In order to minimize further the possible impacts of the offshore renewable projects on other competing economic sectors interested in the same areas, focus shall be on the "Low-Risk Scenario" outside the territorial waters. However, specific areas under the "Medium-Risk Scenario" which were excluded from the "Low-Risk Scenario" on the basis of vessel traffic density have also been taken into consideration under an "Extended Low-Risk Scenario" as potential sites subject to specific assessments performed by the relevant authorities. **Figure 3** shows the potential areas for offshore renewable energy development beyond the territorial waters with respective areas and indicative bathymetry under the Extended Low-Risk Scenario. The indicated areas have no bearing on the final designation of EEZ areas. This scenario excludes all areas having a constraint, excludes bathymetry below 50m or above 700m and includes vessel traffic density below 500 hours/km^2. **Figure 4** gives more details regarding the bathymetry around the zones identified as potential sites for offshore renewable energy projects.

13.8 It is to be underlined that the alternative scenarios studied have a higher impact on competing sectors. The "Medium-Risk Scenario" incorporates areas with marine route density up to 500 hours/km^2 and also incorporates trawling zones. The "High-Risk Scenario" looks at the maximum possible potential (amongst the three scenarios) so it also allows for additional traffic with marine route density extended to below 750 hours/km^2 and development within most of the Special Areas of Conservation (SACs). Notwithstanding this assessment, taking into account the outcome of the stakeholder and public consultation and any recommendations from the Strategic Environmental Assessment and/or any other relevant studies, the Government of Malta may restrict future calls for the development of offshore renewable energy projects to a subset of the indicated potential areas. These shall be identified in the relevant call.

13.9 The potential areas identified in the Extended Low-Risk Scenario have been identified following the exercise carried out by EWA and updated after consultations with main stakeholders. This assessment may be updated further following feedback which shall be gathered as part of the public consultation process.

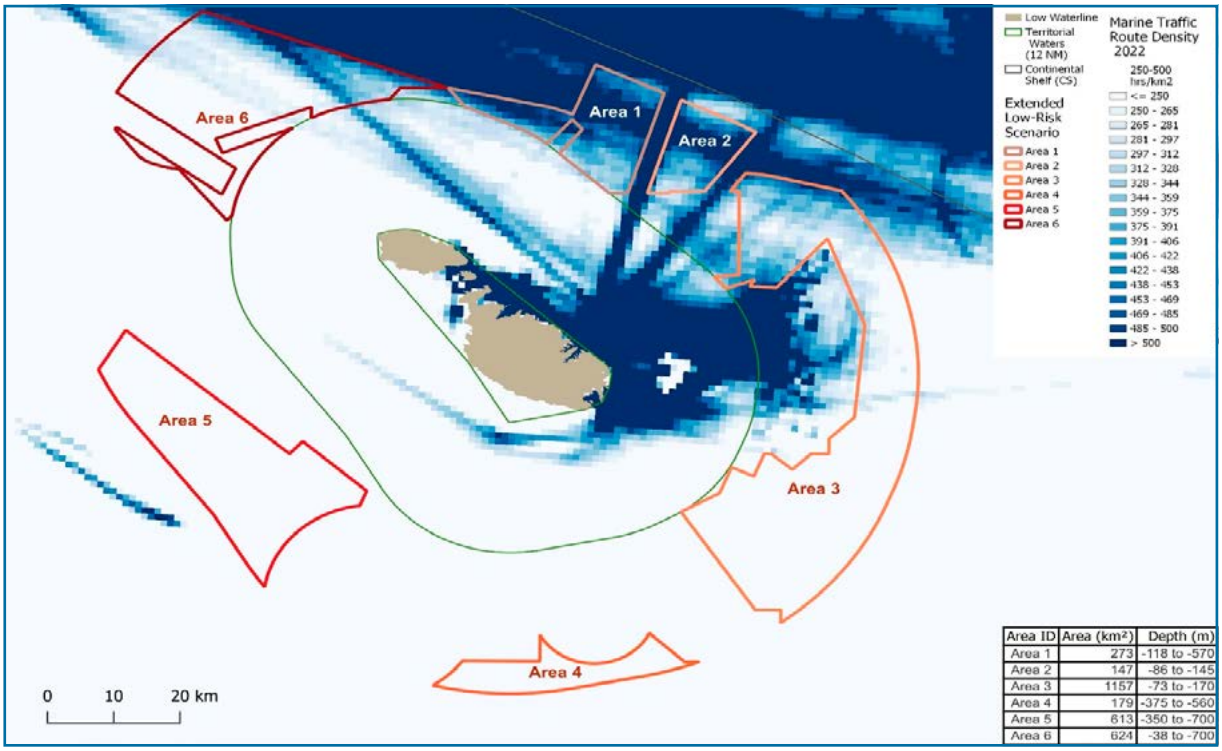


Figure 3: Extended Low-Risk Scenario.
Disclaimer: The indicated areas have no bearing on the final designation of EEZ areas

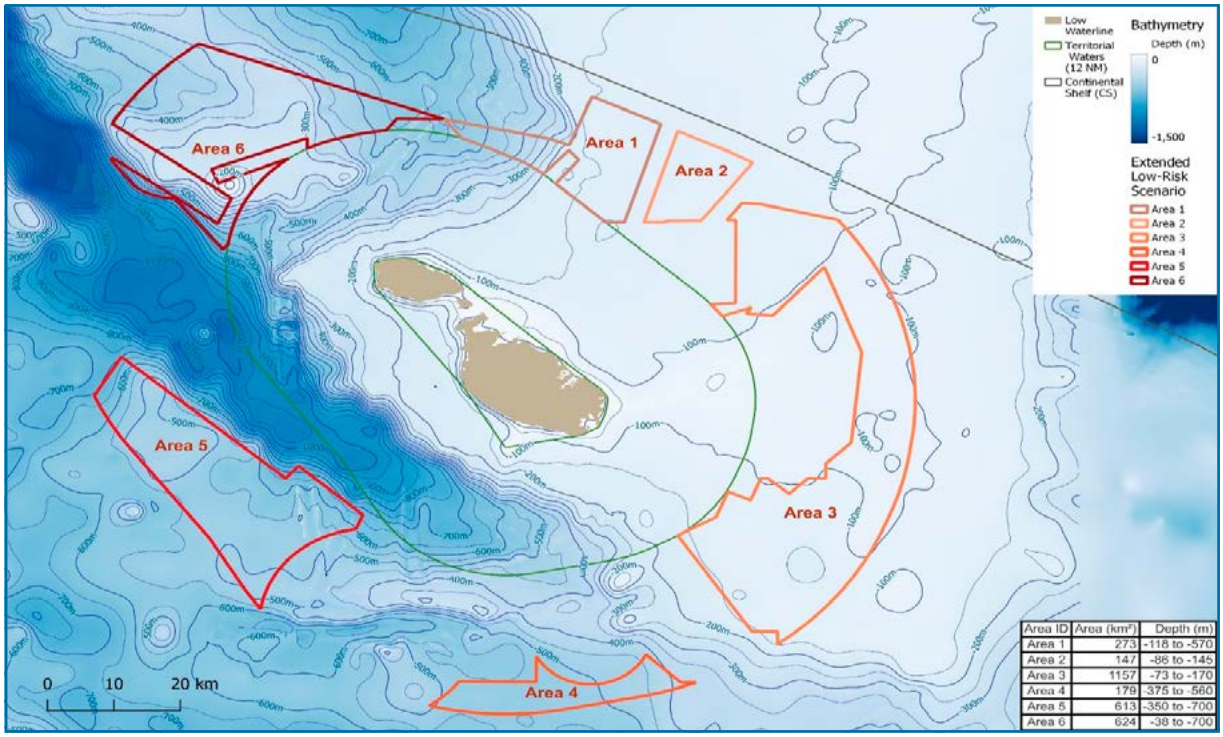


Figure 4: Bathymetry for Extended Low-Risk Scenario.
Disclaimer: The indicated areas have no bearing on the final designation of EEZ areas

