ECONOMIC, BUSINESS, & COMMUNITY OPPORTUNITIES FOR

OFFSHORE RENEWABLE ENERGY IN IRELAND'S SOUTH EAST REGION

Offshore Wind Report

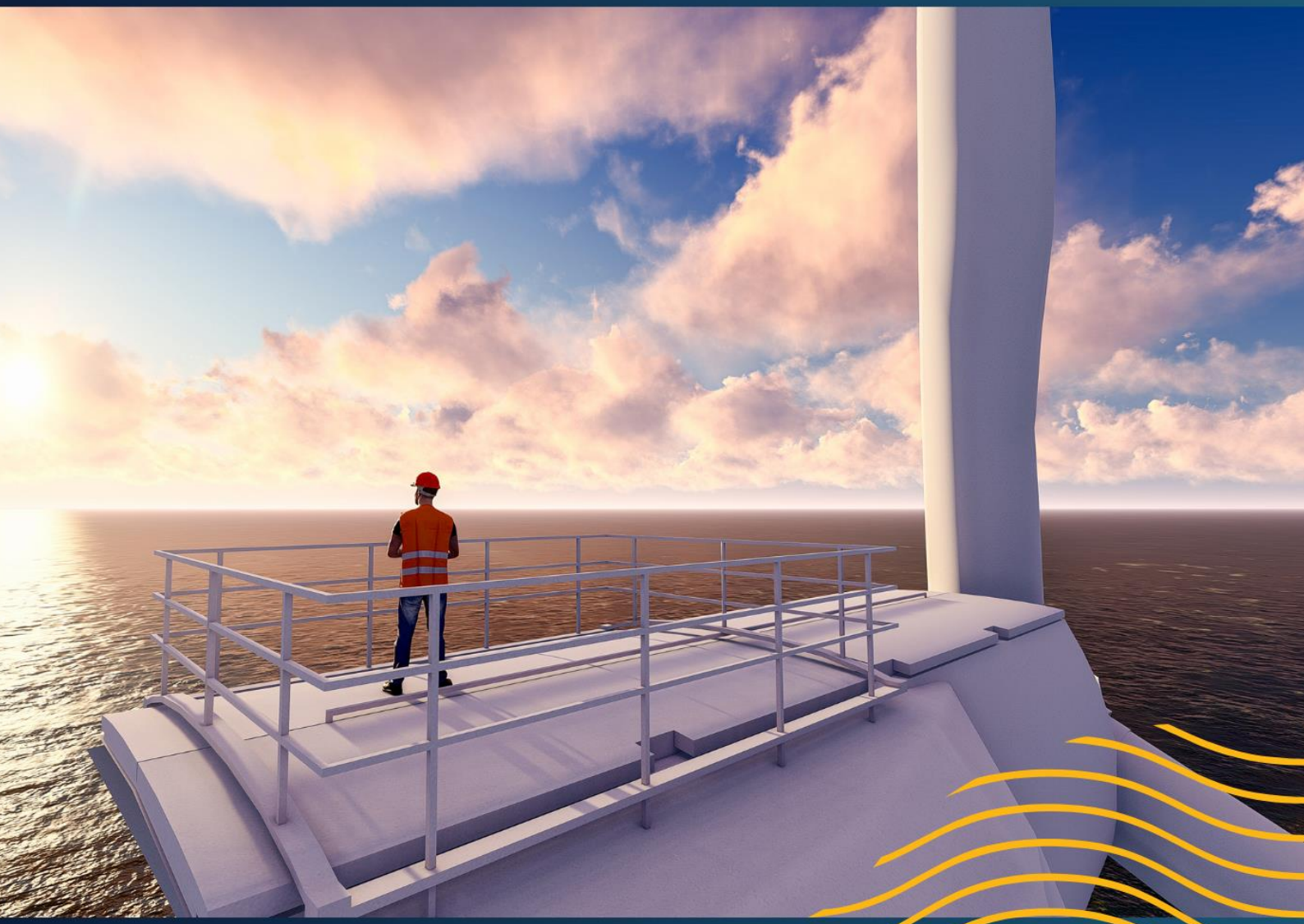


Table of Contents

FOREWORD **9**
SOUTH EAST ENERGY AGENCY CHAIR'S INTRODUCTION **10**
EXECUTIVE SUMMARY **11**
STRATEGIC ENABLERS **14**
OBJECTIVES OF THE SOUTH EAST REGION **15**
RECOMMENDATIONS TO PROGRESS THE PARTNERSHIP APPROACH **16**
1 INTRODUCTION - THE IRELAND SOUTH EAST OFFSHORE WIND PARTNERSHIP **17**
1.1 IRELAND'S OFFSHORE RENEWABLE ENERGY TARGETS 20
1.1.1 Ireland South East's key role *20*
1.2 ECONOMIC BENEFITS TO THE SOUTH EAST REGION 21
1.3 WHY THE SOUTH EAST REGION? 23
1.4 THE SOUTH COAST DESIGNATED MARITIME AREA PLAN 24
1.5 JOBS – WHERE AND WHEN? 26
1.6 ECONOMIC AND COMMUNITY BENEFITS - AN OVERVIEW 28
1.7 DOWNSTREAM ECONOMIC SPIN OFFS 29
1.8 SUPPORTING SUCCESS: EXISTING SUPPORTS & FURTHER REQUIREMENTS 31
2 THE SOUTH EAST: PROFILE & POTENTIAL **33**
2.1 THE SOUTH EAST REGION: DEMOGRAPHY, GEOGRAPHY & ECONOMY 34
2.1.1 Regional Economic Profile and Strategic Planning Alignment *35*
2.2 KEY INFRASTRUCTURE INVESTMENT: A VITAL PREREQUISITE 37
2.2.1 Ports infrastructure investment *37*
2.2.2 Electricity Grid *41*
2.2.3 SETU: South East Technological University (SETU) *43*
2.2.4 Greenlink interconnector *44*
2.2.5 Waterford Regional Airport *45*
2.2.6 Natural Gas – Current Status *46*
2.2.7 EU Hydrogen Backbone Project *49*
2.3 SUMMARY 51
3 THE SOUTH EAST REGION: INDUSTRY, ENTERPRISE AND SKILLS & COMMUNITY **52**
3.1 THE ROLE OF COMMUNITIES IN OFFSHORE WIND 56
3.2 LEVERAGING THE EXISTING REGIONAL SEC NETWORK 56
3.3 BEST PRACTICE: COMMUNITY MODELS FROM EUROPE 57
3.4 THE POWER OF CLUSTERING FOR ECONOMIC VALUE 57
3.5 ALIGNING WITH NATIONAL CLUSTERING POLICY 58
3.6 COLLABORATION & PARTNERSHIP: AN OVERVIEW 58
3.7 CONCLUSION 60
4 CREATING A REGIONAL CENTRE OF EXCELLENCE IN THE SOUTH EAST: POLICY & BEST PRACTICE **61**

4.1 THE SOUTH EAST AND EUROPE'S OWE FUTURE 62
4.2 EU POLICIES AND FUNDING INITIATIVES 63
4.3 BEST PRACTICE (I): POLICY LEARNINGS FROM LEADING OWE NATIONS 65
4.3.1 United Kingdom/Scotland 66
4.3.2 Denmark 66
4.3.3 Germany 67
4.3.4 Belgium 67
4.4 BEST PRACTICE (II): INDUSTRY COLLABORATION 68
4.4.1 Collaboration Case Study 1: Dogger Bank Offshore Development 68
4.4.2 Collaboration Case Study 2: Hyoffwind 69
4.5 BEST PRACTICE (III): COMMUNITY BENEFIT FUNDING 71
4.5.1 CBF Case Study 1: Orsted Community Grants 71
4.5.2 CBF Case Study 2: The REScoop model (Belgium) 72
4.6 CONCLUSIONS 73

5 THE ECONOMIC BENEFITS OF OFFSHORE WIND ENERGY INVESTMENT IN THE SOUTH EAST REGION 74

5.1 INTRODUCTION 75
5.2 OVERALL ECONOMIC BENEFITS OF OWE INVESTMENT 76
5.2.1 'Extensive' national studies by AFRY & BVG 76
5.3 THE FOUR ECONOMIC OBJECTIVES OF OWE INVESTMENT 80
5.4 COMMUNITY INCLUSION – A VITAL SOCIAL OBJECTIVE 81
5.5 CONCLUSIONS & POLICY RECOMMENDATIONS 82

6 EXCELLENCE THROUGH COLLABORATION – A STRATEGIC ACTION PLAN 84

6.1 THE CASE FOR IMMEDIATE ACTION 85
6.2 EMBEDDING OWE IN THE SOUTH EAST ECONOMY 85
6.3 CASE STUDIES: REGIONAL CAPABILITY IN ACTION 86
6.4 SUPPORTING POLICY AND FUNDING INSTRUMENTS: UNLOCKING SUPPORT 87
6.5 DEVELOPING SKILLS AND HUMAN CAPITAL 87
6.6 STRENGTHENING THE OFFSHORE WIND PARTNERSHIP 87
6.7 NATIONAL AND REGIONAL POLICY ALIGNMENT 88
6.8 BUILDING THE BUSINESS CASE 88
6.9 STRATEGIC NEXT STEPS 88

7 CONCLUSION – POWERING A REGIONAL AND NATIONAL TRANSFORMATION 90
APPENDIX I – REFERENCES & MAP CREDITS 93
APPENDIX II – HOW THE COMMUNITY BENEFIT FUND & DEVELOPMENT DELIVERY PLAN (DPP) WORKS 97
APPENDIX III – ENGINEERING CASE STUDIES 101

CASE STUDY 1: EASTGATE ENGINEERING 101
CASE STUDY 2: FLI PRECAST SOLUTIONS LTD 101

APPENDIX IV – EDUCATION AND TRAINING CAPACITY 103

CASE STUDY 1: WALTON INSTITUTE FOR INFORMATION AND COMMUNICATIONS SYSTEMS SCIENCE 103

List of Figures

Figure 1: Infographic illustrating the strategic flow from MAC approval to regional decarbonisation 13
Figure 2: Members of Ireland South East Offshore Wind Partnership 18
Figure 3: Comparative advantages of Ireland's South East region 20
Figure 4: Profile of South East Ireland at a glance 23
Figure 5: The South East region's high OWE potential 24
Figure 6: Maritime Areas proposed for OWE development in the SC-DMAP 25
Figure 7: Maritime Areas for OWE in the South East and the proposed installation capacities 25
Figure 8: Irish annual FTE years of employment for 37 GW OWE by 2060, split by supply chain level 1 category .. 26
Figure 9: Irish employment effects for all SC-DMAP projects in the baseline scenario 27
Figure 10: Economic and Community Benefits from the impact of 4.9 GW SC-DMAP projects over the life cycle of the wind farms considered 28
Figure 11: The path from offshore to onshore for the clean energy transition 29
Figure 12: Potential Advantages and Policy Implementation Requirements for Success of OWE sector in South East Ireland 32
Figure 13: South East population data 34
Figure 14: Mean wind speeds at the proposed maritime areas 35
Figure 15: Activity Matrix of Southern Region Ports of Ireland 37
Figure 16: Ports in the South (Entire Map) and South East (Shaded) Region 38
Figure 17: Planned offshore support investments at the Rosslare Europort – Construction Stage 39
Figure 18: South **East port capacity Vs National Need** 40
Figure 19: Process for Offshore Grid Connection 41
Figure 20: Spatial extent of Tonn Nua maritime area indicating grid infrastructure zones & landfall areas 42
Figure 21: Great Island converter station in Co. Wexford 44
Figure 22: Waterford Airport in Co. Waterford 46
Figure 23: Gas Networks Ireland Network Map 47
Figure 24: Map of CNG refuelling stations in Ireland 48
Figure 25: European-wide map of Hydrogen Infrastructure showing projects & transport routes 49
Figure 26: A breakdown of key OWE investment by key spending areas 53
Figure 27: Employment in "OWE-relevant" sectors in the South East region (CSO Business Demography 2022) .. 54
Figure 28: Existing Sustainable Energy Community (SEC) Network 56
Figure 29: An architecture of EU, National, Regional and Local ORE development 59
Figure 30: Ireland's OWE advantage within the EU 62
Figure 31: Scenarios examined in National studies by AFRY & BVGA 77
Figure 32: Trajectory of local content for each supply chain category 79

List of Tables

Table 1: Port of Waterford Cargo (Q3, 2024) 38
Table 2: Rating of other Regional Ports for OWE potential 40
Table 3: Hydrogen potential timeline to support regional decarbonisation through gas grid 47
Table 4: Potential cumulative CBF value conservative over the auction period 59
Table 5: Electricity generation mix in Ireland, UK, Denmark, Germany & Belgium 65
Table 6: Orsted Community grant spending 71
Table 7: Expected national and local economic benefits 78
Table 8: Community Benefit Fund revenues by specific SC-DMAP area 81

Glossary of Terms

AI	Artificial Intelligence
ARE	Accelerating Renewable Electricity (Taskforce)
BVGA	BVG Associates
CAPEX	Capital Expenditure
CARO	Climate Action Regional Office
CB1, CB2	Carbon Budget periods 1 (2021-25), 2 (2026-30)
CBF	Community Benefit Fund
CCAC	Climate Change Advisory Council
CEF	Connecting Europe Facility (of EU)
CPPA	Corporate Power Purchase Agreement
CRU	Commission for Regulation of Utilities
CTV	Crew Transfer Vessel
DBEC	Dublin Belfast Economic Corridor
DECC	Department of the Environment, Climate and Communications
DETE	Department of Enterprise, Trade and Employment
DMAP	Designated Maritime Area Plan
DNZ	Domestic Net Zero
EEZ	Exclusive Economic Zone
EHB	European Hydrogen Bank
ETBs	Education and Training Boards
EI	Enterprise Ireland
EirGrid	Ireland's (electrical) Transmission System Operator (TSO)
EMD	Electricity Market Design
ENTSO-E	European Network of Transmission Systems Operators for Electricity
FET	Further Education & Training
FTE	Full-time equivalent
GVA	Gross Value Added
GW	Gigawatt, or one million kilowatts of power
Hub	A synergistic collection of activities
IC	Interconnectivity
IDA	Industrial Development Authority of Ireland
IFAC	Irish Fiscal Advisory Council
ISEOWP	Ireland South East Offshore Wind Partnership
ISIF	Irish Strategic Investment Framework
IPCEI	Important Projects of Common European Interest
kWh	Kilowatt-hour, or one unit of metered electricity

LCOE	Levelised Cost of Energy
MAC	Maritime Area Consent
MARA	Maritime Area Regulatory Authority
MSP	Marine Spatial Planning
MW	Megawatt, or one thousand kilowatts of power
MWh	Megawatt-hour, or one thousand kilowatt hours of energy
NDP	National Development Plan
NSEC	North Seas Energy Cooperation
NPF	National Planning Framework
NZIA	Net-Zero Industry Act
O&M	Operations and Maintenance
ORE	Offshore Renewable Energy
ORESS	Offshore Renewable Electricity Support Scheme
OWDT	Offshore Wind Delivery Task Force
OWE	Offshore Wind Energy
OWIF	Offshore Wind Industry Forum
PPA	Power Purchase Agreement
PSO	Public Service Obligation
RED	Renewable Energy Directive
REDF	Regional Enterprise Development Fund
REP	Regional Enterprise Plans
RSES	Regional Spatial and Economic Strategy
RTCF	Regional Technology Cluster Fund
SC-DMAP	South Coast Designated Marine Area Plan
SEEA	South East Energy Agency
SEAI	Sustainable Energy Authority of Ireland
SEAM	South Eastern Applied Materials (@ SETU)
ISEM	(All-island) Integrated Single Electricity Market
SETU	South East Technological University
SONI	System Operator for Northern Ireland (TSO)
SRA	Southern Regional Assembly
TEN-E	Trans-European Networks for Energy
TWh	Terawatt-hour, one billion kWhs
WPE	White Paper on Enterprise

FOREWORD

The emergence of offshore wind as a cornerstone of Ireland's renewable energy future presents not only a pathway to decarbonisation, but also the potential to drive significant regional economic growth. With its strategic coastal location, existing industrial capabilities, and skilled workforce, the South East is ideally positioned to play a leading role in the development of Ireland's offshore wind sector.

The Ireland South East Offshore Wind Partnership was formed in late 2023 under the auspices of the Regional Enterprise Plan (REP) to look at the economic opportunity presented by the development of offshore windfarms off the south coast. The group has proved effective in facilitating meaningful engagement between local authorities, economic agencies, industry and key infrastructure partners, and higher education institutions.

On behalf of the Partnership I welcome this report from the South East Energy Agency. It provides a timely and insightful look at the scale of the opportunity before us — one that could shape the South East economy for decades to come. Offshore wind offers the potential to attract substantial private and public investment, stimulate innovation, and create new, high-value jobs across engineering, construction, logistics, and port services. It also presents a once-in-a-generation chance to revitalise regional infrastructure, enhance supply chain capacity, and strengthen collaboration between key stakeholders.

The purpose of this report is to highlight how the South East can capitalise on this moment — identifying the economic, business and community gains that can arise from coordinated regional action. It shows that, with clear ambition and strong collaboration, the South East can become a leading force in Ireland's clean energy transition and a proud contributor to Europe's green future.