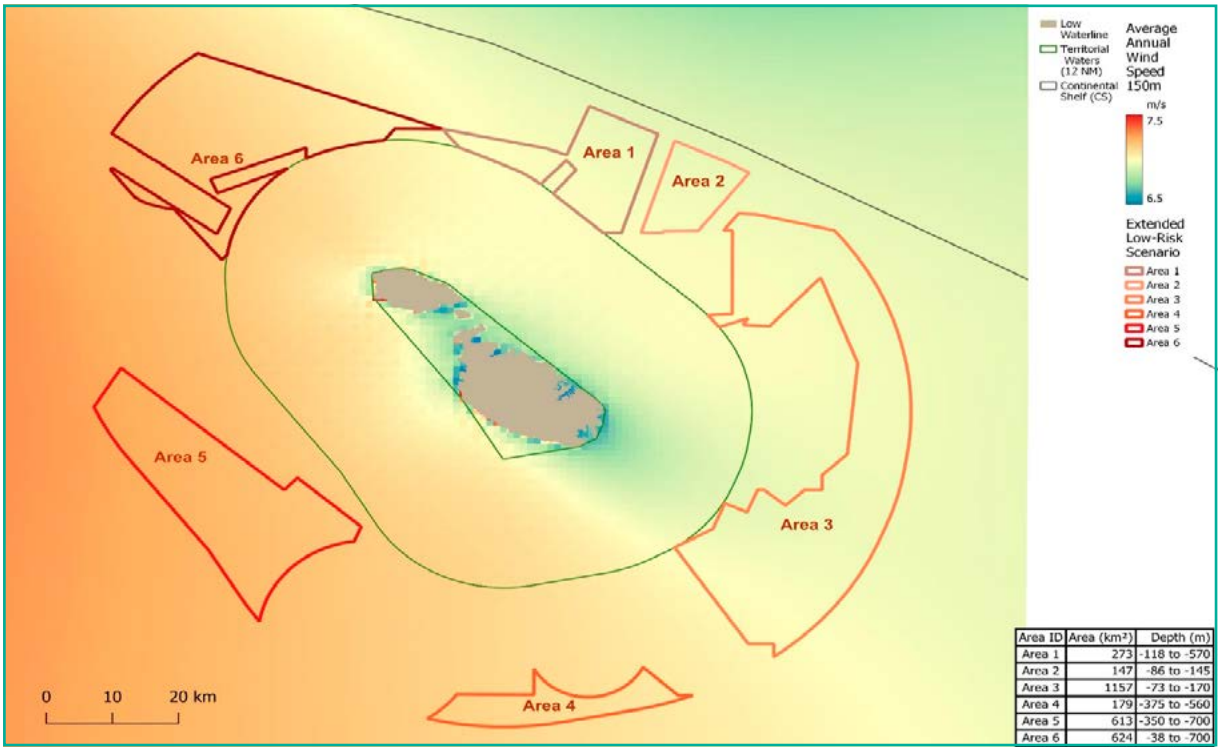


Figure 5: Wind Resource. Disclaimer: The indicated areas have no bearing on the final designation of EEZ areas

14. Wind resource data

14.1 Wind data covering specific years and sites in Malta was collected using wind resource measuring campaigns carried out by the University of Malta and the Ministry responsible for Resources using onshore wind masts. Nevertheless, feasibility studies of offshore wind projects must be based on accurate resource assessments at the project sites. Advances in measurement technologies have nowadays made it possible for accurate data to be acquired, extrapolated to a desired degree of accuracy and used to generate bankable datasets, essential for a sound business model.

14.2 EWA has acquired a long-term (33-year) data set for the wind resource around the Maltese Islands based on re-analysis. This long-term wind data is required to project wind parameters over a period that covers the expected lifetime of an offshore wind farm. The dataset covers data points at different heights at 1km intervals over the mapped region. An indicative picture showing the Annual Average Windspeed around the Maltese Islands based on 1990 – 2022 modelled data at a height of 150m above sea level is shown in **Figure 5.** Whilst this information provides a good basis for the identification of appropriate sites for the development of offshore wind farms, it is expected that detailed studies of wind and the acquisition of other parameters, essential for the project design and execution, will be carried out by the respective project developers.

15. Strategic Environmental Assessment (SEA)

15.1 Following a preliminary site selection process based on the level of risk, the preferred locations for offshore renewable installations will be selected following the completion of a plan-level SEA.

15.2 The SEA shall be carried out in accordance with SEA Regulations as per Subsidiary Legislation 549.61 on the assessment of the effects of certain plans and programmes on the environment and also in line with the Flora, Fauna and Natural Habitats Protection Regulations under the provisions of Subsidiary Legislation 549.44 of the Laws of Malta and any additional requirements indicated by the Environment and Resources Authority (ERA).

15.3 The objective of the SEA is to contribute to the establishment of the policy framework for the development of offshore renewable energy by identifying the main environmental constraints and considerations with regard to the areas identified. Where appropriate, the SEA shall identify measures to avoid, reduce or offset any potential significant adverse effects.

15.4 The elements which may be assessed in the SEA include:

- Geology, geomorphology and hydrography to identify impacts on the seabed and related mineral resources, the seabed landforms and their seabed sediments, and the physical features of the water areas.
- Seabed contamination and water quality.
- Degradation of protected sites and impacts on protected species.
- Benthic ecology to study the impacts of organisms that make up the bottom communities (sediments, seagrass communities and rock outcrops) in the identified areas to determine the effects on environmental health.
- Impacts on fish and shellfish such as issues like disturbance and displacement of habitats, noise creation, collision, accidental contamination during project implementation and possibly EMF radiation amongst others shall be assessed.
- Negative effects on marine bird, mammals and reptiles possibly due to noise creation, displacement, physical disturbances and other impacts similar to those for fish and shellfish.
- Marine and coastal archaeology and wrecks.
- Commercial fisheries especially since some areas within the risk scenario indicated will compete with such an activity.
- Aquacultural activities.
- Port, Shipping and Navigational operations.

- Recreational activities and tourism.
- Aviation and radar interference.
- Possible military exercise areas.
- Oil and gas exploration licensed areas and oil and gas potential prospects.
- Dredging, spoil and disposal areas.
- Energy and telecommunication cables and possibly pipelines.

The relevant environmental factors which shall be considered for assessment will be identified in the SEA scoping report following a consultation with designated consultees.

16. Consent process for marine operations

16.1 Before commencing the construction of an offshore renewable energy project within the allocated site, developers are required to obtain all necessary consents in relation to their project. These include:

- an authorisation from the Maltese Electricity Regulator (REWS) under clause 6 of the Electricity Regulations S.L 545.34
- development order or permit as issued by the Planning Authority under the Development Planning Act (Cap 552) for development on land and within Malta's territorial waters
- a licence from the Continental Shelf Department in accordance with the Continental Shelf Act (Cap 535) and the Exclusive Economic Zone Act (Cap 625) and any regulations made under such Acts
- clearance from the Environment and Resources Authority
- clearance from the Superintendence for Cultural Heritage
- clearance from the Fisheries Department
- clearance from Transport Malta
- clearance from Malta Air Traffic Services
- clearance from Enemalta

16.2 All activities within Malta's potential Exclusive Economic Zone and Continental Shelf require licensing from the Continental Shelf Department. Furthermore, seabed and subsoil activities within Malta's Territorial Waters also require a licence from the Continental Shelf Department.

16.3 The consent process of an offshore renewable development will impact marine operations both in terms of navigational safety as well as environmental assessments. According to EU legislation, offshore developments should take place within the framework of a national policy that would have undergone a Strategic Environmental Assessment (SEA), and, where applicable, the Environmental Impact Assessment (EIA) and possibly an Appropriate Assessment dedicated to the actual project

16.4 The scope of the SEA has been covered in Section 15. This is the process of evaluation of environmental effects during the preparation of policies, plans, programmes, and legislation including executive regulations.

16.5 An EIA ensures that the environmental consequences of the offshore projects are identified, assessed, and possibly mitigated prior to authorisation and clearance to proceed with works. Potential environmental impacts associated with offshore developments range from issues like stress and reduction of biological fitness, habitat loss as fish may migrate to other areas, change of food species availability, bird collision in the case of wind turbines and other detrimental effects which could result from the materialisation of the project. However, in line with Article 6 of Council Regulation (EU) 2022/2577 in force until June 2024, renewable projects and their grid connection may be exempt from the EIA under Article 2(1) of Directive 2011/92/EU and from the species protection assessments under Article 12(1) of Directive 92/43/EEC and under Art 5 of Directive 2009/147/EC provided that:

a) the project is located in a dedicated renewable or grid area for the related grid infrastructure which is necessary to integrate renewable energy into the electricity system, if Member States have set any renewable or grid area, and

b) the project has been subjected to a strategic environmental assessment in accordance with Directive 2001/42/EC.

Complementing this policy approach adopted at EU level, the proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652, introduces the following amendment to Article 15 of the Renewable Energy Directive:

For the purposes of Article 6(4) and 16(1)(c) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, Article 9(1)(a) of Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds, and Article 4(7) of Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy, Member States shall ensure that the planning, construction and operation of plants for the production of energy from renewable sources, their connection to the grid and the related grid itself and storage assets are ***presumed as being in the interest of public health and safety, and as being carried out for imperative reasons of overriding public interest,*** *in the planning and permit-granting process when balancing legal interests in the individual cases. Member States may restrict the application of these provisions to certain parts of their territory as well as to certain types of technologies or to projects with certain technical characteristics in accordance with the priorities set in their national integrated energy and climate plans.*

In order to contribute to the achievement of climate neutrality, Member States shall ensure, at least for projects which are recognized as being of public interest, that in the planning and permit-granting process, the construction and operation of energy plants from renewable sources and the related grid infrastructure development is given priority when balancing legal interests in the individual case. Concerning species protection, the preceding sentence shall only apply if and to the extent that appropriate species conservation measures contributing to the maintenance or restoration of the populations of the species at a favourable conservation status are undertaken and sufficient financial resources as well as areas are made available for this purpose.

It is therefore clear that whilst environmental studies should seek to ensure appropriate protection for species and their habitat, these should to a certain extent, be accelerated to facilitate the rapid deployment of renewable energy installations.

16.6 Project developers may be requested to perform a navigational safety assessment. This exercise focuses on the likelihood and consequences of ship impact on the offshore development. The main hazards assessed are commercial ships deviating from normal routes, Search and Rescue (SAR) operations in the area, or the encroachment of shipping routes by recreational or fishing vessels in order to avoid proposed development sites.

16.7 It is a known fact that large structures such as wind turbines could potentially interfere with radar operations. It is therefore important that clearance from the relevant authority is obtained before proceeding with the development of specific offshore wind projects.

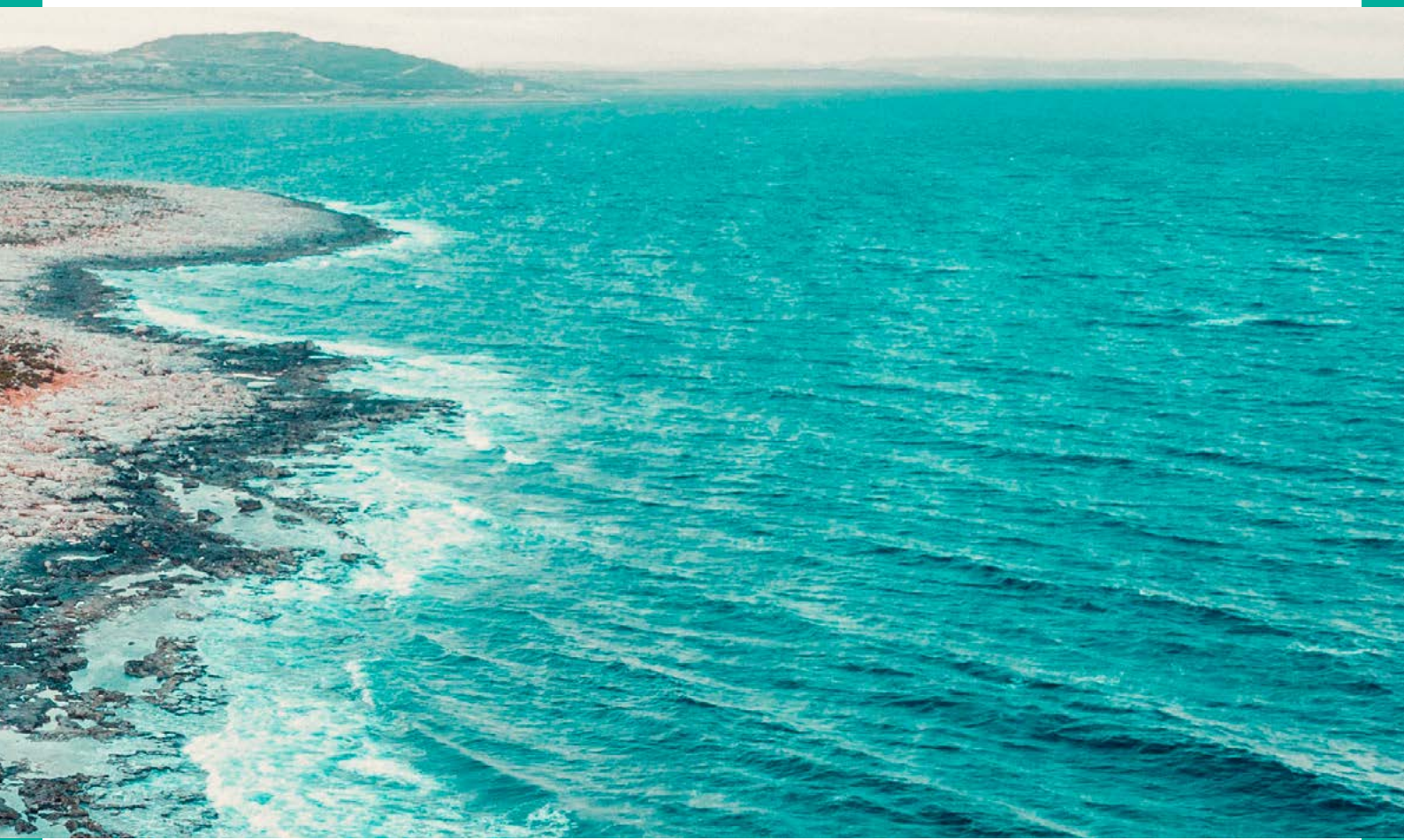
16.8 No subsoil rights will be granted under the EEZ Act apart from any rights required to secure (moor) the floating installations in case the moorings will be drilled into the subsoil. The licence in the EEZ designated area will be for an installation or structure (in case of offshore renewable energy). The licence would contain conditions specific to the activity being licensed.