David Dempsey

Dr. David Dempsey, Chair, Ireland South East Offshore Wind Partnership

SOUTH EAST ENERGY AGENCY CHAIR'S INTRODUCTION

Ireland's offshore wind ambition is entering a decisive decade—and nowhere is better positioned to lead than the South-East. As Chairman of the South East Energy Agency (SEEA), I am proud to introduce this report, which demonstrates the region's capacity to deliver up to 5 GW of offshore wind by 2050 and to become a national and European exemplar of place-based climate and industrial transformation.

Commissioned by SEEA on behalf of the Ireland South East Offshore Wind Partnership (ISEOWP), and funded by the four Local Authorities of Carlow, Kilkenny, Waterford and Wexford, this study provides a robust foundation for action. It quantifies the economic and energy opportunities linked to the South Coast Designated Maritime Area Plan (DMAP), and outlines the infrastructure, policy and institutional conditions necessary for success. Crucially, the Partnership has enabled the alignment of local government climate planning, urban regeneration, and county-wide enterprise strategies with Ireland's national offshore wind objectives.

SETU plays a central role in this effort, driving research, skills development, and innovation across marine, digital, and engineering domains to ensure a pipeline of talent and knowledge for the offshore industry. The recent announcement of funding for Waterford Airport marks a strategic enabler—strengthening international access for offshore personnel and unlocking new use cases such as drone monitoring and light aviation during operations and maintenance phases.

SEEA continues to advocate strongly for accelerated grid infrastructure and energy sector coupling across electricity, data, mobility and industry. The region's success in offshore wind will depend on timely upgrades to transmission capacity, hybrid connection options, and smart regulatory frameworks. In parallel, we support the IDA in attracting large-scale energy users—particularly multinationals pursuing Net Zero-aligned operations under the EU Taxonomy regulation. These companies are increasingly targeting regions where renewable power is guaranteed, scalable, and locally integrated.

In November 2025, the EU27 formally reaffirmed their climate ambition: a 90% emissions reduction target by 2040, with an interim reduction of 66.8%–76.8% by 2035. The South-East region, through the South Coast DMAP and the imminent Tonn Nua development, is uniquely positioned to deliver for Ireland at precisely the right moment—providing clean electricity, enabling the decarbonisation of hard-to-abate sectors, and attracting high-value inward investment.

This report sets out the pathway. The Ireland South East Offshore Wind Partnership will continue to play a vital role in delivering a just, regionally rooted and globally competitive clean energy future.

John Carley

John Carley, Chair, South East Energy Agency

EXECUTIVE SUMMARY

Ireland—and in particular its South-East region—stands at a pivotal juncture. As global energy systems are reshaped by decarbonisation, security concerns, and the push for sustainable growth, Ireland's future prosperity will depend on building new sources of strategic economic advantage. Offshore wind energy (OWE) offers just such an opportunity—vital not only for climate action and innovation, but also for economic resilience and long-term competitiveness.

Independent research commissioned by the Department of the Environment, Climate and Communications (DECC) in 2023–2024 confirms the scale of this opportunity for both Ireland and the South-East. The development of a robust OWE sector has the potential to unlock major gains in employment, gross value added (GVA), infrastructure investment, and community regeneration. Critically, it can enable Ireland to meet its legally binding climate targets and avoid potential EU fines of up to €26 billion after 2030.

The South-East is ideally positioned to lead this transformation. With a growing population of nearly 500,000 and a skilled workforce approaching 250,000, the region has a diversified economy underpinned by strengths in engineering, manufacturing, logistics, and port operations. Its proximity to the Greenlink and Celtic Interconnectors reinforces its strategic relevance as a gateway between Ireland and European energy markets.

The real impact will be felt at community level. Under the South Coast Designated Maritime Area Plan (DMAP), over €500 million in Community Benefit Fund payments is expected to be delivered across the South-East over the next 15 years. These resources will strengthen social infrastructure, support rural and coastal resilience, and enable the emergence of energy communities.

The Ireland South-East Offshore Wind Partnership (ISEOWP) is a well-established regional coalition of local authorities, developers, enterprise agencies, the regional energy agency, higher education institutions, and community stakeholders. It is already embedded in key national processes, including the Government's Future Framework, Offshore Wind Industry Forum, and Regional Enterprise Plans. The Partnership is ready to help deliver at least 5 GW of OWE capacity off the South-East coast by 2050.

Momentum is growing. At EU level, supportive policy frameworks—including the European Green Deal, Wind Power Package, Renewable Energy Directive, and Net Zero Industry Act—are fast-tracking project delivery, streamlining permitting, and mobilising investment into OWE infrastructure and

supply chains. Financial instruments such as the Connecting Europe Facility are already supporting public and private investment in priority projects across Europe.

International best practice shows that strategic alignment can unlock transformative outcomes:

- The UK demonstrates how tax incentives and supply chain localisation can build domestic capacity;
- Belgium exemplifies successful integration of community benefit schemes;
- Germany and Denmark offer lessons in scaling coordinated industrial and workforce strategies.

Drawing on this knowledge, the South-East region has articulated the following strategic objectives for success:

- **Create a Renewable Energy Hub**: Positioning the South-East as a key location for investment, operations, consumption/utilisation and export activity in OWE.
- **Establish a Centre of Excellence in Offshore Wind**: Anchored by SETU, delivering high-impact research, training, and innovation.
- **Empower Parallel Industries**: Enabling local firms in digital, logistics, precision engineering, and services to join OWE supply chains.
- **Digitise the Offshore Wind Sector**: Leveraging regional expertise in software, AI, and internet of things (IoT) to create a globally competitive advantage.
- **Utilise existing strategic infrastructure** e.g., Rosslare Europort & Port of Waterford, Waterford Regional airport etc.

To achieve this, a set of strategic enablers and recommendations are identified:

- Timely MAC approvals for Rosslare Europort and the Port of Waterford;
- A €250 million phased investment programme in port infrastructure;
- Completion of all four South Coast DMAP auctions, starting with Tonn Nua site;
- Policy certainty and planning streamlining to support project delivery;
- Expansion of skills development via SETU, ETBs, and industry pathways;
- Alignment of national tax and investment supports with evolving EU frameworks;
- Strong governance and transparency in deploying Community Benefit Funds;
- Institutional capacity to maximise EU funding drawdown and strategic partnerships.

Through coordinated action with Enterprise Ireland, the IDA, EirGrid, the CRU, local government, key infrastructure stakeholders, and community groups, the South-East can help deliver not just a clean energy transition but a new economic engine for the region.

With the right policy support and continued local ambition, Ireland's South-East can become a flagship European region for offshore wind—delivering sustainable jobs, climate progress, and regional prosperity for decades to come.

Figure 1: Infographic illustrating the strategic flow from MAC approval to regional decarbonisation

STRATEGIC ENABLERS

Strategic Enabler:	Timeline	Responsible Agency/Stakeholders
Marine Area Consent (MAC) Approval for Rosslare Europort & Port of Waterford	Immediate (2024–2025)	MARA, Department of Housing, Local Authorities
€250M Port Infrastructure Investment (Rosslare ORE Hub, Waterford O&M), Waterford Airport investment	Post-MAC approval (2025–2027)	Port Authorities (Rosslare, Waterford), Private Investors, EU CEF, Central Government
Job Creation from Tonn Nua & Full SC-DMAP Development (600 jobs)	2025–2030	MARA, DECC, Developers, Local Authorities, Enterprise Ireland
Auction the 3 remaining sites in South DMAP ASAP	2025	Expedite the 3 remaining auctions to follow the Tonn Nua auction.
Grid Capacity Development (2.5GW) & Private Wire Facilitation (2.5GW)	2025–2032 (staged)	EirGrid, CRU, DECC, Wind Farm Developers
Hydrogen Production Infrastructure at Waterford Port & Great Island	2027–2035	GNI, Private Sector (Hydrogen), DECC, EU Agencies
Green Hub Industrial Parks in 4 South East Counties	2025–2035 (phased)	Local Authorities, IDA, Enterprise Ireland, Private Sector
Community Benefit Fund (€6M–€36M annually for 15 years)	2034–2050	DECC, OWE developers, Local Authorities, SEAI, SEEA, Leader Partnerships, Community Groups.
Decarbonisation of Agriculture via Energy Offsets (Net Zero Region Strategy)	2025–2050	Teagasc, SEEA, Agri Sector, DECC, OWE Developers

OBJECTIVES OF THE SOUTH EAST REGION

Critical objectives of Ireland South East Offshore Wind Partnership

Objective	Description	Relevant Owner
Creating Renewable Energy Hubs	Establishing the South East as a leading location for offshore wind energy (OWE) investment and industry development.	South East Offshore Wind Energy Partnership, Government of Ireland, Local Authorities, DETE/DECC, EI, IDA, Infrastructure Stakeholders
Centre of Excellence in Offshore Wind Energy	Developing the region into a hub for research, training, and innovation in OWE, attracting research, investment and high-value jobs.	SETU (South East Technological University), Enterprise Ireland, Industry Stakeholders, DETE/DECC
Empower Parallel Industries	Supporting industries such as logistics, manufacturing, and digital sectors to integrate into the OWE supply chain. Specialised operations & maintenance support services, and training.	IDA, Local Enterprise Offices, Private Sector
Digitising the Offshore Wind Sector	Leveraging digital technology, AI, and big data to enhance efficiency and develop a competitive edge.	SETU, Tech Industry Leaders, Research Institutions

RECOMMENDATIONS TO PROGRESS THE PARTNERSHIP APPROACH

Key recommendations for Implementation by the partnership members

Recommendation	Description	Relevant Owner
Port Infrastructure Investment	Upgrading Rosslare Europort and Port of Waterford to support OWE logistics and operations.	Port Authorities, Government, MARA, EU Funding Agencies
Grid Connectivity & Expansion	Ensuring necessary grid upgrades and interconnections for offshore wind energy distribution.	EirGrid, ESB Networks, GNI (Gas Grid) Government Agencies (CRU), SEEA
Planning Streamlining	Fast-tracking planning permissions for OWE projects and related infrastructure. Ensure all 4 DMAP areas are procured.	An Bord Pleanála, Local Authorities, Government, MARA
Skills Development Programmes	Expanding education and training to meet OWE industry needs.	SETU, Education & Training Boards, Private Sector
Seabed Leasing & Regulation Clarity	Creating clear, predictable policies for leasing and grid connection.	Department of Environment, Climate & Communications, MARA
Tax Incentives & Investment Attraction	Introducing tax policies to attract investment in OWE within EU regulations.	Department of Finance, IDA
Community Benefit Fund Allocation	Ensuring local communities benefit from OWE developments.	Government, Local Authorities, Community Groups, SEEA.
Industry & Government Collaboration	Enhancing partnerships to attract international investment and align policies.	Enterprise Ireland, South East Offshore Wind Partnership, IDA, DETE, DECC

INTRODUCTION

Ireland and the South-East region are on the cusp of an exciting breakthrough in which our economy is powered by clean, reliable, and sustainably generated energy.

1 INTRODUCTION - THE IRELAND SOUTH EAST OFFSHORE WIND PARTNERSHIP

The Ireland South East Offshore Wind Partnership (ISEOWP) brings together key stakeholders from the region's economic ecosystem to ensure that offshore wind is at the heart of our future economic development.

Figure 2: Members of Ireland South East Offshore Wind Partnership

The partnership enables meaningful engagement between the ports, the airport, local authorities, industry and enterprise agencies alongside the Higher Education and Training Institutes and Skills Forum. We believe that collaboration is key to delivering on the region's ambition to play a major role in Ireland's offshore renewable energy sector and sharing in the economic and societal benefits this will bring locally and nationally.

The partnership prepared this report to:

- **Provide a comprehensive overview of the South East region of Ireland, focusing on the unique geographical, economic and demographic characteristics, as well as an offshore wind policy review.**
- **Analyse the direct economic and job creation impacts for the region, examining community and stakeholder engagement and opportunities.**

Ireland South East Offshore Wind Partnership (ISEOWP)

The Ireland South East Offshore Wind Partnership brings together key stakeholders from the region's economic ecosystem to ensure that offshore wind is at the heart of the region's future economic development.

In 2023 the then Minister for Enterprise, Trade, and Employment, Simon Coveney, wrote to every Regional Enterprise Plan (REP) chair to ask them to consider utilising the REP network to look at the economic opportunity presented by offshore wind.

Dr. David Dempsey, ex Salesforce, agreed to chair the group of stakeholders who came together as the Ireland South East Offshore Wind Partnership. The group has met quarterly since then and has travelled on best practice study trips to the North East of England and to the annual WindEurope conferences. Sub-groups under the partnership are examining and developing actions on how the region needs to prepare to maximise economic opportunities across various thematic areas: Skills; developing Supply Chain; attracting FDI; and securing major infrastructural development.

The partnership enables meaningful engagement between the ports, the airport, local authorities, industry and enterprise agencies alongside the Higher Education and Training Institutes and Skills Forum. The partnership believes that collaboration will be key to supporting the development of new companies, creating the next generation of skilled employees and delivering on the region's ambition to play a major role in Ireland's offshore renewable energy sector.

The overarching objective of the partnership is to maximise the economic benefit to the South East in assisting Ireland and Europe achieve its ORE targets. We believe these economic benefits will be seen across various areas:

- Number of jobs in the offshore wind supply chain
- R&D spend within companies involved in the supply chain
- Investment and enhancement of regional infrastructure
- New Start Ups serving the offshore wind supply chain
- Increased FDI attractiveness
- Parallel industry opportunities
- Community Benefit Funding

1.1 Ireland's Offshore Renewable Energy Targets

Ireland's offshore renewable energy targets are ambitious. Building on 2030 targets of 5 Gigawatts (GW) of grid-connected offshore wind plus an additional 2GW of non-grid connected offshore wind in development, by 2040 Ireland aims to deliver 20GW of Offshore Renewable Energy (ORE), and by 2050 this rises to 37GW, (approximately six times current peak electricity demand), with potential for 50GW. The scale of these targets is a strong signal of Ireland's clear potential to become a global leader in ORE.

1.1.1 Ireland South East's key role

The region's existing port infrastructure and our geographical proximity to the south coast wind farms make the region the ideal location from which to service and manage offshore renewable energy projects. The work of the partnership, chaired and coordinated by business leaders, ensures that our local authorities, enterprise agencies and higher education stakeholders are working together to make offshore wind a priority sector for the region.

Figure 3: Comparative advantages of Ireland's South East region

1.2 Economic benefits to the South East region

The overarching objective of the partnership is to maximise the economic benefit to the South East in assisting Ireland and Europe achieve its ORE targets. We believe these economic benefits will be seen across various areas:

- Number of jobs in the offshore wind supply chain and local services
- R&D spend within companies involved in the development of the OWE opportunity, O&M spend within supply chain industries.
- Investment in and enhancement of regional infrastructure.
- Availability of up to 7GW of locally produced clean energy.
- Community Benefit Funding.
- New Start Ups and existing parallel industries serving the offshore wind supply chain.
- Exports of goods and services to the UK, Europe and global markets.
- Increased FDI attractiveness – 2035 -2050.

Ireland and in particular its South East region are on the cusp of an exciting breakthrough. A breakthrough to a future in which our economy is powered by clean, securely generated energy in a manner that generates significant investment, high quality employment and clusters of clean energy industrial excellence in the South East region.

This report sets out the generous growth, employment and the substantial social benefits in the form of Community Benefit Fund spending – from which the region stands to gain.

Ireland's exciting national potential in offshore wind generation is internationally recognised. Visiting Ireland in 2024, Germany's ministerial envoy for international hydrogen projects Dr Jürgen Friedrich said that Ireland's potential in OWE was *"a once-in-a-lifetime opportunity as Ireland is in a unique position with one of the largest resources of offshore wind."*[1].

> *"**This is a once-in-a-lifetime opportunity.** Ireland is in a unique position with one of the largest resources of offshore wind... Our joint vision is that **Ireland is part of Europe's hydrogen engine** especially as part of the connectivity we are going to establish in the North Sea."*
>
> **Dr. Jürgen Friedrich,**
> **German Government Envoy for Hydrogen**

[1] See also section 4.2

In addition to the exciting long-term potential, equally pressing reasons to support accelerating OWE investment are:

- Securing our energy supply in an increasingly volatile and unpredictable world.
- Meeting Ireland's obligations: Total renewable energy usage in Ireland overall was only 13.5% in 2020 as against the 16% target mandated by the EU's Renewable Energy Directive (RED), while the trend towards the increased 42.5% EU (REDIII) target in 2030 is similarly concerning[2]; and total CO_2 emissions for the period to 2030 are forecast to exceed the Carbon Budgets (CB1 & CB2) by between 17 and 27%[3],
- Avoiding fines for breach of our EU climate action commitments that, according to a recent official report could be €8 to 26 billion[4] and if Ireland was to put into effect the measures in its own Climate Action Plan 2024 by 2030, it could still amount to a bill of between €3bn and €12bn[5]
- To tackle cost of energy for the Irish citizen: Wind energy is proven in ORESS Auction 1, requiring average €86.05 per MWh. Proving that over a life cycle assessment of generation compared to traditional oil and gas fired generations, long term post-investment power should get less expensive.