17. One-Stop Shop

17.1 Given that the waters surrounding the Maltese Islands are of interest and used by many commercial and national operators, accommodating activities in a widespread range of economic sectors, it is evident that the offshore renewable development will require clearances from various entities with respect to the use of the EEZ area for the purpose licensed.

17.2 To streamline these procedures and facilitate the administrative and permitting process, the Maltese Government will establish a One-Stop shop that will act as a single point of reference for project developers to be guided through the permitting process necessary to construct and operate the offshore project. A single administrative unit will be responsible for this procedure, and it may act independently or involve other administrative authorities in the process. This design increases the transparency of the process and ultimately saves time and resources.

17.3 The concept of the one-stop shop is mandated in the Renewable Energy Directive (EU) 2018/2022 Article 16 whereby each member state is required to set up or designate one or more contact points, with the aim of guiding through and facilitating the entire administrative permit application and granting process.



18. Different Models for Offshore Renewable Energy Developments

18.1 There are mainly three (3) different types of models that can be followed for the development of offshore renewable energy projects. The main difference between these categories lies in the extent of studies and preparations needed by state or developer and the extent of who will be shouldering the burden of the connection costs. In all models, regardless of who is responsible for the specification of the projects (state or developers), the prerequisite for the launching of a competitive procedure is the selection of sea areas where offshore renewables could be installed.

18.2 In the centralised model, the State has the leading role in all phases of the development, namely zone planning, site planning and environmental studies. The state is responsible for implementing all measurements/studies which are provided to the developers for the materialisation of their projects. The state launches a competitive tender and grants the rights to build and operate the renewable energy development to the bidder who offers the lowest price per kWh. The full cost of the connection with the grid will be fully funded by the Transmission System Operator (TSO).

18.3 The second model is the decentralised model where, in contrast with the centralised procedure the involvement of the state stops at the zone identification only. The bidders are chosen based on technical and financial competence and the value of the option fee proposed by the developer. Any planning exercises, project developments, measurements and studies required for the actual implementation of the offshore renewable project are conducted fully by the developer. Furthermore, the cost of the connection with the transmission network has to be catered for by the developer as well.

18.4 A third or the 'in-between' model combines elements of the two main ones. In this case the responsibility for the construction works to connect the offshore wind project to the national 'distribution' network is shared between the developer and the state.

18.5 Malta will be adopting features of the decentralised model where the Government will be responsible for identifying the zones and areas for development, launch the competitive bidding process which will lead to a selection of a successful bidder/s whose choice will be based on a set of criteria. The Government will enter into an agreement with the successful bidder/s guaranteeing the use of the area as per agreement and subject to all relevant permits, authorization and clearances having been obtained within a specific timeframe. If financial aid is foreseen, the development will also be supported through either a Contract for Difference (CfD) whereby the generator shall be required to sell the generated electricity to the market and get remunerated for the difference between the awarded bid price and the market price, or a Power Purchase Agreement (PPA) with a designated offtaker. However, the adopted model may also include features typical of the centralized model to accelerate the permitting process and attract investment in the sector.

19. Allocation of site/s

19.1 The primary purpose of the procedure is to grant specific rights and obligations in EEZ designated areas for new commercial offshore renewable project developments, in a way that is fair and transparent. The Maltese Government will provide certainty, clarity and reduced risk for those investors seeking to generate energy from renewable resources installed within Malta's designated EEZ areas. The agreement will give the developer the rights to construct and operate the offshore infrastructure subject to then obtaining all necessary approvals, permits, licenses and clearances from the relevant national authorities.

19.2 The offer of the blocks earmarked for offshore renewable project development will be made through an open competitive process. The bidder can be a company, consortium or joint venture making the process accessible to a broad mix of potential bidders and supporting the competitive market.

19.3 The path leading to final allocation of blocks for offshore development follows a number of stages. Once the sites have been identified, potential bidders will be requested to show their interest in developing renewable energy projects by submitting pre-qualification information based on eligibility criteria which will allow the Maltese Government to assess the developer's technical and financial capability and legal compliance to embark on and finalise the infrastructural project in a successful manner.

19.4 The process shall ensure that the best projects and strongest applicants move forward. Once the technical and financial capabilities of the interested bidders have been assessed, a shortlist of eligible candidates for participating in the open tender for actual offshore development project is published.

19.5 The tenders for offshore renewable energy site development will follow specific tender rules as shall be imposed by the respective Contracting Authority. As a minimum the tender shall require the bidder to submit:

- A technical offer – detailing the technical solution being offered including mooring, installation capacity, and timeline of project deliverables such as FID, procurement, commissioning, operation and decommissioning,
- A financial offer comprising of an estimated budget, and bid price.

19.6 The selection of the successful bidder may take into consideration elements besides the bid price such as the need to achieve diversification, network constraints and grid stability, system integration costs, the longer-term potential of a given technology, and the value added to the economy.

20. Intended projects

20.1 The competitive procedure will stipulate that the applications must be for offshore renewable energy projects of a scale and nature which is compatible with the Strategic Plan for Environment and Development (SPED), the National Energy and Climate Plan, and this Policy.

20.2 The competitive procedure will, amongst other parameters, specify the preferred sites (in line with those identified by this Policy) and the minimum generation capacity to be accommodated within each site.

21. Power Offtake

21.1 Land based utility scale renewable energy generators which are awarded support for the generation of renewable electricity are required to sign a CfD with the contracting authority. An alternative arrangement could take the form of a Power Purchase agreement signed between the generator and an off taker. The Electricity Regulations 2021 (LN 235 of 2021) under the Regulator for Energy and Water Act (Cap 545) establishes Enemalta plc as the designated distribution system operator in Malta. Furthermore, in view of the derogations from the application of Articles 4 – Free choice of supplier and Article 6 - Third Party Access of the Electricity Market Directive (EU) 2019/944, the licence for the supply of electricity shall be issued only to Enemalta. Thus, in the case of a CfD, Enemalta will act as the exclusive off taker for wholesale electricity in Malta until such time as the electricity supply market remains closed for competition, whereas in the case of a PPA, Enemalta will act as the off taker at the agreed price (as per PPA) for the whole duration of the contract.

21.2 Enemalta plc, being Malta's designated sole energy supplier and distribution network operator, shall be the entity to assess the technical impact of each offshore renewable energy development project on the national grid and provide a study, at a cost, for indicating how, where and at what voltage level the connection can be made.

21.3 The connection and operation will have to follow Malta's Network Code (NC) which also regulates how and when situations of curtailment may arise. Furthermore, electricity dispatch and balancing obligations will be in line with the Electricity Regulations SL 545.34 or any Regulation which may be applicable.

22. Grid connection points

22.1 Offshore renewable projects sited outside Malta's territorial waters and within EEZ designated areas are bound to have a comparatively large capacity in order to justify the grid connection costs. Depending on the size and nature of the project, Enemalta would, after performing the necessary grid studies propose an appropriate connection point, with the most likely points being listed below and indicated in **Figure 6**[21].

- Delimara Power Station, Marsaxlokk – Voltage at 132kV/230kV
- Magħtab Terminal Station, Naxxar – Voltage 132kV/ 230kV
- Marsascala Converter Station, Marsascala – Voltage 230kV (subject to outcome of feasibility study)

Marsascala Converter Station is not being featured on Figure 06 as this is undergoing studies.

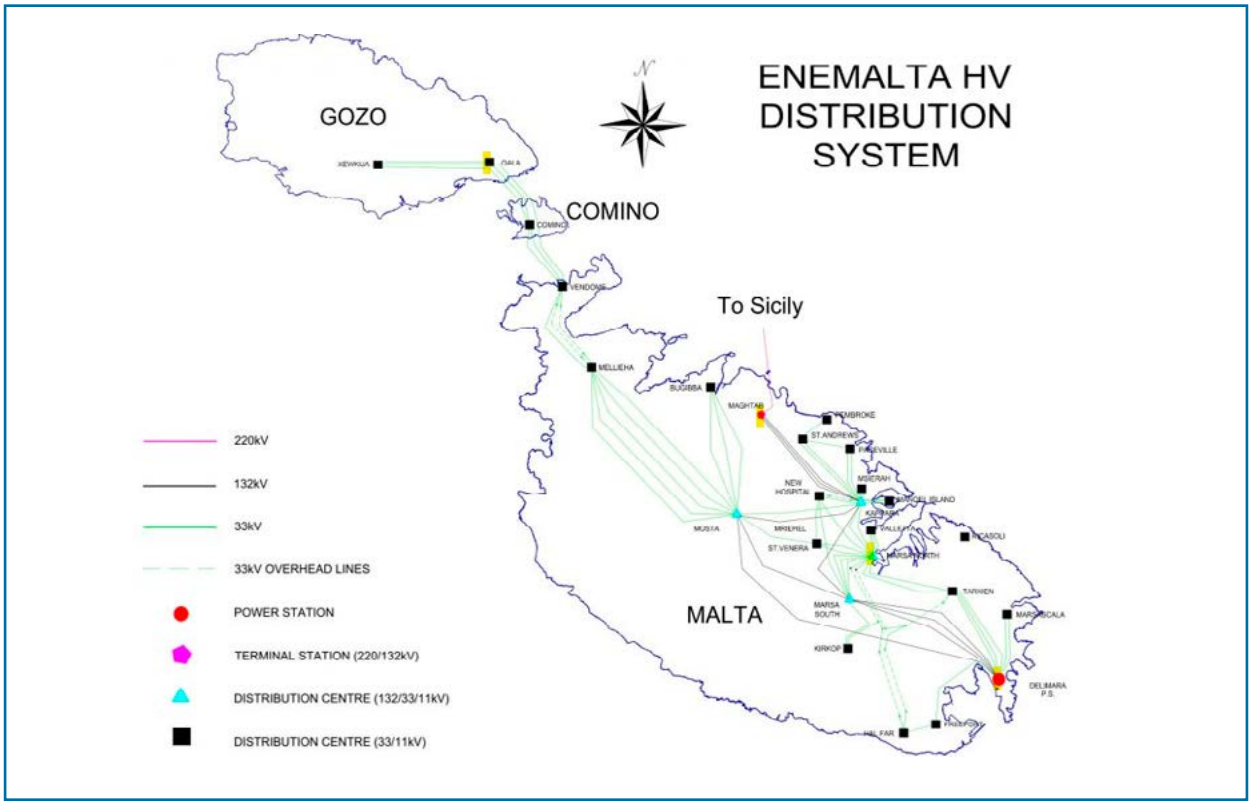


Figure 6: Enemalta HV Distribution System

22.2 In view of the expected capacity of new offshore renewable energy installations for financial viability, it is not expected that there would be multiple installations at any single site during the first years of development. It is therefore likely that at first, each project would require a dedicated grid connection facility. However, depending on the overall interest expressed as well as planned deployment capacity, shared connections could be an option.