These "push" factors are complemented by equally compelling "pull" factors including the prospects of:

- Jobs – Direct employment, per GW installed between 250-650 direct jobs annually.
- Providing 5GW of clean, renewable energy for local consumption.
- Achieving energy supply at close to zero marginal cost of production.
- Reaping the benefits of greater scale and lower prices as the OWE industry matures.
- Securing a cumulative €1.7 billion in GVA and €500 million in Community Benefits Funds in the South East region alone(set out in Section 4).

[2] REDIII sets 42.5% (binding average) to 45% (stretch); Ireland's NECP 2024 sets 43%

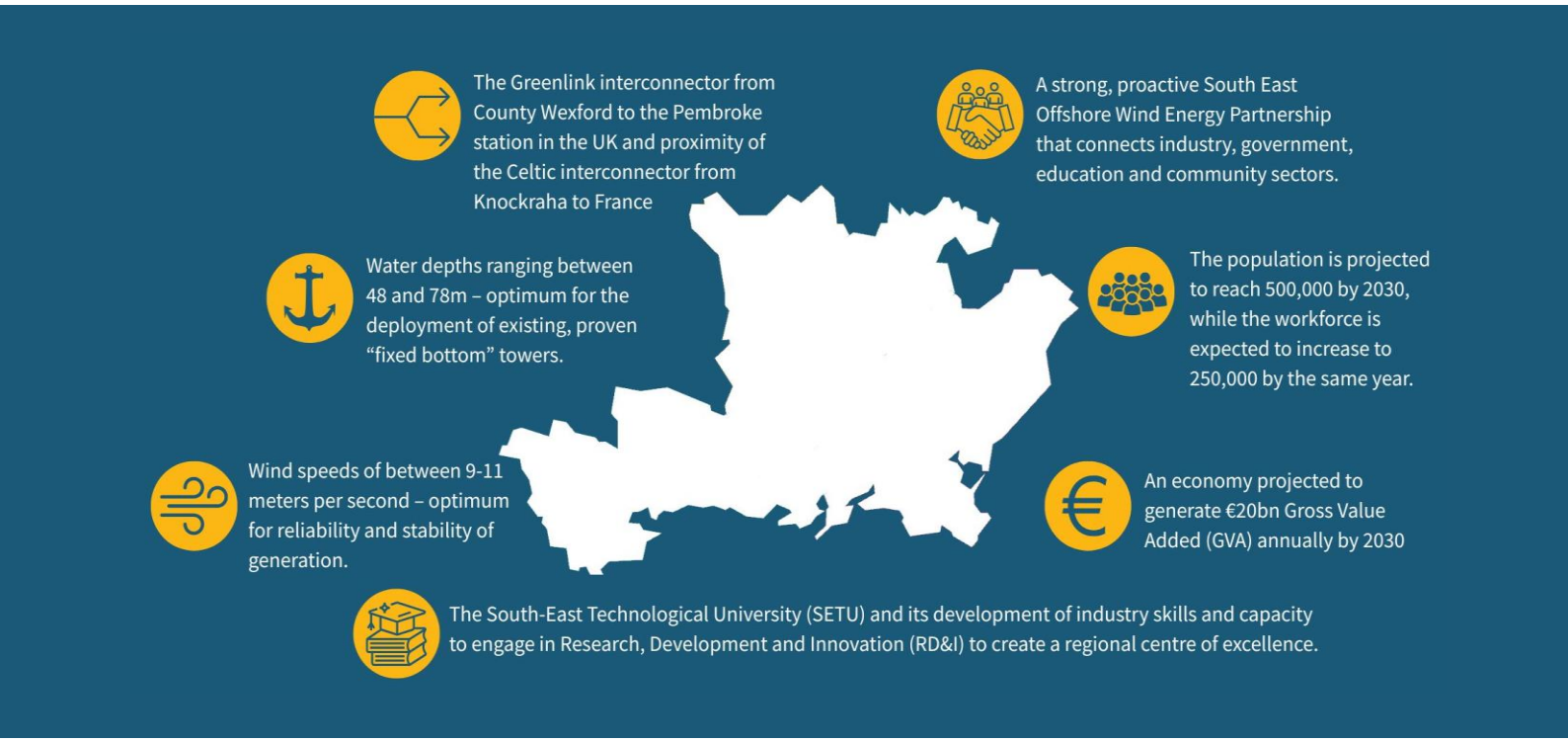
[3] EPA 2024

[4] IFAC/CCAC March 2025

[5] https://www.irishexaminer.com/news/arid-41585959.html.

1.3 Why the South East region?

The South East region alone has a coastline of 434 kilometres in length, comparable to that of the Netherlands, which had reached 4.7 GW of OWE capacity by 2023. In addition, the region also benefits from political alignment with national and regional strategies (RSES, REP, Future Framework).



An infographic profile of the South East showing comparative advantages is shown in Figure 4 above. If supported by infrastructure investment, to enable this OWE aligned development, as well as policy and planning supports, the South East has the potential to deliver up to half of Ireland's 2040 OWE target of 6.5 GW (set out in NECP 2024). EirGrid's planned grid connection programme for Tonn Nua, now indicates commissioning of the 1st 900 Megawatt (MW) in 2033/34, later than originally expected, while a study for Government anticipates that the balance of the 5GW in the additional mapped areas of the South Coast Designated Marine Area Plan (SC-DMAP) would be in place by 2040 (see Figure 5 below [6]).

[6] BVGA(4) *"South coast Designated Maritime Area Plan: Regional economic impact of offshore wind development",* Report for *the Department of Environment, Climate and Communications*, May 2024.

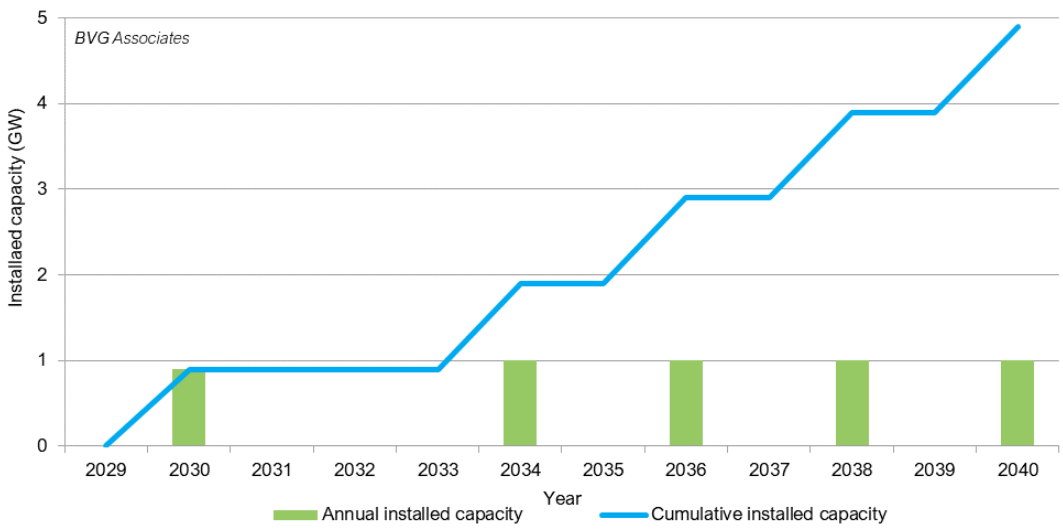


Figure 5: The South East region's high OWE potential

Figure 5 shows the region's clear advantages in terms of infrastructure, interconnection, demographic, education and maritime conditions. The South East's reliable wind speeds, moderate sea depth and sea-bed conditions are particularly critical in enabling the location of fixed as against floating infrastructure. This reduces cost, risk and encourages early, large scale, investment.

1.4 The South Coast Designated Maritime Area Plan

The development of the South East region's OWE potential is based on the SC-DMAP. This identifies the 4 Maritime Areas (see Figure 6) for the development and operation of approx. 4.9 GW offshore wind energy capacity in the region.

By designating specific areas and establishing a legal framework for the management of fishing, energy and conservation activities in these areas, the Designated Marine Area Plan (DMAP) process raises investor certainty in the legality and compliance of offshore wind investment. By reducing risk, this in turn helps to secure investment at a level needed to achieve greater scale and cost efficiency.
Area A, the "lead" area, is earmarked for an installed OWE capacity of approximately 900 MW (0.9 GW) with remaining areas B, C and D earmarked for a further 3.3 GW to 4.7 GW.

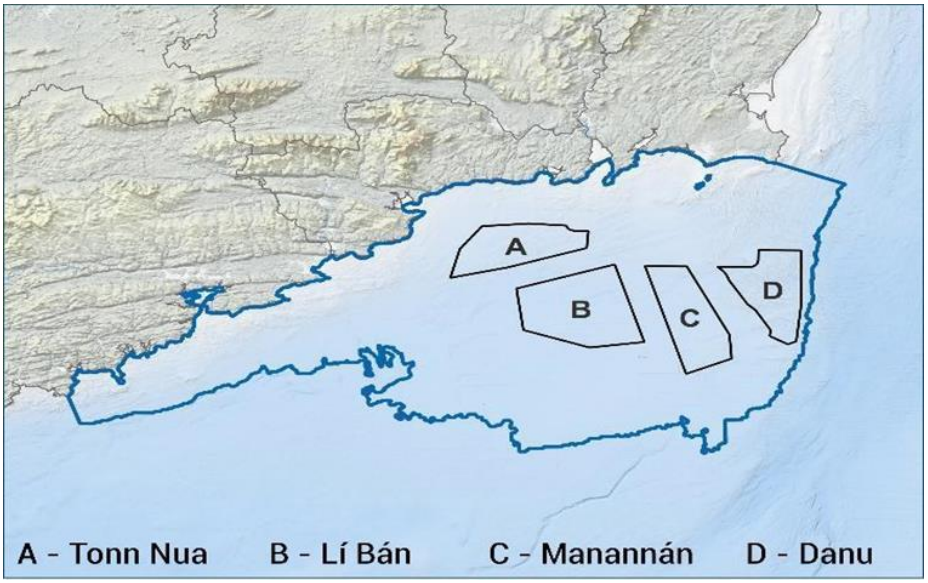


Figure 6: Maritime Areas proposed for OWE development in the SC-DMAP

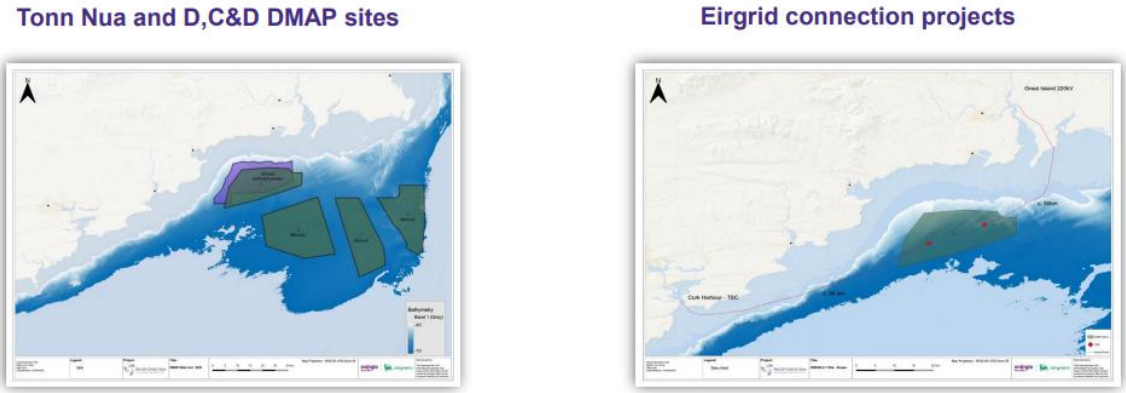


Figure 7: Maritime Areas for OWE in the South East and the proposed installation capacities

The following section summarises the significant benefits of this potential to the regional economy in terms of GVA, Employment, Community Benefit Fund Investments & downstream spin-offs.

1.5 Jobs – Where and When?

Studies commissioned by the Department of the Environment, Climate and Communications (DECC) examine the expected national employment impact of large scale OWE development, presented as Full Time Employment years (FTE years)[7].

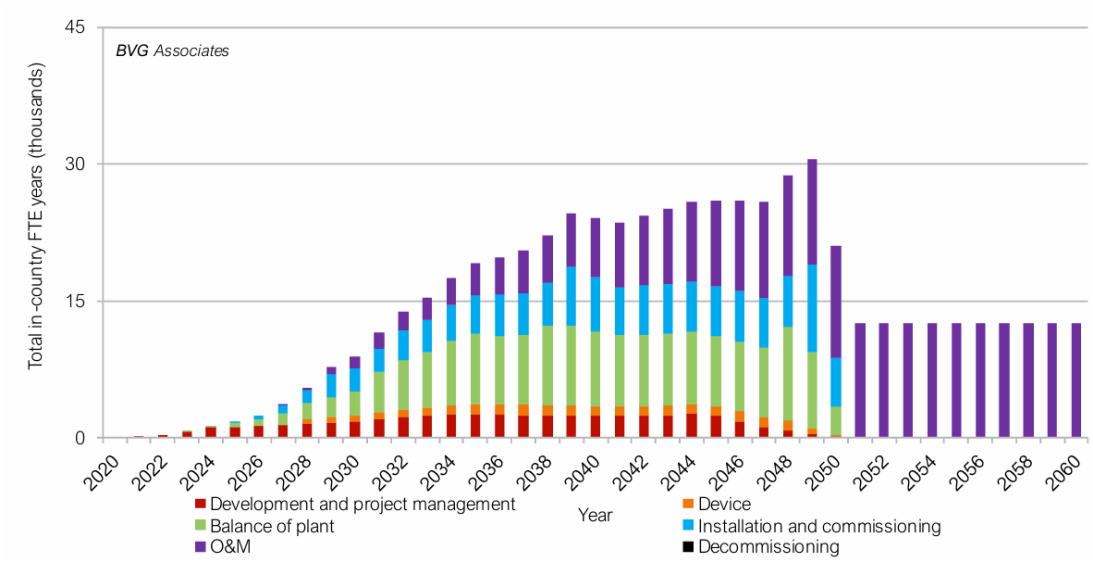


Figure 8: Irish annual FTE years of employment for 37 GW OWE by 2060, split by supply chain level 1 category

As the BVG Associates (BVGA) report in question states about this figure, it shows: "annual FTE years employment reaching a peak of about 31,000 in 2049. Over the lifetime of the projects, there is the potential for 820,000 FTE years of employment be created in Ireland, about 20% of the total created globally by Irish projects. The percentages breakdown as follows: 13% of this is in fixed offshore wind, 43% in floating offshore wind, 39% in hydrogen production, storage and transmission and 5% in interconnection. 52% of the jobs would constitute in direct employment while 48% would be indirect jobs."

Converting this data to the 'number of jobs' requires a number of assumptions, as the employment profile is quite variable over time and all jobs may not be full time. Suffice to say that:

- There are broadly 3 stages: development, construction, operations and maintenance (O&M).
- Employment levels are most variable during development and most stable during O&M.
- If we make the simplifying assumption that the number of FTE years in any one year broadly reflects the number of 'jobs' during that year, then we can estimate that the development of 37GW of well-connected OWE in Ireland out to 2060 will employ around 31,000 people at

[7] BVGA(3) *Offshore renewable energy export potential for Ireland.* Workstream 4: Export viability, policy considerations, trade and investment opportunities. *A report for the Department of Environment, Climate and Communications, 2024.*

peak, some 13,000 during operations and a variable number much less than 13,000 during development.

The equivalent study (also by BVGA for DECC[8]) for the full set of projects to be developed in the South Coast DMAP area provides a useful comparison of the local (South) and national employment impact, as illustrated below.

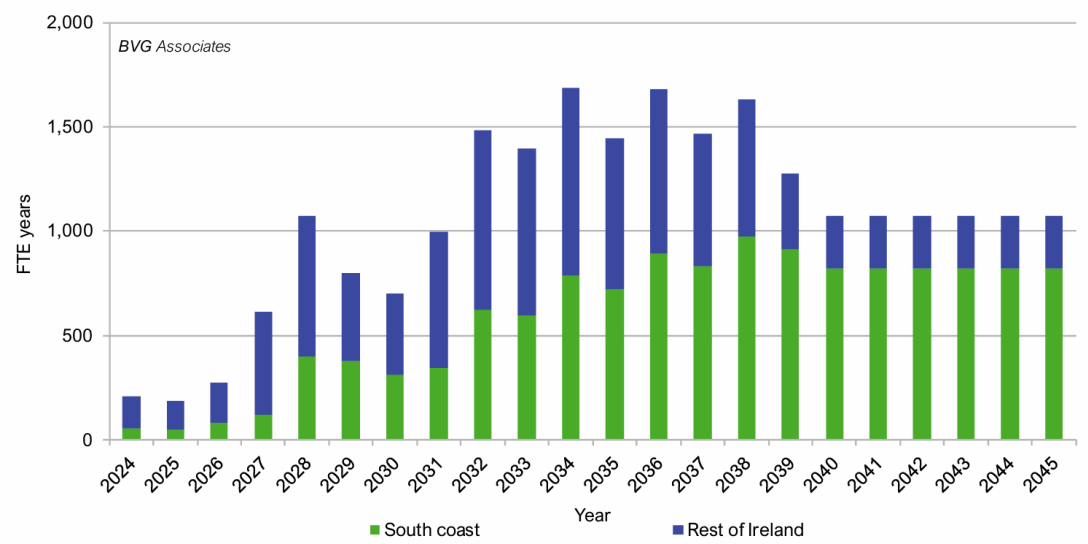


Figure 9: Irish employment effects for all SC-DMAP projects in the baseline scenario

The following points may be observed or inferred:

- The earlier phases give rise to more national jobs than local, construction is roughly split, while most of the employment at the O&M stage is in the "South" region.
- Using the same simplifying assumption as before, we can estimate that the construction jobs would peak in the South region at around 1,000 and O&M would level off at about 800 full-time jobs.
- However, we can also reasonably assume that some of the jobs in the South arise around Cork City (with its enormous harbour), so it is estimated that about three quarters of that total employment effect would be in the South East region during the construction and O&M stages.