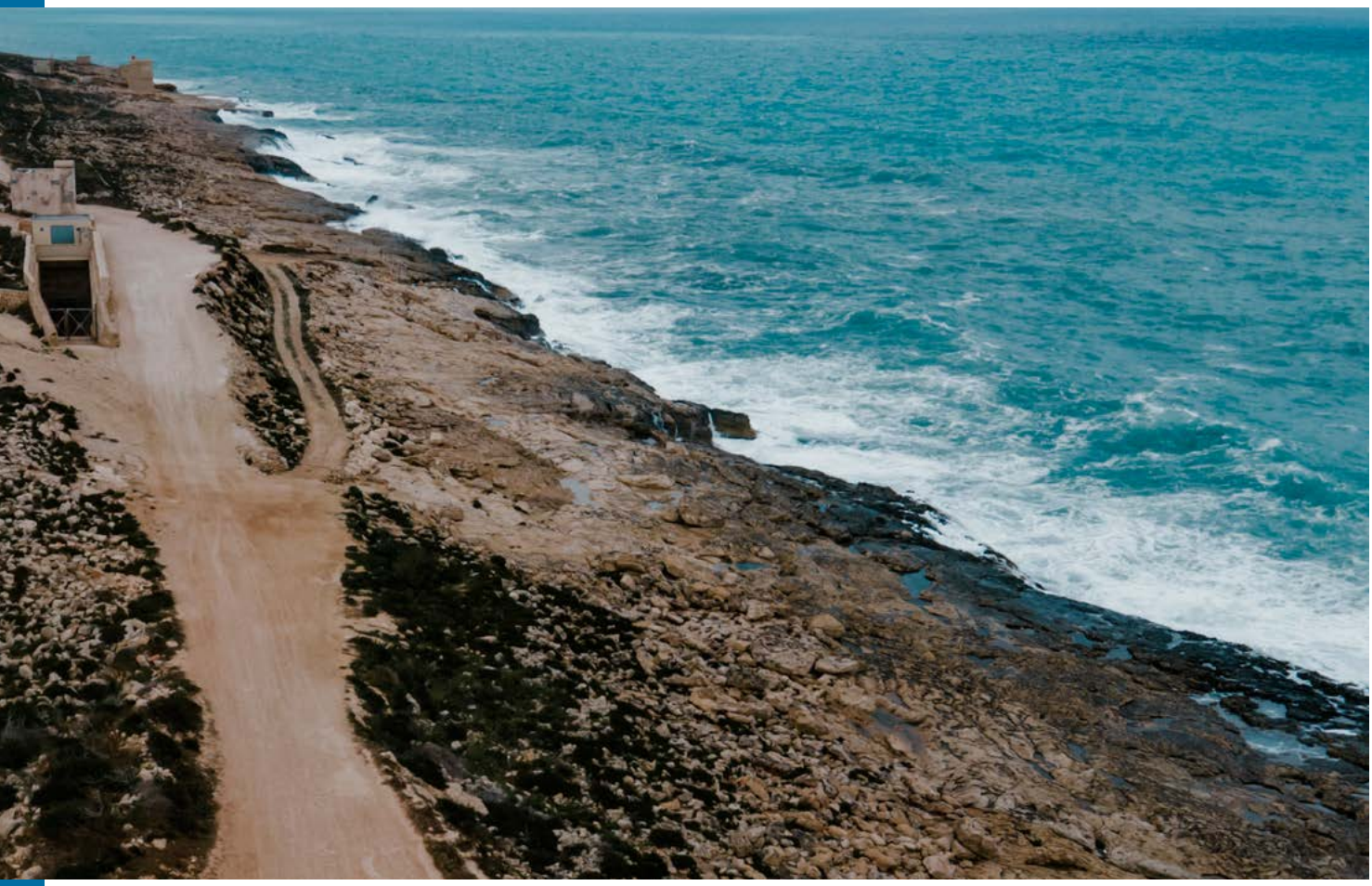
[21]Source: Enemalta

22.3 The criteria to determine the final option will be based upon:

- The capacity of the specific onshore grid connection point versus the capacity of the proposed project, and
- The degree of utilisation proposed by a selected bidder for a potential marine area as indicated in the contracting procedure, suitable for development of offshore renewable energy projects.

22.4 If a particular project is deemed to exhaust most of the grid connection capacity at a particular grid connection point, then it would be more feasible to have a dedicated onshore connection for that particular project. Conversely, should an individual project only utilise a portion of the available grid connection capacity and would only require a portion of the potential marine area available indicated in the contracting procedure for offshore renewable energy then it would be more appropriate to upsize the grid shore connection capacity to allow for future multiple developments, thereby resulting in reduced overall infrastructural costs. In such cases, it is likely that there will be a common offshore substation for the purposes of serving as a common point of coupling.

22.5 Should the decision to construct a common offshore grid infrastructure prevail, then, depending on whether this will be constructed by the first developer at their expense or possibly supported by the Government of Malta for eventual future use, the cost of the infrastructure will be an input into the business model determining the strike price.



23. Grid Stability

23.1 Over the past decade, Malta has been experiencing a steady increase in energy-demand (with the exception of 2020 due to the Covid-19 pandemic). This trend is expected to persist as economic activity continues to grow with the onset of new demand centres resulting from electrification of transport, such as electric vehicles and shore-to-ship supplies.

23.2 To keep pace with the decarbonisation trajectory established in the LCDS[22], Malta will require an increase in the deployment of renewable energy. To meet this objective, Malta needs to exploit the remaining effective potential of areas on land for PVs while tapping feasible locations for offshore wind and possibly PV generation.

23.3 By their very nature, renewable sources are intermittent. This intermittency has to be given due consideration when assessing the stability and transient requirements of the network. Besides meeting the increase in demand, the second alternating current (AC) interconnector cable to the European grid, specifically to Italy, that is programmed to be commissioned by 2026 will also help in addressing the intermittency concern. The second interconnector will not only deliver a more resilient grid, but it will also significantly reduce the instances where the Maltese grid will operate in island mode. As a result, the need for curtailment of renewable generation to ensure network stability will be minimised.

24. Certification

24.1 Offshore renewable energy projects, especially those within the wind technology industry must follow a rigorous procedure for certification. This spans from certification of components, e.g. type certification of wind turbines and complete wind turbine structures or power plants including offshore substation and power cables, i.e. project certification.

24.2 Project certification is performed to demonstrate that a renewable power plant is meeting its defined requirements mainly related to structural integrity for the defined phases. Typically, the phases from development to construction and operations are included.

24.3 Offshore renewable energy developments undertaken in EEZ designated areas shall abide by the mandatory modules for the project certification laid down in the international procedure IECRE OD-502:2018 Project Certification Scheme and the referred ISO and IEC standards covered. Alternative approved international schemes which meet the same criteria could also be applicable.

22 Ministry for the Environment, Climate Change and Planning, 'Malta Low Carbon Development Strategy', https://unfccc.int/sites/default/files/resource/MLT_LTS_Nov2021.pdf, Accessed: 07/08/2023

25. Security of the allocated site/s

25.1 The security of the offshore renewable energy installations will be the responsibility of the developer. The developer has to carry out a vulnerability assessment and has to cover the installation by a comprehensive insurance which satisfies the security requirements as set out by the Ministry for Home Affairs, Security, Reforms and Equality (MHSR).

26. Decommissioning

26.1 When a site is allocated for a proposed offshore project, it will also include a condition requiring the developer or owner to submit a decommissioning programme before any offshore construction works begin. The agreement will determine the mechanism that would be used in connection with this obligation.

27. Securing Revenue Stability for Prospective Investors

27.1 The Maltese Government is conscious that offshore renewable technology especially floating wind, is significantly more expensive than its onshore counterpart. However, in view of the spatial limitations on land, Malta has no option but to look beyond its shores if it is to continue increasing its renewable generation. Otherwise, it is only a matter of time for the land opportunities to be exhausted.

27.2 It is thus imperative that onshore and offshore generation are treated separately. The Government is also aware that investors in offshore renewable technology need a long-term price signal. To address this the Government is considering two distinct financial instruments, either support to offshore renewable generation in the form of a Contract-for-Difference (CfD) mechanism or a Power Purchase Agreement (PPA).

27.3 With regards to a Contract-for-Difference (CfD) mechanism, the strike price will be determined by means of one or more auctions that will have a finite maximum capacity allocation corresponding to specific offshore site/s. The support would cover the difference between the strike price and the market price (or proxy of the market price in the absence of a liquid wholesale market) and shall be guaranteed for a period as specified in the relevant call.

27.4 An alternative approach to ensure a long-term price signal is for an off taker to enter into a PPA with the offshore renewable generator. As detailed in section 21.1, under the current market arrangements, Enemalta would act as the off taker.

28. Financial Instruments: Contract for Difference (CfD) and Power Purchase Agreement (PPA)

28.1 In general, offshore renewable energy projects require incentives in order to ensure financial viability and bankability. With regards to a CfD mechanism, direct financial support is often provided, whereas PPAs are more common when no government operating aid is provided or when the off taker is subject to a mandate to purchase renewable energy.

In the CfD method the beneficiary will pay/receive the difference between the 'strike price' (a price for electricity reflecting the cost of investing in a particular renewable technology) and the 'reference price' (a measure of the market price for electricity for each unit of electricity exported to the grid), depending on whether the strike price is higher or lower than the reference price. No support is provided during times when the market price is negative.

In the PPA method, the energy buyer (off taker) and seller come together and agree to buy and sell an amount of energy that will be generated by a renewable asset. In the case of offshore renewable development, the agreed price would need to be established through a competitive process in much the same way as a CfD.

28.2 Since Malta does not have a liquid wholesale electricity market yet, and the energy tariffs are regulated by the Regulator for Water and Electricity (REWS) in accordance with the REWS Act XXV of 2015, the market price will be the proxy for the market price of electricity as per the Fourth Schedule to SL.545.34 (Electricity Regulation)

28.3 The annual subsidy would be capped depending on the estimated capacity factor of the installation and shall be defined in the "Invitation to bid" document. The beneficiaries will be obliged to follow a development schedule and start generating power and feed it into the grid within a pre-defined time from the date the CfD or PPA is awarded. Failure to abide by the schedule defined in the CfD or PPA may lead to penalties or even the forfeiture of financial support.

28.4 The competitive process will both determine the assignment of the site as well as the financial support level (if applicable) subject to a maximum price cap. The price cap will take into account costs during the whole investments, procedure (preparation, construction and decommissioning), and the cost incurred in the period of offshore operation as well as the justified return on the capital involved.

29. Offshore Industry Support Capabilities

29.1 The deployment of renewable energy installations relies on an extensive supply chain and often leads to the development of a specialized industry engaged with the design, development and maintenance of the project over its lifetime. This is an important ancillary benefit of large-scale renewable energy projects and host countries seek to ensure that, as much as technically possible, the value chain relies on inhouse supply.

29.2 For many years, Malta has offered support to offshore facilities in the oil and gas industries. Over the years, the private sector has developed skills to service the offshore industries, using Malta as their base for operations in the Mediterranean. With the right investment and training, such skills can be transferred to the offshore renewable energy industry.

29.3 The Maltese Government is committed to activating and supporting local supply chains that can participate in the offshore renewable sector and generate direct and indirect jobs in the country. This includes working closely with offshore developers and unions to identify opportunities for the local industry.

29.4 To further support the offshore renewable energy endeavor, the Government will also assess local capabilities, such as port facilities and engineering resources, to leverage local content in any upcoming project.

30. Delivering the Vision

30.1 The deployment of offshore renewable systems is part of a set of key strategic elements in the decarbonisation path of the Maltese economy. These will however need to be developed within the context of other challenges of a more cross-cutting nature, such as ensuring a just transition, meeting higher energy demand driven by demographic changes and economic activity, and the need to move towards a more circular economy. It is therefore essential that the energy transition is cost efficient and in addressing these challenges, adds value to Malta's economic development. As with existing renewable installations, this also needs to be reflected in future developments including offshore, which should contribute towards more affordable energy for consumers.

30.2 The analysis carried out by the Maltese Government has confirmed that there is lots of potential and a good opportunity for offshore renewable developments - primarily wind or solar projects in Malta. This can be corroborated by the interest shown by various economic operators to the Preliminary Market Consultation (PMC).

30.3 Following the public consultation process and completion of relevant preliminary studies, the Maltese Government will establish a target capacity or range of capacities and timeframe for the deployment of offshore energy within its EEZ areas.

30.4 This time period is needed to allow sufficient time for the Government and offshore energy developers to complete the necessary development activities which may include:

- The specific Environmental Impact Assessment (EIA) for the allcoated zones
- The Planning, Permitting and Approval stages
- The Procurement, supply chain and workforce development
- The Stakeholder impacts
- The Enabling infrastructure such as ports and connection requirements

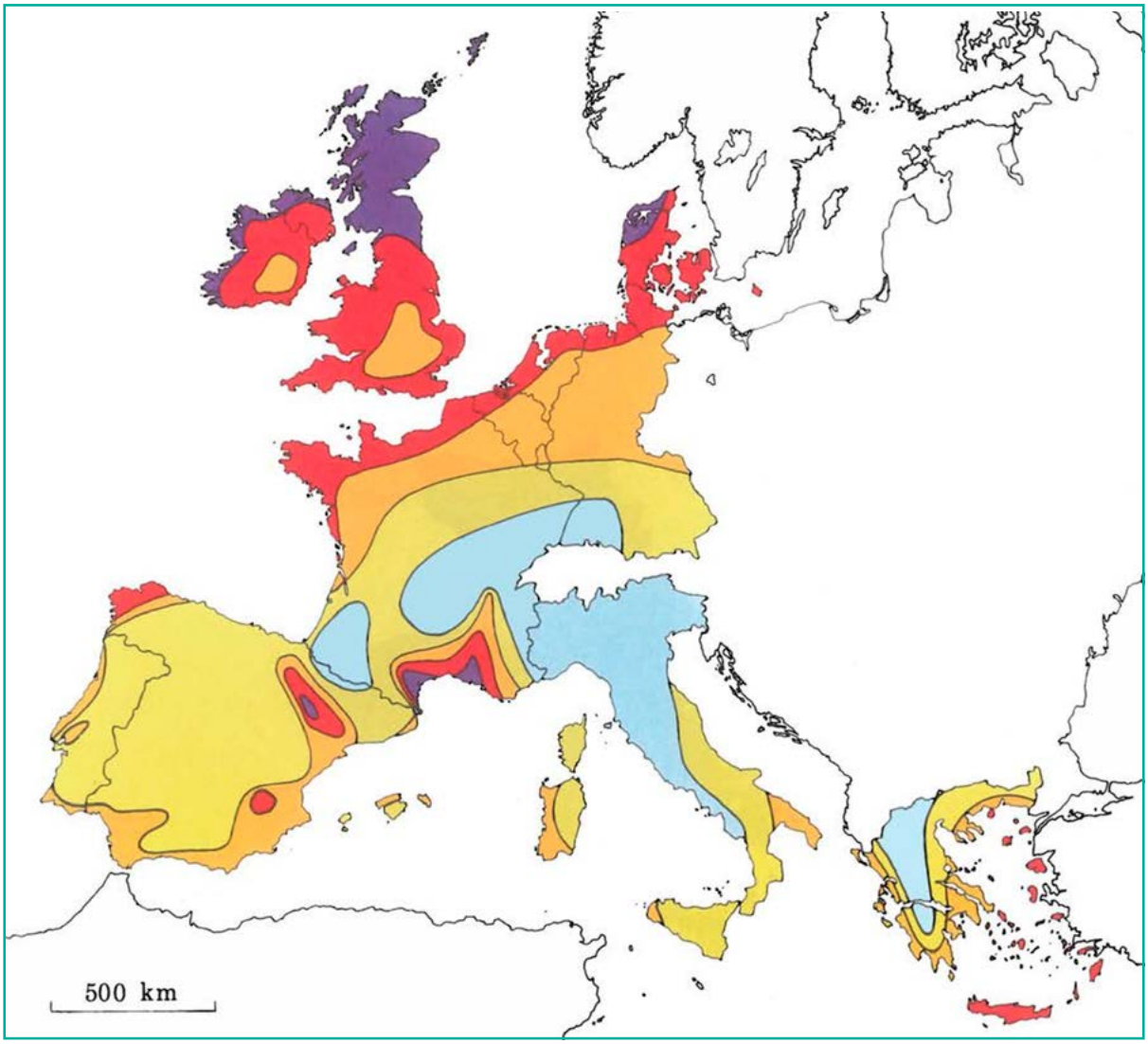
30.5 Future developments will feature in Malta's updated National Energy and Climate Plan 2030, due to be finalized by June 2024 and in any subsequent update/revision.