[8] BVGA(4) "*South coast Designated Maritime Area Plan: Regional economic impact of offshore wind development",* Report for DECC, May 2024.

1.6 Economic and Community Benefits - An Overview

In a study published in tandem with the SC-DMAP[9] substantial economic benefits were identified under both "baseline" and "upside" scenarios for OWE generation capacity. The economy of the South region stands to gain a total of €2.2 billion in GVA as well as the addition of 650 new jobs, with most of that domiciling in the South East Region (see Chapter 4 for a more detailed discussion). Because the legal and regulatory mandate under the Offshore Renewable Electricity Support Scheme (ORESS) ensures that €2 per Megawatt hour (MWh) of OWE generated revenue accrues to a Community Benefit Fund (CBF), significant social benefits are likely to be diffused throughout local communities in the region. This requirement is to ensure that such auctions support *"the wider economic, environmental, social and cultural well-being"* of local communities. We estimate a total cumulative of about €450 million in CBF spending, arising from the OWE supports granted to all four South-Eastern wind farms in the SC-DMAP planned to be constructed between now and 2040, offering a very significant benefit worth approximately 2.5 per cent of the region's current GVA. A high-level summary of these benefits is indicated below (*Figure 10*).

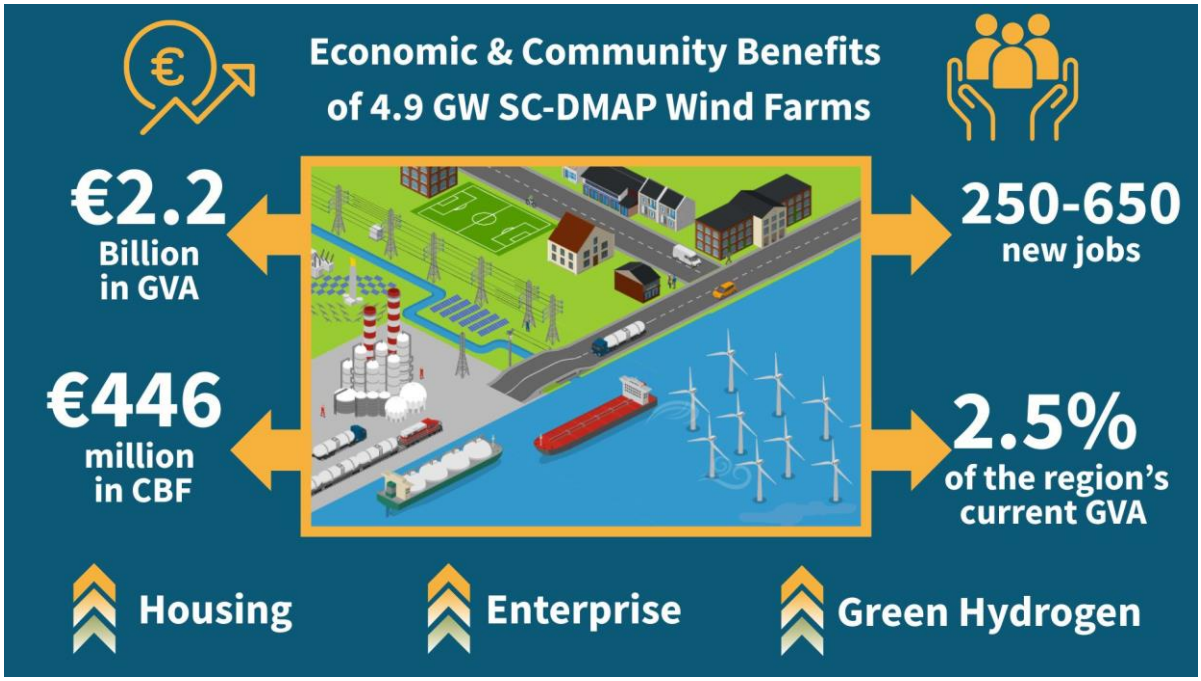


Figure 10: Economic and Community Benefits from the impact of 4.9 GW SC-DMAP projects over the life cycle of the wind farms considered

[9] ibid

1.7 Downstream Economic Spin Offs

In addition to the more direct employment and economic impacts, it is reasonable to consider whether there are possibilities within the South East region to add value to the power generated from the OWE though industrial uses, such a data centres and hydrogen production. In an ideal world, a similar volume of power would be used locally to minimise the load on (and need for development of) the transmission system, suggesting such industrial demand in the area.

The South-East Region has a unique opportunity to establish green or eco-industrial parks within the region leveraging on the abundant clean energy potential from offshore wind power. These parks could serve as hubs for sustainable industrial development, attracting investment in sectors such as pharmaceuticals, technology, cement production, fertiliser/ammonia production and clean fuels. By co-locating renewable energy generation with large energy users, the region can drive decarbonisation efforts, reduce energy costs, and enhance competitiveness for industries transitioning to clean power. This initiative aligns with global trends in green industrial development and positions the South-East as a leader in fostering innovation, creating high-quality jobs, and supporting Ireland's broader climate and economic goals.

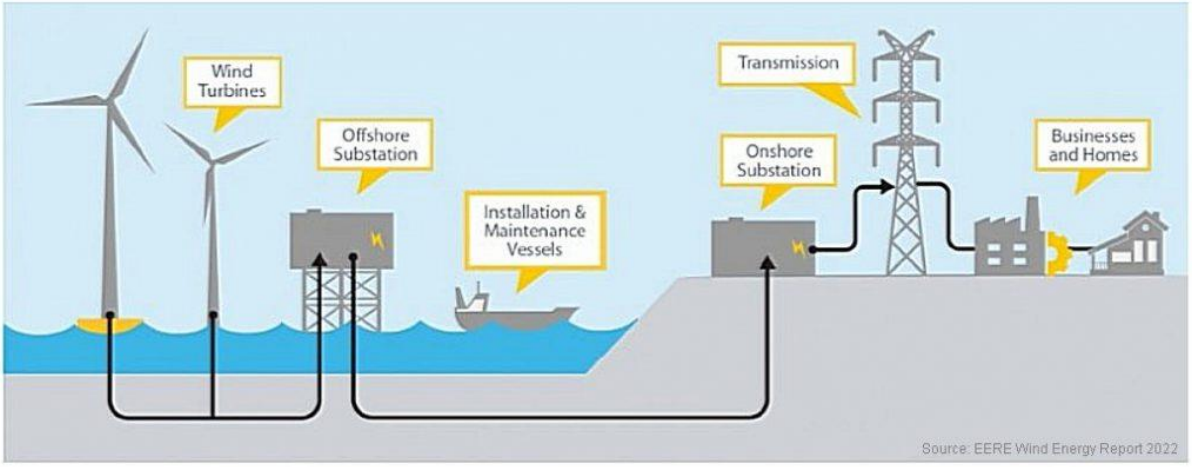


Figure 11: The path from offshore to onshore for the clean energy transition

Modern offshore windfarms are at the scale of power stations (hundreds of MW) and usually deliver their power directly to the national transmission systems, most likely at 220,000 Volts in this country. Transmission systems are meshed motorway-type grids, so power delivered to them is no longer 'local'.

A developer of an offshore windfarm in Ireland only has two approaches to selling the power output so that the billions of euro in bank finance that are required to construct it can be raised:

1. DECC's ORESS, which requires the project to sign a Power Purchase Agreement (PPA) with a large electricity supply company, one with a big enough balance sheet to satisfy banking criteria, which then deals with Ireland's wholesale Integrated Single Electricity Market (ISEM)

on behalf of the project. The price the project bid in the ORESS auction is provided by adjusting the total revenue from that PPA with funds levied from consumers (PSO levy). Because Government provides supports, it retains the 'green', by not issuing Guarantees of Origin (GoOs) for the power produced during the (usually 15 year) support period.

2. The project could sign a Corporate PPA (CPPA) with a large commercial entity, which prefers to use 'green' power for its activities, for example data centre services. While the GoOs would be issued to the CPPA provider by Government (since it is not providing any support), the resulting 'green' power would not be available for wider use, as it has been purchased to power the activities of the CPPA provider.

In the former case, industrial activity could be developed locally through development of green parks in any of the 4 counties of the South East partnership and while the electricity demand they create would help balance the grid, they would not be using 'green' power during the projects' support periods (first 15 years). In the latter case, either a large data centre service company could be encouraged to agree a CPPA and locate its activities locally, or a significant producer of hydrogen could do likewise, aiming to produce large volumes of hydrogen via electrolysis in the area (probably requiring export by ship or pipeline given low hydrogen demand in Ireland).

The Irish Government aims to start producing green hydrogen from OWE, and even has a 2GW target for that, but under its own rules it would not be able to issue GoOs for the power generated by supported OWE, thus losing the 'green' for the first 15 years. Clearly policy development is required in this area, and ISEOWP will consider entering discussion with Government on this question.

Beyond the construction and commissioning of offshore wind farms, the South East region stands to gain significantly from the long-term economic opportunities linked to Green Hub Industrial Parks. These hubs—strategically located across the region—will capitalise on abundant clean energy to attract energy-intensive and advanced manufacturing sectors. Industries such as data processing, low-carbon construction materials, fertiliser production, e-fuels, and food logistics and can co-locate with renewable energy generation, enabling efficient energy use and creating a stable base of long-duration, high-value employment.

Inland counties like Carlow and Kilkenny also present strong potential for specialist supply chain activities including component fabrication, mechanical services, and digital infrastructure support. Leveraging regional expertise in aerospace, agri-tech, precision engineering, and renewable-powered heating systems, these green industrial parks will foster a new class of jobs in operations, smart grid management, hydrogen handling, and circular economy services. The development of these parks will ensure that the economic dividend of offshore wind is sustained well beyond commissioning, positioning the South East as a leader not just in energy generation, but in energy-enabled enterprise and innovation.

1.8 Supporting success: Existing supports & further requirements

Existing EU level supports

A strong foundation of supports already exists at EU level for the promotion and acceleration of Europe's OWE economy. By 2050, the EU aims to have 300 GW in OWE installed capacity (of which Ireland is, under the most ambitious scenario, expected to deploy 37 GW, or nearly 13%) to which end it has targeted a total of €800 billion in OWE investments in the coming quarter century.

This commitment to developing Europe's OWE capacity has intensified recently in several ways (EU policy supports are elaborated further in Chapter 3):

- Through the development in 2020 of an EU OWE Strategy,
- Through the recent emphasis in the Draghi report on renewable energy as a source of EU competitiveness,
- Through the operationalisation of an EU "Taxonomy" to classify and incentivise sustainable investment,
- Through the development in 2023 – with impetus from heightened concerns over energy security in the wake of war in the Ukraine – of an EU Offshore Wind Action Plan,
- Through a revised Renewable Energy Directive with a binding EU-wide target of 42.5% for renewable energy by 2030.

National Policy

Government policy on offshore wind, as set out in the 2024 "Future Framework" policy document, is strongly aligned with EU policy. The Future Framework document sets out two scenarios - a 16 GW "Domestic Net Zero" and a 37 GW "Export-focused" scenario – of generation capacity by 2050. The document commits to supports that aim, respectively in the more immediate and longer-term, to achieve

Ireland's long-term OWE potential:

- Expanding interconnection capacity: Five new interconnectors - two of which (Greenlink and Celtic interconnectors) will be strategically placed in or close to the South East region – are set to expand Ireland's capacity to transmit surplus OWE energy,

- The development of a "Green Hydrogen" industry that, using electrolysis to convert OWE into a clean fuel, will enable some of Ireland's OWE capacity to be channelled into new, large-scale industries of the future, such as sustainably produced fertilisers, alternative transport fuels and clean heating systems, as well as to meet the demands of large industrial nations like Germany whose green hydrogen demand is expected to increase significantly in the coming decades.

Complementing this, the "Powering Prosperity" (Department of Enterprise, Trade and Employment (DETE) 2024) policy sets out an Action Plan from 2024-2025 and a pathway to 2030 for OWE development with the key objectives to:

- Create 5,000 jobs in OWE,
- Dramatically scale up OWE to achieve cost reductions,
- Develop a Large Company Green Industry ecosystem,
- Develop OWE Industry hubs around strategic port infrastructure,
- Pioneer RD&I in OWE generated manufacturing industries,
- Develop OWE industry supply chains, supply chain management and skills.

Investment in port infrastructure, streamlining planning and ensuring a suitable level, technology and quality of grid interconnectivity will be crucial to realising these benefits.

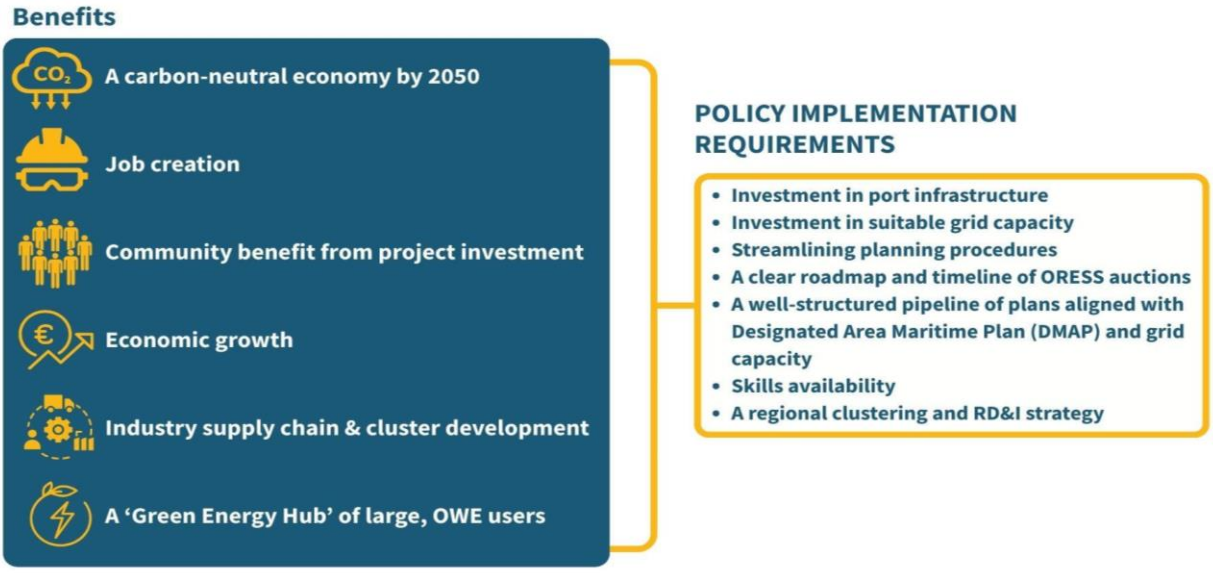
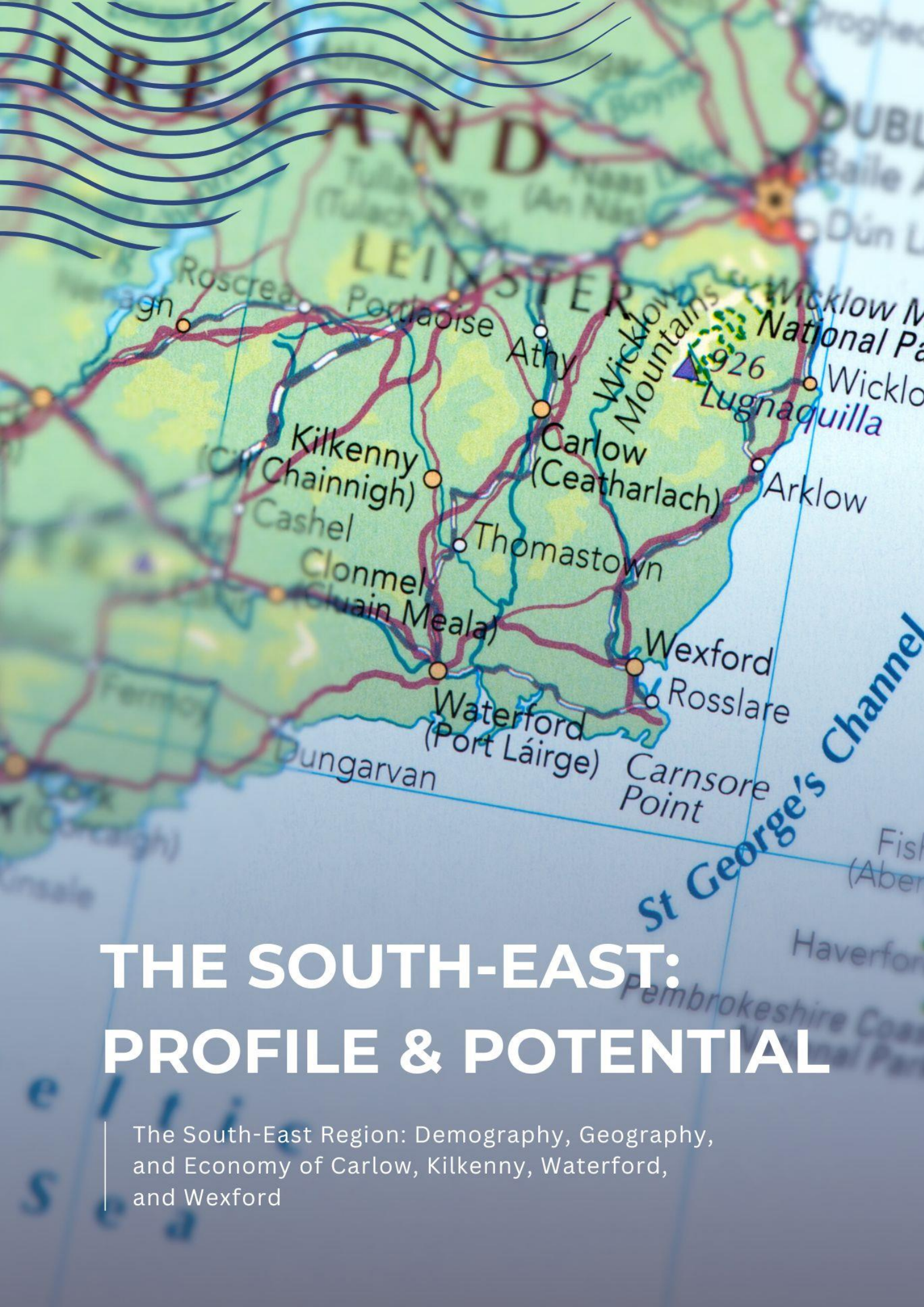


Figure 12: Potential Advantages and Policy Implementation Requirements for Success of OWE sector in South East Ireland



THE SOUTH-EAST: PROFILE & POTENTIAL

The South-East Region: Demography, Geography, and Economy of Carlow, Kilkenny, Waterford, and Wexford

2 THE SOUTH-EAST PROFILE & POTENTIAL

2.1 The South East Region: Demography, Geography & Economy

This chapter outlines the South East's economic base, infrastructure capacity, and strategic assets that enable it to become Ireland's **Offshore Wind Energy (OWE) powerhouse**.

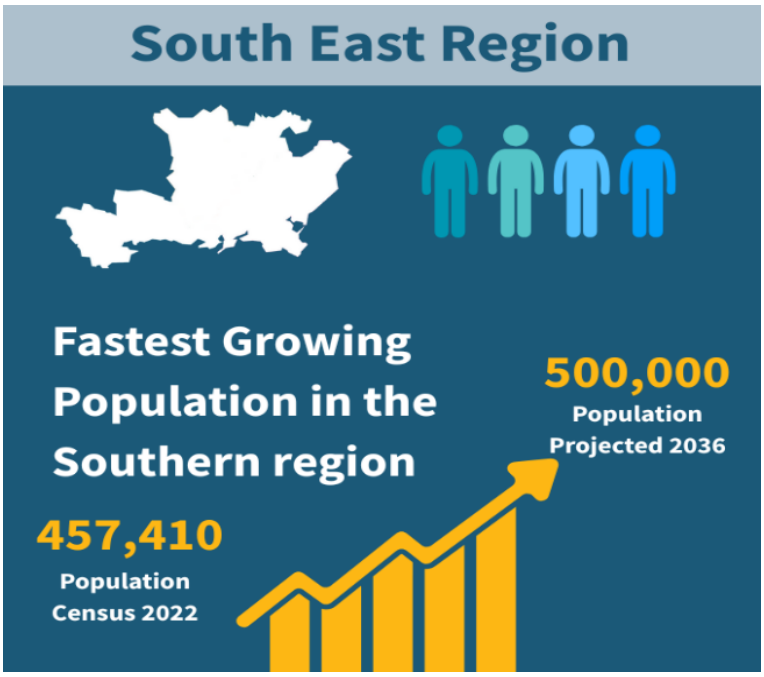


Figure 13: South East population data

Figure 13 above presents 2022 demographic data for the region, sourced from the Central Statistics Office. This continues the year-on-year increase in population growth which is consistent with overall national growth; highlighting workforce availability within the region in the long term.

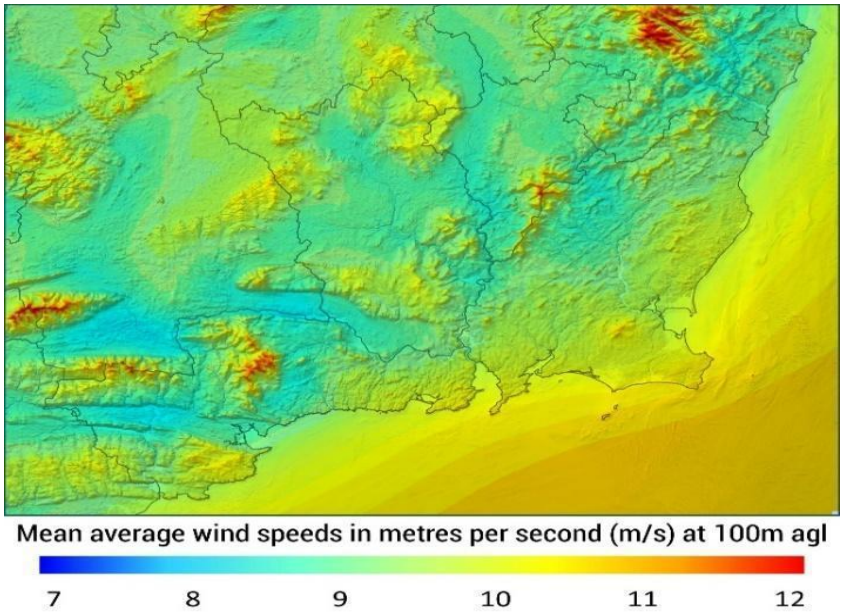


Figure 14: Mean wind speeds at the proposed maritime areas

Figure 14 above showing average offshore wind speeds at heights of 100m, illustrates the abundant wind resources around the DMAP areas and the appropriateness of these locations for providing the essential utility-scale, reliable, affordable, and zero-carbon energy required to expedite the energy transition.

2.1.1 Regional Economic Profile and Strategic Planning Alignment

Analysis of the South East's regional economic and labour data highlights both its strengths and untapped potential. As of 2024, total employment in the region stood at approximately 227,800, representing 7.9% of the national workforce, a figure aligned with its population share. However, the region's economic output—while growing—is still lagging. In 2021, it recorded a Gross Value Added (GVA) of €15.9 billion, with projections reaching €20 billion by 2030. This equates to just 3.9% of the national GVA, less than half of its population share. Similarly, tax data from the Revenue Commissioners shows the South East contributed €2.45 billion to the national exchequer, accounting for only 3.3% of total receipts. These figures underline the necessity—and the opportunity—to leverage the offshore wind economy to bridge this productivity and fiscal gap.

The Regional Spatial and Economic Strategy (RSES) 2020–2024 recognises this potential and sets out targeted objectives to harness it. Key among them are the development of renewable energy as a strategic asset, increased use of renewables across economic sectors, and improved marine spatial planning (MSP). Complementary priorities include establishing an integrated framework plan for Port of Waterford, advancing port development and connectivity to the Dublin-Belfast Economic Corridor,

and strengthening intra-regional transport links. Crucially, the RSES also calls for greater integration between Carlow, Kilkenny, Wexford, and Waterford, and emphasises the role of SETU in scaling regional skills, research, and innovation capacity. These ambitions are further reinforced in the draft revised National Planning Framework, which notes:

> *"Regional opportunities to leverage growth include national and international connectivity, especially via ports proximate to continental Europe, such as Belview and Rosslare Europort, strengthening HEIs and further balanced employment and housing development... This must be based on infrastructure and quality of life, rather than long distance commuting to Dublin, as is apparent in part of counties Carlow and Wexford in particular."*

As well as this sizeable population essential for guaranteeing a diverse workforce to meet growing supply chain employment, the region has other compelling attractions:

- The presence and proximity, respectively of the Greenlink interconnector to the UK and Celtic interconnector to France.
- Optimal water depths for bottom fixed OWE infrastructure (48m – 78m).
- Good wind speeds (between 9 – 11 m/s) optimal for reliability and stability.
- A proactive Ireland South East Offshore Wind Energy Partnership.

An analysis of key economic, labour force and fiscal data at regional level does bear this out:
The ambition of developing the South East region to its full potential is fully supported by the outgoing Regional Spatial and Economic Strategy for the Southern Region (RSES 2020-2024). This commits to achieving the following strategic regional objectives:

- A progressive development of the region's renewable energy potential as a strategic asset
- An increase of renewable energy usage across key sectors of the region's economy.
- Planning of the marine spatial environment.
- Developing a Strategic Integrated Framework Plan for Port of Waterford & others where merited.
- Developing regional Ports and connecting them to the Dublin-Belfast Economic corridor (DBEC).

- Further integration of Carlow, Kilkenny, Wexford and Waterford economies by road and rail links
- Optimising the role of the South East Technical University (SETU) in the development of skills and RD&I capacity in the region.

2.2 Key infrastructure investment: A Vital Prerequisite

Realising the South East's full economic potential relies heavily on investment in its key infrastructure including but not limited to roads, rail, ports, gas grids, electricity transmission and distribution systems etc. Aside from the region's OWE potential the fact that Ireland is an open island economy with a growing population requires that these infrastructural investments are made.

2.2.1 Ports infrastructure investment

The government is moving to address a key differentiator between Ireland on one hand and Denmark and the UK on the other, namely Ireland's need for greater Port infrastructure. As well as creating long-term employment opportunities, this will also develop supportive skill sets required for Tier 1 and O&M players. The importance of the leverage effect of this port investment in the South East region has been stressed several times in this report and bears one further reference in the context of identifying vital policy supports for OWE development.

The Southern Region ports account for a little under half the goods- and passenger traffic in Ireland

	RoRo tonnes (in 1000)	LoLo tonnes (in 1000)	Bulk and other cargo tonnes (in 1000)	Cruise passengers	Ferry passengers	Value of fish landed (mill. euros)
Cork	219	2 043	6 295	186 426	118 256	17
Shannon Foynes			8 187	1 149		
Waterford		260	1 527	17 054		
Rosslare	3 355		-		634 130	3
Ports of regional significance			410	4 737		100
Other ports			-			84
Total	3 574	2 303	16 418	209 366	752 386	205
Share of Irish total, %	**22**	**35**	**64**	**56**	**30**	**52**

Figure 15: Activity Matrix of Southern Region Ports of Ireland

Ports are also essential to develop and grow OWE activity. As well as supporting OWE installation[10] , operation and maintenance, the expansion of ports will enable storage and bunkering for alternative sustainable fuels such as green hydrogen that will be generated as OWE capacity expands. These fuels will help to power both large scale local sustainable industries and sustainable shipping. As Figure 16 shows, the South East has no "Tier 1" (in black) Ports but it has two "Tier 2" (in red) ports of which only Waterford is capable of receiving Load-on/Load-Off cargo. It also has 1 port of regional significance - New Ross Port. Both it and the Port of Waterford can handle bulk freight, whilst New Ross Port can also cater for liquid cargoes.

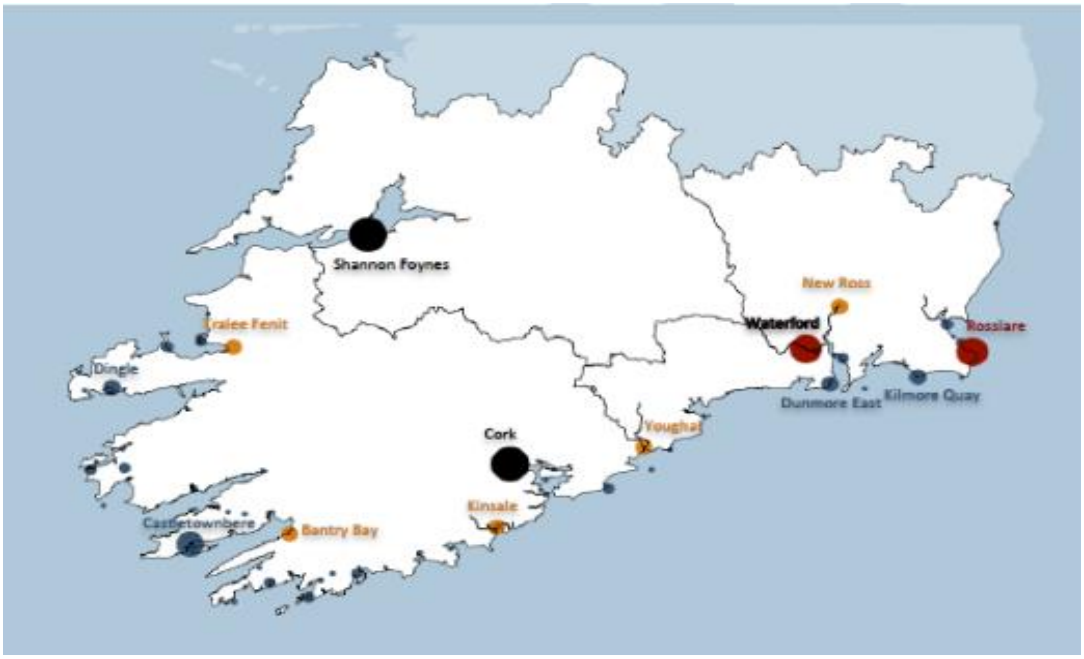


Figure 16: Ports in the South (Entire Map) and South East (Shaded) Region

Table 1 shows how Waterford's share of national cargo is considerably lower than the South East's share of population and workforce (see section 2.1).

Table 1: Port of Waterford Cargo (Q3, 2024)

	All Irish Ports	Waterford	% Waterford
Total Units	174962	6230	**3.6%**
Loaded Units ('000 Tonnes)	2333	88	**3.8%**

Given their vital logistical importance of being the closest ports to OWE farms planned under the SC-DMAP, investment in these ports will be essential to enable vital staging and marshalling activities for

[10] At present only one port on the island of Ireland, Belfast, is ready to construct offshore wind farms.

fixed bottom OWE infrastructure. The Programme for Government's prioritisation of developing Ireland's OWE potential makes this investment a priority

2.2.1.1 Rosslare Europort development

Rosslare Europort is poised to become Ireland's leading hub for Offshore Renewable Energy (ORE) for its Project REORE. This follows the designation of the port as a recipient of an investment estimated at €250 million for the project, secured through the CEF, a significant EU funding instrument for infrastructure investment [11]. The project encompasses significant redevelopment of port infrastructure, enhancement of quayside facilities, and establishment of new logistics and assembly zones to facilitate wind turbine marshalling and pre-assembly. It is forecasted to generate up to 2,000 direct and indirect jobs locally, positioning the port as a strategic asset for both construction and long-term O&M of offshore wind farms along the South Coast.

Figure 17: Planned offshore support investments at the Rosslare Europort – Construction Stage

2.2.1.2 Port of Waterford development

A critical upgrade is required to elevate the Port of Waterford to a Tier 1 port status, enabling it to handle large-scale offshore wind logistics and heavy-lift operations. Currently capable of receiving LoLo and bulk freight, Waterford Port is strategically positioned with available land and quay space to support wind turbine pre-assembly, installation vessel mobilisation, and storage of heavy components. Upgrading the port's handling infrastructure, quay reinforcement, and connectivity to

11 Rosslare Europort announces €200m Plan for South-East Offshore Renewable Energy Hub | Marine Ireland

road and rail networks will allow it to play a key dual role in both construction and long-term O&M support for the South Coast DMAP. With recent Maritime Area Consent (MAC) approval, the announcement of planning application made by the Port Authority for Offshore Renewable Energy (ORE) Capable Terminal at Belview is a welcome development[12] to achieve a purpose-built ORE terminal. The terminal and a full Tier 1 designation would enable Waterford to operate in synergy with Rosslare Europort, maximising the regional economic and logistical capacity.

2.2.1.3 New Ross Port

The Port of New Ross is a port of regional significance and is situated in the heart of the region. It has recently undergone extensive upgrade works; it can handle bulk and liquid cargoes as well as catering for project shipments. It is ideally placed to accommodate the expected demand for both on shore component storage and mobilisation requirements for the Offshore Industry.