31. Glossary of Key Terms

AC	Alternating Current
CfD	Contract for Difference
EED	Energy Efficiency Directive
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ERA	Environment and Resources Authority
EU	European Union
EUCA	The Governance of the Energy Union and Climate Action Regulation
EWA	The Energy and Water Agency
FPV	Floating PV
GIS	Geographic Information System
IA	Impact Assessment
IEA	International Energy Agency
IEC	International Electrotechnical Commission
IS	Implementation Statement
ISO	International Organisation for Standardisation
LCDS	Low Carbon Development Strategy
LCOE	Levelized Cost of Energy
LiDAR	Laser Imaging, Detection and Ranging
MAFA	Ministry of Agriculture, Fisheries and Animal Rights
MEEE	Ministry for the Environment, Energy and Enterprise
MEFL	Ministry for the Economy, European Funds and Lands
MFE	Ministry for Finance and Employment

MHSR	Ministry of Home Affairs, Security, Reforms and Equality
MPWP	Ministry for Public Works and Planning
MSP	Maritime Spatial Planning
NC	Network Code
NECP	National Energy and Climate Plan
PA	Planning Authority
PMC	Pre-Market Consultation
PPA	Power Purchase Agreement
PV	Photovoltaic
RE	Renewable Energy
RED	Renewable Energy Directive
REWS	The Regulator of Energy and Water Services
SAC	Special Area of Conservation
SAR	Search and Rescue
SEA	Strategic Environmental Assessment
SL	Subsidiary Legislation
SPA	Special Protection Area
SPED	Strategic Plan for Environment and Development
TM	Transport Malta
TSO	Transmission System Operator
UM	University of Malta
UNCLOS	United Nations Convention on the Law of the Sea

32. Appendix A



Wind resources[1] at 50 metres above ground level for five different topographic conditions

	Sheltered terrain[2]		Open plain[3]		At a sea coast[4]		Open sea[5]		Hills and ridges[6]	
	$m\,s^{-1}$	Wm^{-2}	$m\,s^{-1}$	Wm^{-2}	$m\,s^{-1}$	Wm^{-2}	$m\,s^{-1}$	Wm^{-2}	$m\,s^{-1}$	Wm^{-2}
	> 6.0	> 250	> 7.5	> 500	> 8.5	> 700	> 9.0	> 800	> 11.5	> 1800
	5.0-6.0	150-250	6.5-7.5	300-500	7.0-8.5	400-700	8.0-9.0	600-800	10.0-11.5	1200-1800
	4.5-5.0	100-150	5.5-6.5	200-300	6.0-7.0	250-400	7.0-8.0	400-600	8.5-10.0	700-1200
	3.5-4.5	50-100	4.5-5.5	100-200	5.0-6.0	150-250	5.5-7.0	200-400	7.0-8.5	400-700
	< 3.5	< 50	< 4.5	< 100	< 5.0	< 150	< 5.5	< 200	< 7.0	< 400

European Offshore Wind Sources

(Source European Wind Atlas Denmark)

33. Appendix B

Continental Shelf Department

The main role of the Continental Shelf Department is to promote and attract investment for the exploration and exploitation of Malta's natural resources in a safe and environmentally sustainable manner. The Department is also responsible for regulating other activities on Malta's continental shelf and potential Exclusive Economic Zone (EEZ) such as petroleum exploration and exploitation, the laying of submarine cables and pipelines, marine scientific research and the construction, operation and use of artificial islands, structures and devices.

Planning Authority

The roles of the Planning Authority as governed by the Development Planning Act (Cap 552) have already been highlighted in Section 11 dealing with Marine Spatial Planning.

Environment and Resources Authority (ERA)

The ERA which is governed by the Environment Protection Act (Cap 549) is responsible for protecting the environment and managing it in a sustainable manner. It focuses on pollution prevention and any sources of environmental degradation and through its remit takes necessary action via preventive and remedial measures. ERA is also responsible for safeguarding biological diversity and sustainable management of waste. All these aspects are directly related to offshore renewable energy activity and the input from this authority is critical in the uptake of the offshore initiative.

Transport Malta

Transport Malta (TM) governed by the Authority for Transport Act in Malta (Cap 499) is responsible for functions relating to transport by air and sea within ports and inland waters and relating to merchant shipping. Renewable energy activities in designated blocks within the Maltese waters will somewhat affect activities in both sea and air traffic. The site identification exercise avoids areas which could significantly interfere with maritime navigation as identified by TM, whilst taking into consideration any necessary mitigation measures which can be adopted to utilize alternative sites.

Malta Air Traffic Services (MATS)

Malta Air Traffic Services Ltd (MATS) is Malta's Air Navigation Service Provider. They provide air traffic services to aircraft flying in the Malta Flight Information Region (lower & upper), Search and Rescue services, as well as terminal and aerodrome services for the Malta International Airport.

MATS are responsible for the control of all air traffic, technical support services for all the Communication, Navigation Surveillance infrastructure, and provision of AIM services within the Flight Information Region as from 1st January 2002 in accordance with the Air Navigation License granted by the Civil Aviation Directorate of Transport Malta (TM-CAD). MATS is nowadays certified under the provision of the Single European Sky (SES).

Department of Fisheries and Aquaculture

The Department of Fisheries and Aquaculture is responsible for the national fisheries and aquaculture sector. Offshore generation projects will surely influence this sector and therefore it is important that the mitigating feedback is received in a timely manner to alleviate any repercussions on this essential commercial activity.

Lands

The Lands Authority of Malta established under the Lands Authority Act (Cap 563) is also a very significant stakeholder in any offshore policy. The definition of 'land' in the act also covers the sea and the seabed. Any block identified for offshore generation within the territorial waters is all 'government land' and it is within the responsibility of the Lands Authority that any sea areas are used in the best way possible.

Armed Forces of Malta

Through their responsibility of the Armed Forces and Security of the Maltese Islands, the AFM will also have a vested interest in assessing the impacts brought about by any offshore project proposed on the Maltese waters.

Enemalta plc

Enemalta is the leading energy services provider in Malta entrusted with the distribution of electricity, and the development of the national distribution network. As of today it is the sole supplier of electricity in Malta.

34. Appendix C

This policy document presents the government's vision for the development of offshore renewable energy projects beyond the 12NM. As part of the consultation process, stakeholders are being invited to provide their feedback. The following questions are being presented to guide this process.

I. Do you agree that offshore renewable installations are an appropriate solution for Malta to increase its renewable energy generation?

II. Do you consider the proposed sites as best suited for offshore renewable installations?

III. What additional elements would you consider as important to be included in the policy in order to ensure a seamless regulatory and permitting process?

IV. What local facilities would you consider as essential to support the development of offshore renewable energy projects?

V. Would you consider a two-way contract for difference as an appropriate energy off take arrangement? Would you consider such arrangement as having a significant bearing on the expected level of support compared to alternative arrangements?

VI. What additional barriers do you foresee for the development of offshore renewable installations that need to be considered in this policy?

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