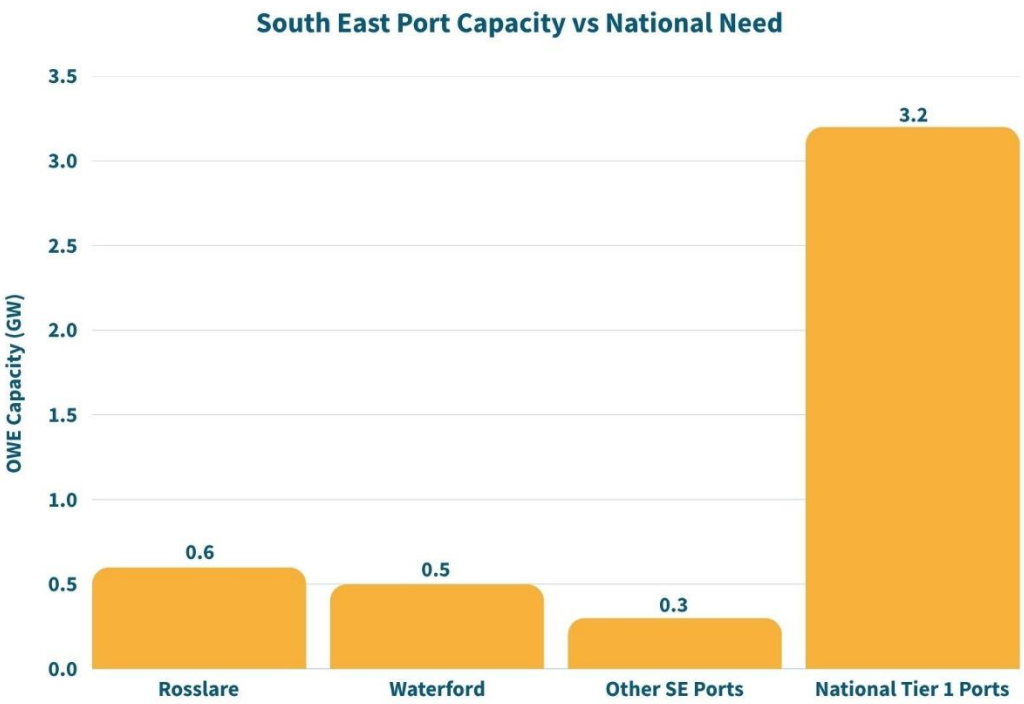


Figure 18: South East port capacity Vs National Need

In addition to Rosslare, Waterford and New Ross ports, the obvious locations, several smaller but strategically located fishing harbours along the Wexford and Waterford coastlines can contribute to lifetime O&M support by offering berthing, logistical coordination, marine operations, or crew support infrastructure. These include:

Table 2: Rating of other Regional Ports for OWE potential

[12] Planning lodged for Port of Waterford ORE terminal

County	Port/Village	Relative O&M Support Capacity	Notes
Wexford	Kilmore Quay	High	Established marina, service infrastructure, O&M-ready
Wexford	Wexford Harbour	Moderate	Historically significant, mussel dredgers active, some limitations, new marina proposed
Wexford	Courtown Harbour	Moderate	Proposed new harbour and marina development would be a significant asset in the region
Waterford	Dunmore East	High	National Fishery Harbour Centre, existing infrastructure for fishing only.
Waterford	Passage East	Low	Ferry and small boat operations, potential for localised marine ops
Waterford	Boat strand	Low	Traditional fishing base, space constraints, seasonal activity

These ports can play varying roles in supporting O&M activities, such as inshore crew transfers, equipment maintenance, data monitoring stations, or niche servicing activities. Prioritising strategic investment in a subset of these ports would help balance spatial access to South Coast wind farms and optimise long-term operational logistics.

2.2.2 Electricity Grid

2.2.2.1 Tonn Nua Offshore grid connection timeline

Q2 2025 up to date progress for offshore grid connection in maritime area A (Tonn Nua), shown in Figure 19 below, indicate that EirGrid are currently at stage 3 of their grid development framework – a 6-step process to develop the electricity transmission grid to energisation.

Figure 19: Process for Offshore Grid Connection

The anticipated schedule for energising offshore infrastructure at Tonn Nua is unlikely to be met, primarily due to long delay to the publication of the site's project timeline by EirGrid. ISEOWP observes following recent consultations with prospective bidders on the Tonn Nua maritime area, now delayed

from June 2025 to September 2025, that the EirGrid programme of works is targeting commissioning for power offtake in mid-2034. The delay has cascading effects for the site's development such as delays to maritime and coastal surveys, uncertainty for auction and bidding window/process.

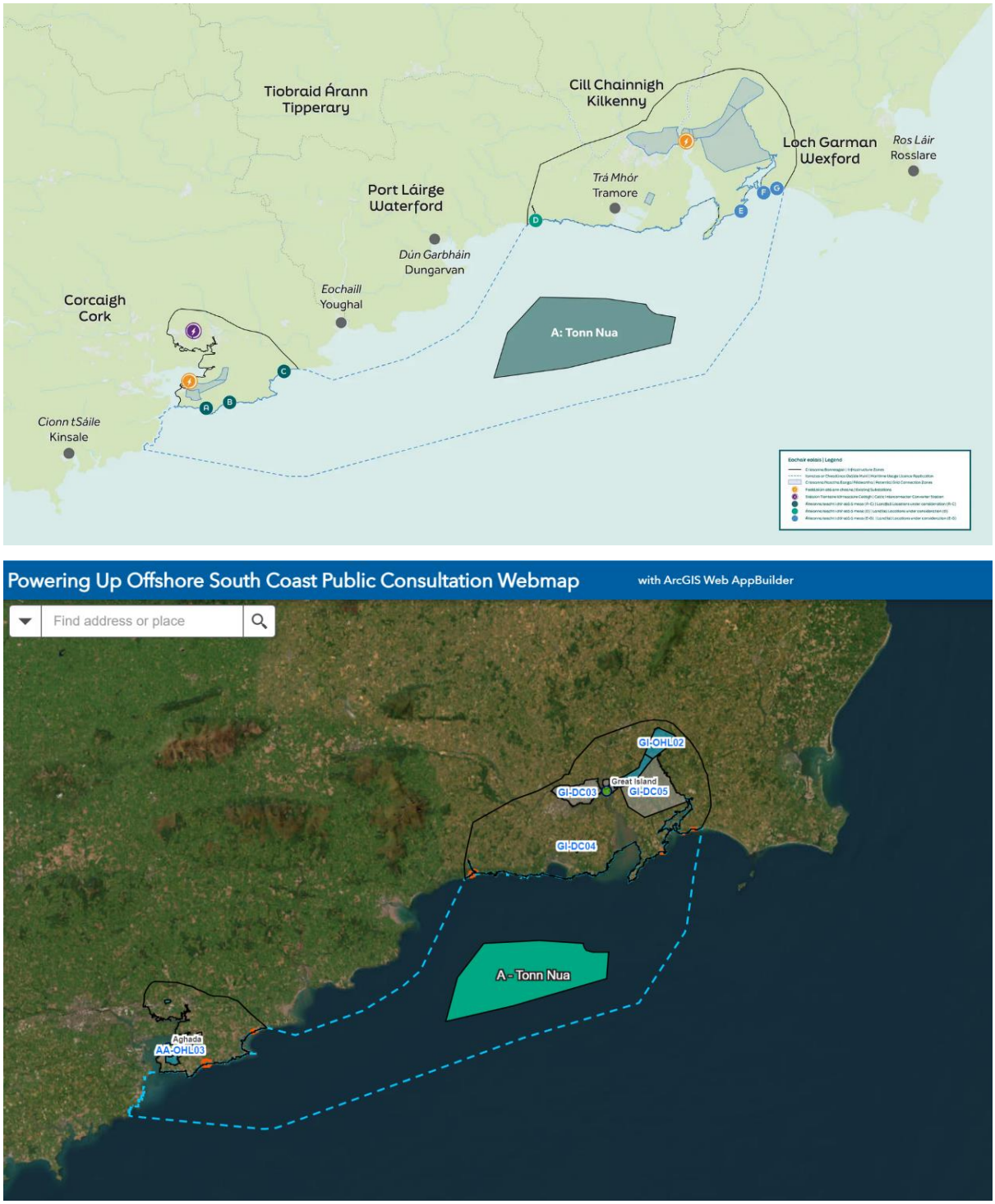


Figure 20: Spatial extent of Tonn Nua maritime area indicating grid infrastructure zones & landfall areas[13]

[13] https://www.eirgrid.ie/OFFSHORE

The news about commencement of marine survey following EirGrid's secure of maritime usage licence from MARA is a welcome development. However, this operation can be expanded to include the other 3 sites afield as a way of fast-tracking the SC-DMAP development by partnering with interested developers in a post-contract approach to expedite construction at the SC-DMAP sites. The recent Iberian Peninsula blackout[14] is a reminder for the need of grid capacity investments. In order to attract investors to construct these utility-scale assets in an expeditious manner, Ireland must rapidly construct additional transmission capacity and implement a new grid architecture that is well-planned in advance. Currently, the development of grids in both nations is significantly impeded by the extremely cumbersome planning systems. It is imperative that the current planning protocols be promptly revised.

2.2.3 SETU: South East Technological University (SETU)

South East Technological University (SETU) is at the forefront of supporting Ireland's offshore renewable energy ambitions through cutting-edge research, innovation, and skills development. With a strong focus on sustainability, digital transformation, and collaboration, SETU will play a pivotal role in advancing the offshore wind sector.

National and European Engagement

SETU is directly contributing to the development of Ireland's offshore wind strategy through active participation in both national and European initiatives. As a member of the **National Government Taskforce on Offshore Wind**, SETU is helping shape education and training nationally along with developing specialised training programmes to meet the growing needs of the offshore renewable energy sector. At the European level, SETU represents Ireland on the T-Shore Steering Group, part of an EU project dedicated to building training and skills capacity for the offshore renewable energy sector.

Research Driving Innovation

SETU leads a portfolio of innovative, high-impact research projects that address critical technical and environmental challenges in offshore wind. The **SPOTBlade** project is developing antifouling and

[14] https://www.rte.ie/news/world/2025/0514/1512897-spain-portugal-blackouts/

erosion protection technologies for turbine blades, using advanced materials and climate data to reduce maintenance costs and increase turbine lifespan. Other major initiatives include **SOLOBlade**, which is creating hybrid sol-gel coatings for marine applications, and **CLEERBlade**, which is pioneering cold spray technology for portable and rapid blade repair. These projects are aimed at improving performance, reliability, and sustainability in offshore energy infrastructure.

Environmental and Digital Integration

SETU also integrates environmental monitoring with digital technologies. One project uses UAVs, satellite imagery, and machine learning to map seaweed biomass along the Irish coastline—contributing to ecosystem monitoring and coastal sustainability. The university is also exploring future innovations such as **underwater acoustic monitoring** to support both infrastructure integrity and marine biodiversity protection.

2.2.4 Greenlink interconnector[15]

Greenlink is a high voltage direct current (HVDC) interconnector that went into commercial operation recently. It is a grid infrastructure that boosts energy security by providing a 500 MW link between the electricity systems of Ireland and Great Britain via a subsea cable. Consequently, it is a 'Project of Common Interest' (PCI) – key cross-border infrastructure projects that link the energy systems of European countries – is of strategic importance. The interconnector runs between Great Island substation in Co Wexford, and Pembroke 400 kV substation in Wales.

Figure 21: Great Island converter station in Co. Wexford

[15] https://www.greenlink.ie/ireland

Along with boosting energy security and resilience, the connection will also increase capability to harness the potential of clean power by sharing surplus generation between Ireland and the UK. It is a vital project for grid system balancing and will further the integration of renewable energy sources and regional investments. The successful commercial operation of Greenlink interconnector increases the strategic position of the South East region as Ireland looks ahead to export renewable energy to the UK & mainland Europe. In particular, with the combined effects of the interconnector and SC-DMAP, the OWE sector of the South East region will increase in importance as the renewable energy sector becomes a larger proportion of supply in the Irish and European electricity system, both in relation to the import and export of electricity.

> *"…this project (Greenlink Interconnector) is a tangible expression of our ever-strengthening energy relationship with the UK, and highlights the value and benefits which international energy collaboration can bring."* – **Darragh O'Brien, Minister for Energy**

2.2.5 Waterford Regional Airport

Strategically located within close proximity to key offshore wind ports, Waterford Regional Airport offers a vital logistical asset for O&M operations. The airport can facilitate rapid deployment of crews via helicopters or possibly small sea plane to offshore platforms and servicing vessels. Its capacity to support emergency response, technician rotation, and just-in-time spare parts delivery strengthens the South East's overall O&M readiness. With existing infrastructure and potential for expansion, the airport could serve as a regional aviation hub for offshore wind logistics, transfer of resources in and out both of the region and to the wind farms thereby complementing port-based activities and reducing response times to turbine sites.

Figure 22: Waterford Airport in Co. Waterford[16]

Additionally, Waterford Airport presents an ideal platform for deploying advanced aerial operations such as autonomous drone systems in partnership with SETU. Drones can perform remote inspections, data collection, and environmental monitoring, enhancing efficiency and reducing operational risk. The region is well positioned to become a national leader in offshore drone applications, attracting new start-ups, and nurturing specialist skills that can be exported globally to meet rising demand in the international OWE sector. These synergies reinforce the region's potential to become a global innovation hub for digitally enabled O&M services.

2.2.6 Natural Gas – Current Status

Ireland's national gas network is a critical strategic asset that can be progressively **decarbonised over the next 5 to 15 years** through integration with **offshore wind, onshore renewables, and bioenergy sources**. The existing transmission and distribution infrastructure is well-positioned to accommodate **hydrogen blending**, with up to **20–25% hydrogen by volume** achievable in the near term without major system overhaul. Over time, targeted investments can enable **full hydrogen-ready networks**. Additionally, the deployment of **biomethane** from agricultural and waste sectors, alongside **power-to-gas technologies** converting excess offshore wind into green hydrogen or synthetic methane, will allow Ireland's gas system to transition from a fossil-based network to a **low-carbon, renewable**

[16] https://www.rte.ie/news/munster/2024/1101/1478484-waterford-airport-funding/

energy carrier. This integrated approach across **gaseous, liquid, and solid renewables** will not only reduce emissions but also enhance national energy security, support rural economies, and balance the intermittency of renewable electricity generation.

Table 3: Hydrogen potential timeline to support regional decarbonisation through gas grid

Today (2024)	By 2030	By 2040
- Natural gas pipelines dominate **- Fossil methane only**	- Gas network blended with 20–25% **green hydrogen** - Injection of **biomethane** from farms, waste - Pilot hydrogen clusters around ports	- 100% **hydrogen-ready gas grid** - Full integration of **biomethane** and **solid biomass hubs** - Hydrogen-based industrial supply

Figure 23: Gas Networks Ireland Network Map[17]

Figure 23 shows that there exists only 1 renewable gas injection facility in the country located in Cush, Co. Kildare. This presents a challenge for renewable gas producers in South East region as renewable gas delivery to the entry point is by means of road transportation in containerised trucks. Timely development of OWE in the SC-DMAPs would facilitate and incentivise more private sector investment in gas injection facilities to increase renewable gas production for security of renewable supplies and resiliency of critical energy infrastructures.

The development and operation of compressed natural gas (CNG) refuelling stations presents a strategic opportunity for the South East region to build a clearer future with renewables. Currently, there are 9 operational CNG filling stations in the country, with the South East not linked to the existing CNG refuelling network as shown in Figure 24.

[17] https://www.gasnetworks.ie/corporate/company/our-network/pipeline-map/

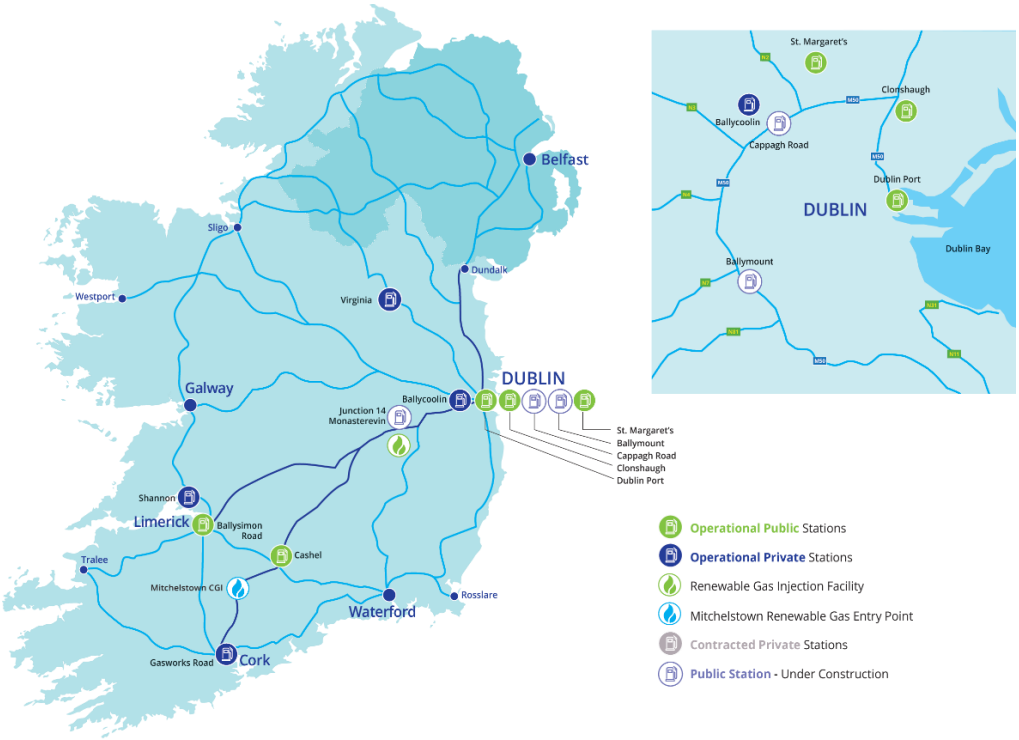


Figure 24: Map of CNG refuelling stations in Ireland[18]

The lack of operational or planned CNG refilling stations in the South East intensifies emissions from the transport sector, hindering the region's 2030 targets. CNG infrastructure investment, in conjunction with offshore wind energy investments, would enable the decarbonisation of the energy-intensive transport sector by supplying carbon-neutral biomethane gas at reduced costs.

[18] https://www.gasnetworks.ie/business/natural-gas-in-transport/cng-refuelling-stations

2.2.7 EU Hydrogen Backbone Project[19]

Hydrogen introduction as an economic enabler for sustainable future power and energy security on the continent of EU reduces its dependence of fossil gas imports from outside EU and increases competitiveness of the EU, from an ESG perspective, as a low carbon continent.

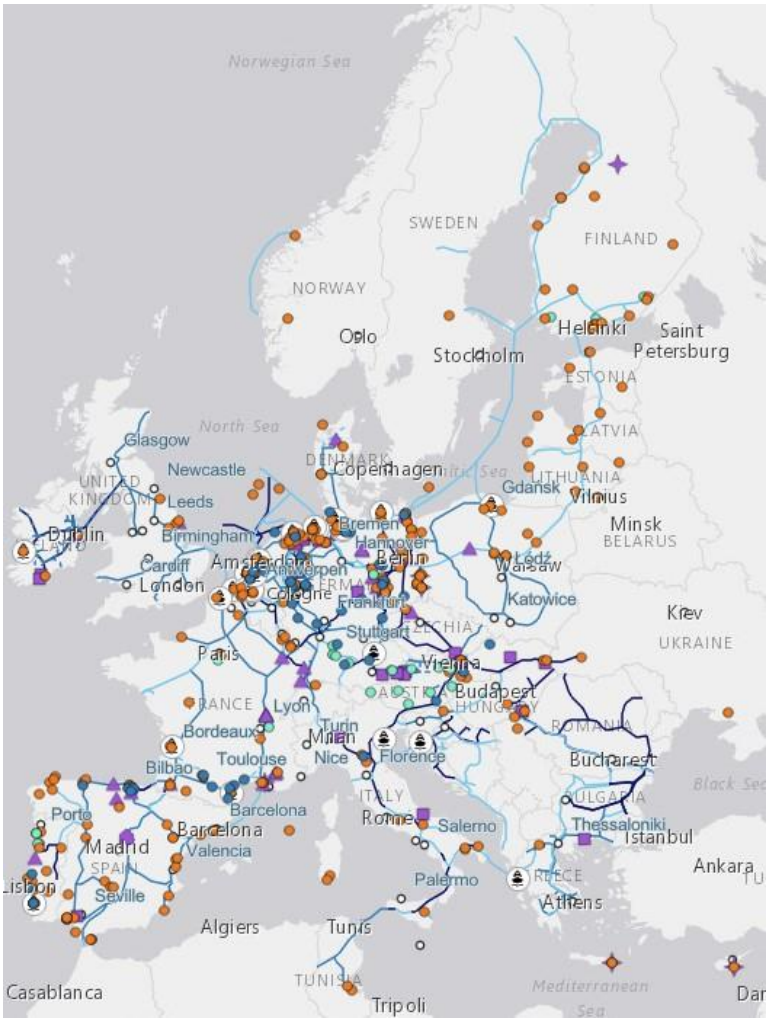


Figure 25: European-wide map of Hydrogen Infrastructure showing projects & transport routes

2.2.7.1 Hydrogen and Gas Grid Integration: A Strategic Opportunity

The offshore wind potential mapped under the SC-DMAP (4.9 GW) provides not only direct electricity generation but also the capacity to support large-scale **green hydrogen production via electrolysis**. This opens a vital pathway for **sector coupling**, where renewable electricity is converted into clean fuel for use in industry, transport, and the national **gas transmission network**.

[19] European Hydrogen Backbone Initiative (2021). *Hydrogen infrastructure – The missing link to deliver on the climate action plan*. Available at: https://gasforclimate2050.eu

A new report[20] commissioned by InterTradeIreland highlights the scale of the economic opportunity in offshore wind for SMEs across the island of Ireland.

With world-class wind resources and growing net zero commitments, both governments have set ambitious targets for offshore renewables. This report from specialist renewables consultancy Everoze provides, for the first time, an all-island picture of firm-level capability, mapping over 160 companies across 12 supply chain sectors.

The findings show strong potential to develop a globally competitive offshore wind supply chain, particularly if efforts are aligned across the island. The report identifies complementary strengths in areas such as engineering, logistics, vessels and cables, and highlights the economic value of collaboration.

It also outlines challenges such as infrastructure capacity and skills shortages. These are best tackled through joined-up action on an all-island basis to ensure local firms can fully participate in this once-in-a-generation opportunity.

Ireland's existing gas infrastructure can accommodate up to 20–25% hydrogen by volume[21], depending on end-use appliance compatibility, system upgrades, and regulatory frameworks[22]. At this threshold, **hydrogen blending** enables a significant reduction in the carbon intensity of the natural gas supply. While hydrogen has a **lower calorific value per cubic metre** (approximately one-third lower than methane)[23], its **carbon emissions per unit volume are effectively zero**, dramatically lowering the **CO_2 g/m³ metric** of blended gas.

The South East is particularly well positioned to pioneer this approach:

- **Waterford Port and Great Island** offer ideal landing and distribution points for hydrogen produced offshore.
- Proximity to the **Gas Networks Ireland (GNI) transmission grid** allows for early-stage integration pilots and downstream access to industrial and heat customers.

[20] https://intertradeireland.com/news/significant-offshore-wind-and-hydrogen-opportunities-for-smes-on-the-island-of-ireland-says-latest-intertradeireland-report

[21] European Commission (2022). *Technical Assistance for Hydrogen Blending in Gas Networks*. EU Energy Directorate-General for Energy. Available at: https://energy.ec.europa.eu

[22] Gas Networks Ireland (2021). *Hydrogen - Enabling a clean energy future*. Available at: https://www.gasnetworks.ie/corporate/company/hydrogen/

[23] SEEA (2023). *The Potential of Renewable Gas and The Development of Bio-CNG in Ireland's South East*. Available at: https://southeastenergy.ie/new-report-reveals-biomethane-could-fulfil-47-of-the-southeasts-energy-needs/

- Blended hydrogen can be distributed across multiple sectors while **displacing fossil-derived methane** in a transitional but materially impactful way.

In parallel with **private wire delivery to coastal electrolysis hubs**, this integration strategy supports a viable model for **grid-scale decarbonisation of heat and power**, establishing the South East as a strategic bridge between offshore renewables and **Ireland's hydrogen-enabled, low-carbon future**.

2.3 Summary

This chapter analysed the advantageous geographic characteristics and the influence of productivity, as indicated by the region's GVA, which positions the South East as an influential region in OWE. Realising the potential of these natural and economic advantages requires strategic investments in port infrastructure. As such, the likes of Rosslare Europort and Port of Waterford will effectively elevate to a Tier 1 status, enabling them to offer logistical support throughout the construction, deployment, and operational phases of the offshore wind farms. In addition, regional ports can benefit from investment upgrades to support O&M activities of the offshore wind farms. Investment in **offshore grid facilities and around the landfall areas should be expedited**, particularly in light of the missed timeline for Tonn Nua, to facilitate offtake of renewable electricity. As the South East builds out the infrastructure required to support offshore wind energy, the opportunity extends beyond physical assets. The real value lies in how this investment catalyses additional renewable initiatives such as green hydrogen, bio-CNG and biomethane, which contribute to resiliency and most importantly the decarbonisation of 'hard to abate' sectors such as transport.

Industry, Enterprise, Skills & Community

How offshore wind energy can drive regional growth through community benefit structures, clustering policies, and innovation, highlighting best practices and local enablers.

3 INDUSTRY, ENTERPRISE, SKILLS & COMMUNITY

This chapter focuses on:

- Structure and opportunity of the **Community Benefit Fund**
- Role of Sustainable Energy Communities (SECs)
- Best practice models from **Scotland, Wales, Belgium**
- Clustering policy for OWE in the South East
- Existing structures: **SETU, Regional Cluster Manager, Engineering Cluster**
- Future potential: **National Clustering Programme.**
- Community and Enterprise-led innovation zones

The region's accessible topography, proximity to Dublin and Cork and closeness to the UK and France – to which it is now linked via the Greenlink interconnector - make it an obvious location for the development of OWE. But which sectors would most benefit from this spending, and is the South East region well placed to benefit? Figure 26 below shows the results of the Squirrel Lane study commissioned by the South East Energy Agency[24] (and drawing on an earlier study[25]) of how investment in Ireland's OWE industry would break down by area of spending.

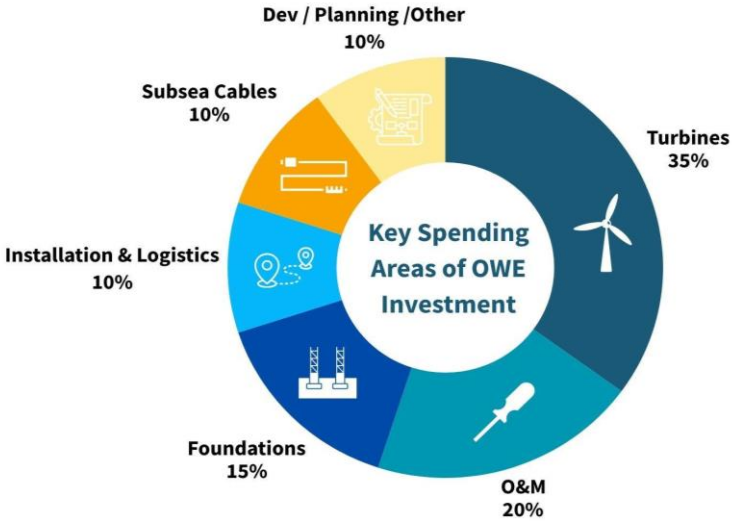


Figure 26: A breakdown of key OWE investment by key spending areas

[24] *"South Coast Designated Maritime Area Plan",* Squirrel Lane consultancy

[25] *"Harnessing our Potential – investment and jobs in Ireland's offshore wind industry",* Carbon Trust, Green Tech, Skillnet, 2020

The "Harnessing our Potential" study envisages a total lifetime project spend of between €4.6 and €5.2 billion per GW of installed capacity, of which the combined share of sectors most relevant to the regional economy – Installation, logistics and O&M – accounts for nearly one third of all spending.
As Figure 27 below demonstrates, the region is beginning this journey with a "core" of employment in those key sectors of importance for the early stage of OWE industry development. These include Manufacturing, Construction, Professional Scientific and Technical and Transportation and Storage.

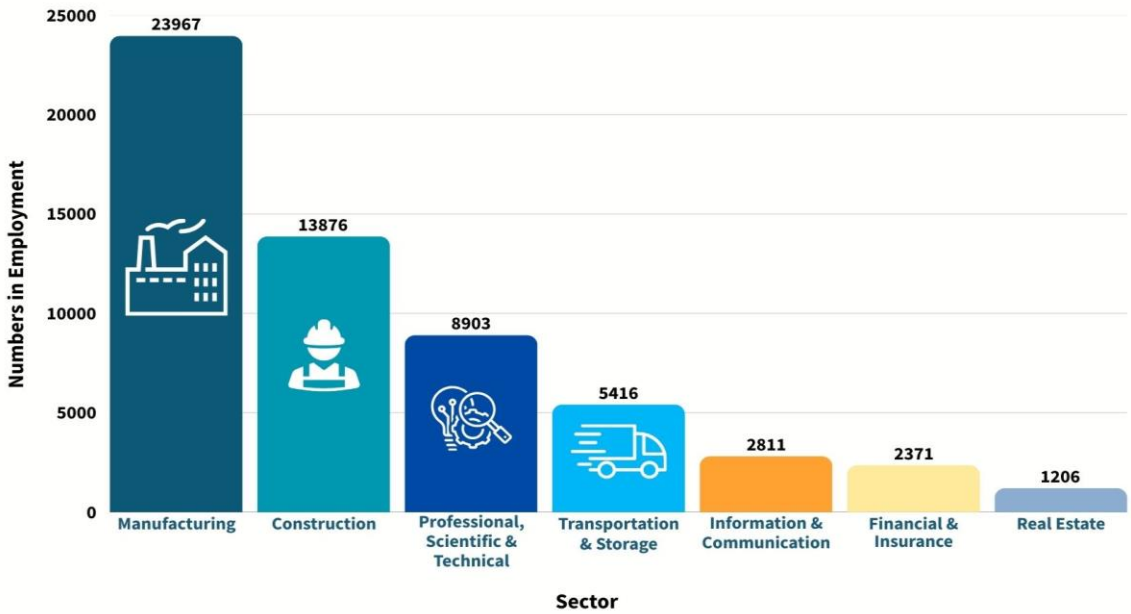


Figure 27: Employment in "OWE-relevant" sectors in the South East region (CSO Business Demography 2022)

In the longer-term, as economies of scale are realised, large scale companies attracted, and skills and RD&I create a clustering effect, the benefits of investment in OWE should begin to diffuse to other sectors. This process describes the path towards achieving a Centre of Excellence in the South East. As well as investment in port infrastructure, designing and implementing a realistic, regionally based clustering policy for OWE will be critical. A special inset provides an overview of clustering policy below.

The Importance of Clustering Policy for the South East Region

The Government's White Paper on Enterprise (WPE) identifies clustering as a key tool in achieving enterprise policy objectives. This approach is now supported in the Programme for Government 2025. Supporting innovation, attracting and embedding FDI and maintaining and developing linkages between multinational corporations and indigenous firms are crucial to this. The WPE proposes establishing National Clustering Programme (NCP), targeting funding for five cluster organisations by 2025, and aiming to establish a central coordination entity to bring coherence to the current ad hoc landscape around clustering in Ireland.

This is directly relevant to the development of the OWE capability in the South-East Region, particularly to the development of a wind turbine generators and related supply industries. The South-East Region boasts the Southeast Technological University (SETU) and, additionally, already has an Engineering Cluster and a regional Cluster manager. By adopting a multi-layer programme, the objective is to achieve clusters of national scale that will receive the highest level of funding, with funding tapered down to enable ongoing funding of smaller and emerging clusters from existing programmes. In recent years both Regional Technology Cluster Funding (RTCF) and Regional Enterprise Development Fund (REDF) funding has supported clustering programmes across Ireland. A draft NCP is being prepared and should be published shortly, and its findings should be embedded in the development of OWE capability. The development of regional clusters is supported by DETE via the RTCF and REDF.

Technological Universities and SMEs play a key role in clustering policy as does skills development, through the €4.6 million in funding for educational outreach managers for 12 clusters to engage with start-ups, SMEs and multinational corporations in all regions. Additional funding through the Enterprise Innovation Scheme is co-funded by the European Regional Development Fund (ERDF) which works with stakeholders to deliver regional enterprise strengths, following an entrepreneurial ecosystem approach aligned with the nine Regional Enterprise Plans. Regional productivity and innovation gaps reveal that Ireland’s economic growth, and its drivers, is uneven across the regions.

The Smart Specialisation Strategy (S3) (2022-27) focuses on bottom-up place-based stakeholder approaches bringing regional and national actors together to identify potential opportunities and shape directions of policy. The identified national priorities, listed below, are all highly OWE-relevant:

1. Digitalisation and digital transformation.
2. Green transformation for enterprise.
3. Innovation diffusion.
4. International collaboration on Research, Development and Innovation (RD&I).
5. Improving the national or regional enterprise research and innovation system.

Finally, Regional Enterprise Plans (REPs) and Regional Spatial and Economic Strategies (RSESs) are central to the S3 Strategy, 2022-27. They allow for identification of existing and emerging sectoral areas of strength. In summary, clustering policy should be a central component of developing OWE capacity in the South-East Region which has the key components needed to develop a Centre of Excellence in Offshore Wind.

3.1 The Role of Communities in Offshore Wind

Ireland's Offshore Renewable Electricity Support Scheme (ORESS) mandates a **Community Benefit Fund (CBF)** of **€2 per MWh** generated by supported offshore wind projects. In the South East, this is projected to yield between **€6 million and €30 million annually** from 2034, with cumulative returns reaching **€450 million** by 2050. This fund is not just compensation—it is a **transformational opportunity** to:

- Reduce energy poverty through local retrofitting and efficiency schemes
- Invest in coastal protection, adaptation, and low-carbon infrastructure
- Finance education, skills, and renewable-powered social projects
- Support climate mitigation and resilience in rural and coastal zones

3.2 Leveraging the existing Regional SEC Network

The South East is uniquely positioned to maximise community benefit, with an existing network of **105+ Sustainable Energy Communities (SECs)** across Carlow, Kilkenny, Waterford, and Wexford.

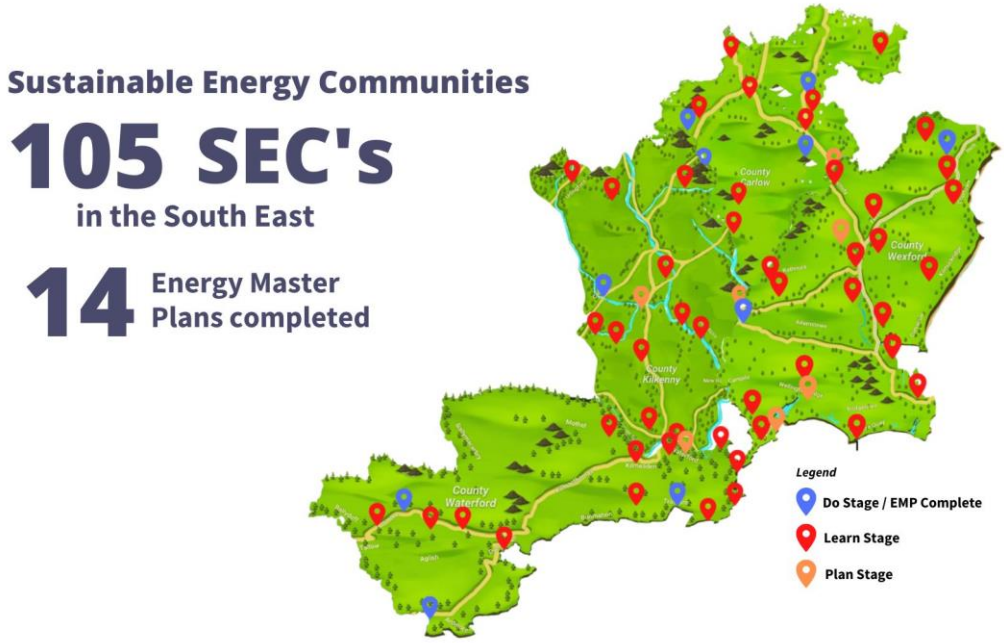


Figure 28: Existing Sustainable Energy Community (SEC) Network[26]

These communities already operate under SEAI's "Learn–Plan–Do" framework and are primed for:

[26] SECs Network map. Available at: https://www.seai.ie/plan-your-energy-journey/for-your-community/sustainable-energy-communities/sec-map/

- Early engagement with offshore developers
- Participatory design of benefit schemes
- Co-financing through EU rural and regional development funds.
- Building **trust and transparency** between the public and OWE sector.
- Support then communities to actually do the projects around energy saving and community led renewable energy generation.

Although linking the CBF directly to existing SECs will **accelerate climate action**, build skills locally, and improve the visibility and public support for offshore wind, it is important to note that this is not the sole route for CBF.

3.3 Best Practice: Community Models from Europe

Ireland can draw inspiration from international models:

- **Orsted UK Funds**: With local advisory groups, their model provides grants for education, marine biodiversity, and disadvantaged communities.
- **REScoop Belgium**: Citizen cooperatives co-own renewable energy projects, ensuring long-term local reinvestment and governance.
- **Scottish Community Benefit Protocols**: Clearly structured and locally governed, these funds empower community trusts to manage long-term low-carbon development.

Applying similar models—while tailored to Ireland's policy and planning frameworks—can bring structure, legitimacy, and equity to the regional fund's operation. A case study on RWE Wales CBF experience is presented in Appendices.

3.4 The Power of Clustering for Economic Value

The **White Paper on Enterprise** and **Programme for Government** both prioritise clustering as a tool to stimulate innovation, enterprise, and regional competitiveness.
The South East is well positioned to lead, with its existing:

- **Regional Engineering Cluster** and full-time **Cluster Manager**
- Strong R&D anchor in **SETU and the Walton Institute**
- Experience accessing **REDF** and **RTCF** funding streams

Clustering can deliver:

- Accelerated SME participation in offshore wind supply chains
- Shared infrastructure and business services (e.g. logistics, fabrication)
- Innovation spillovers across **energy, tech, agri-tech, and construction**

- Regional branding and export-readiness

3.5 Aligning with National Clustering Policy

The emerging **National Clustering Programme (NCP)** targets the creation of 5–10 national-scale clusters, with tapering supports for local and emerging ones. The ISEOWEP should aim to secure this designation by demonstrating:

- Public-private cooperation
- Regional innovation infrastructure (SETU, CARO, SECs)
- Talent development pathways
- Measurable SME participation and export ambition

This can unlock further co-funding under **Horizon Europe**, **ERDF**, and **Smart Specialisation Strategy (S3)**.

The existing partnership would complement the Community Benefit Fund by supporting **business and innovation investment**. GROWE would:

- Direct EU and national funds into SME-led projects
- Facilitate joint investment with public partners
- Provide governance, evaluation, and reporting structures
- Create capacity for local enterprise to scale with the OWE economy

The partnership could be modelled after **LEADER** and **FLAG** schemes but designed around **industrial transformation**, energy-enabled growth, and innovation in coastal and inland communities.

3.6 Collaboration & Partnership: An Overview

The South East region benefits from a strong, proactive Offshore Wind Partnership representing all key stakeholders – including industry, education sector, local government, state agencies and the crucial community sector. Figure 29 shows how the work of this partnership is nested in a strong framework of supportive EU, national and industry bodies that inform both policy (e.g. Offshore Wind Industry Forum (OWIF)) and technical implementation (e.g. the ESB Network Investment Consultation and Accelerating Renewable Electricity (ARE) Taskforce Working Group on Finance and Investment).

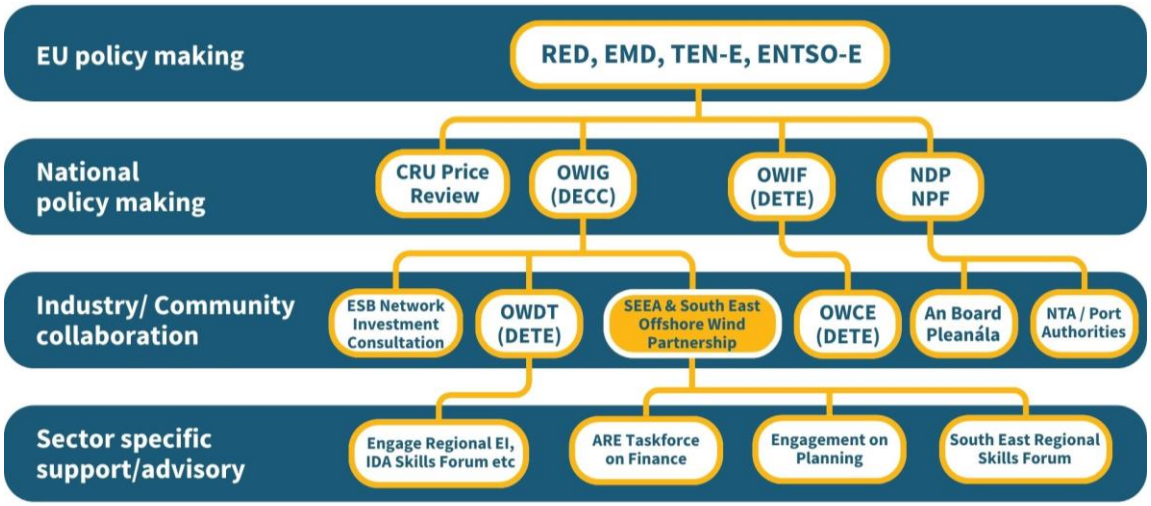


Figure 29: An architecture of EU, National, Regional and Local ORE development

For this reason, the South East is well placed to ensure the maximum community and social benefit from the Community Benefit Fund. As shown in *Table 4* below, anticipated revenues under this fund are substantial, amounting €29.7 million annually and about €450 million over 15 years at €2 per MWh produced (Table 8 provides a breakdown of this data by specific SC-DMAP area). Chapter 3 provides best practice examples from which Ireland can learn in both designing and implementing models of collaboration and applying Community Benefit Funding. Chapter 5 proposes a proactive approach to achieving the full potential of these partnerships and the CBF.

Table 4: Potential cumulative CBF value conservative over the auction period

	Total
Area (km^2)	1,315
Proposed capacity (MW)	4,900
Projected annual renewable energy production (MWh)	14,883,941
CBF per annum (€)	29,767,882
15 years cumulative (€)	**446,518,224**

The monetary values are determined at 40% capacity factor of the OWE projects across the four proposed DMAP areas. If all projects are commissioned successfully, their combined estimated value is nearly €450 million at €2 per MWh produced. For a 25-year period, covering construction phase and ORESS support period, their combined estimated value is projected to be €744.2 million at €2 per MWh produced. Assuming a 15-year support period allocating 25% (5 years of the fund) for administrative and management of the fund. Balancing the allocation of the funds will need to bear reference to address those most impacted by the development. It should include all of the following sectors:

- Coastal communities seeing direct benefits.
    - Energy projects (reference the SEC programme in section 3.2)
- Key Infrastructure on coastal protection investments.

- Sea amenities and Tourism – facilities and O&M Supports
- Fishing industry

The appointment of a trusted intermediary like the South East Energy Agency CLG – regional non-governmental agency with many existing experiences in climate adaptation and mitigation – is key to ensure CBF allocation and administration to most need is based on transparent criteria and applications for funding process.

3.7 Conclusion

The long-term success of offshore wind in the South East will be evaluated not only by gigawatts delivered or ports expanded, but also by its integration into **communities and local enterprise ecosystems**. With 110 SECs, active clusters, and growing institutional capacity, the South East is not starting from scratch. By embedding community and enterprise collaboration from the beginning, it can become a **global model for socially inclusive, regionally driven, low-carbon economic transformation**. The South East region covers a substantial share of Ireland's population and economy and seeks to align its economic contribution with its demographic weight while accommodating a rapidly growing population. The draft revised National Development Plan acknowledges this importance and prioritizes the development of the region's offshore wind capacity. The workforce in the region is expected to rise to 250,000 by 2030 and already contains foundational clusters of skills and expertise in manufacturing, transportation, logistics, and construction that will be relevant to securing local economic benefits from offshore wind energy-related activities.

The South East region is projected to benefit from the Community Benefit Fund, with an estimated cumulative revenue of half a billion euros between 2035 and 2060. The region is connected to the broader national and European offshore wind energy policy implementation bodies through the activities of the South East Offshore Wind Energy Partnership.

Creating a Regional Centre of Excellence in the South East

How the South East can become a Regional Centre of Excellence by leveraging EU policy, funding, and Ireland's offshore wind potential to drive investment, innovation, and long-term opportunities in hydrogen, port infrastructure, and sustainable industry.

4 CREATING A REGIONAL CENTRE OF EXCELLENCE

4.1 The South East and Europe's OWE future

The European Union is the centre of the world's Offshore Wind Energy industry and Ireland is the EU country with arguably the greatest OWE potential: Compared to an EU target of 300 GW capacity to be achieved by 2050, Ireland's target of 37 GW is more than ten per cent, almost ten times larger than Ireland's share of the EU27 population.

The South East Region of Ireland is one of three NUTS III sub-regions comprising the Southern Region (NUTS II) and includes the counties of Carlow, Kilkenny, Waterford, and Wexford. Home to just under 10% of the national population, the region is strategically located along Ireland's south-eastern coastline, facing the Celtic Sea. This coastal orientation, combined with a growing population, emerging port infrastructure, and a diverse industrial base, places the South East at the heart of Ireland's offshore wind energy opportunity. As a recognised Regional Assembly area, the South East benefits from targeted EU cohesion funding, regional spatial planning frameworks, and a strong legacy of cross-county collaboration—making it uniquely positioned to deliver on both national and EU climate and energy objectives.

Figure 30 shows the areas of Europe that are designated as "coastal"[27]. Ireland's share of population living in coastal regions is 93 per cent, compared to 43 per cent for the EU as a whole. Given Ireland's

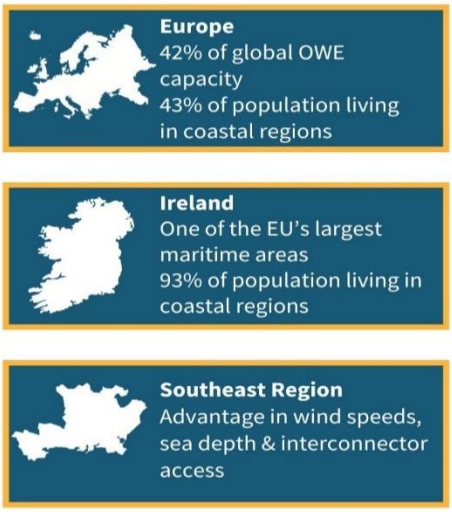


Figure 30: Ireland's OWE advantage within the EU

[27] Eurostat definitions

large maritime area, this means that Ireland is of vital strategic importance to the development of the EU's OWE capacity targets and, by extension, climate action targets.

As outlined in Chapters 1 and 2, the South East region is an area of **"OWE advantage"** due to its unique combination of suitable (for bottom-fixed infrastructure) sea depths, reliable wind speeds and access to interconnectors to both the UK and mainland EU. So just as Ireland is crucial to ensuring that the EU reaches its future OWE goals, so the South East is a crucial first stepping stone towards that objective. That dependency goes both ways: EU policy support and funding will be key determinants of the success of Ireland and the South East's OWE. In the ensuing sections we look at the extensive array of policy and funding supports on which the South East region can rely to develop its OWE capacity and related infrastructure supports and at how the South East region can learn both from best practice models of OWE industry collaboration and Community Benefit Fund implementation.

4.2 EU policies and funding initiatives

The Renewable Energy Directive

The 2020 RED is the main instrument for promoting OWE capacity to leverage the EU's "undisputed" technological and industrial leadership in OWE. It targets 60GW of offshore wind capacity by 2030 and 300GW by 2050 and stresses the need for a "long-term framework" for business and investors and the creation of quality jobs, grid infrastructure development and enhanced cross-border cooperation and coordination. The RED notes Europe's strong comparative advantage in Bottom-Fixed Wind Turbines[28] and that the EU's Atlantic Ocean – of which Ireland's EEZ constitutes a very significant portion – has a high natural potential for bottom-fixed OWE energy. It mandates the creation of a framework under the revised Trans-European Networks for Energy (TEN-E) regulations for long-term offshore grid planning to improve efficiency and calls for digital technologies to be used to accelerate the development and integration of OWE into broader energy systems. This latter focus supports the case for Ireland focusing its OWE comparative advantage on the distinctive strengths of its digital economy. RED seeks to maximise the mobilisation of private-sector investment in offshore renewables through the Invest EU programme, and to focus RD&I activities on supporting OWE projects and building a stronger supply chain across Europe.

The 3rd revised Renewable Energy Directive (RED III) is of essential importance to OWE development. It establishes a binding renewable energy target of at least 42.5% at the EU level by 2030 but aiming for 45%. Significant recommendations include accelerating the permit-granting processes for renewable energy projects and designating renewables acceleration areas for at least 1 type of

[28] 93% of Europe's installed OWE capacity in bottom-fixed wind turbines in 2019 was produced in Europe *"Progress of clean energy competitiveness"*, SWD (2020) 953 final.

renewable energy technology. The South Coast is suitable for OWE in Ireland as it is appropriate for such renewable technology given such location would not have considerable negative environmental effects during OWE project development.

European Hydrogen Bank

The European Hydrogen Bank (EHB) is an auction platform for hydrogen contracts based on renewable energy ("green hydrogen"). The first EU-wide auction of the EHB awarded close to €720 million to seven projects across the EU (all of which were in the Iberian Peninsula and Scandinavia) under the Innovation Fund, corresponding to a production pipeline of 1.58 million tonnes of green hydrogen over a ten-year period. The EHB allocates significant EU aid to investment in clean hydrogen and uses Carbon Contracts for Difference to achieve cost efficiency.

The EU Wind Power Package

The EU Wind Power Package was agreed in October 2023 and identified six "pillars" of action to accelerate OWE development in the EU. These include accelerating the obtaining and deployment of permissions; improved auction pricing supports; improved access to finance; monitoring unfair trade practices; developing industry skills and developing member states for a collective EU wind charter.

The EU Wind Charter

The EU Wind Charter was concluded in December 2023 and commits to operationalising the EU Wind Power Package through a "Robust and predictable" pipeline for the deployment of wind energy, improving and simplifying wind energy auctions and standards for products, services, governance and processes in the wind sector. It aims further to improve the predictability of demand and supply, countering potentially unfair trading practices in the international market for wind-related products and to scale up wind equipment manufacturing capacity in the EU.

The Net Zero Industry Act

The Net Zero Industry Act (NZIA) aims to provide a regulatory framework that will support scaling up of net-zero industries, creating green jobs and maintaining EU competitiveness in the process. The NZIA targets seven sectors, five of which – offshore renewable energy, grid technologies, electrolysers, sustainable biogas and biomethane technologies, and carbon capture and storage technologies - are directly or indirectly relevant to optimising the economic impact of OWE in the South East region.

Connecting Europe Facility

Perhaps most important of the EU's policy and funding support is the Connecting Europe Facility. The CEF aims to enable the Union's decarbonisation objectives for 2030 and 2050 through the development of high performing, sustainable and efficiently interconnected trans-European networks in transport, energy and digital services. It has already provided €38.4 million in funding for the Port of Cork. The CEF focuses strongly on cross-border projects, on promoting interoperable networks and on better integration of the internal energy market. Key components of the CEF include the TEN-E,

Trans-European Networks for Transport (TEN-T) and CEF Digital. These aim to deliver cross-border energy, transport and digital infrastructures while budgets of €5.8 billion and €25.8 billion, respectively, have been earmarked for 2021-2027.

Clustering policy

Clustering policy is supported at EU level through the Single Market Programme funded "Euro clusters". These cross-sectoral, interdisciplinary strategic initiatives gather industry and other economic actors to implement EU Industrial strategy and create opportunities for SMEs to integrate into strategic value chains. The EU's Multiannual Financial Framework (MFF) provides significant benefits to clusters of small and medium-sized enterprises (SMEs) through various funding programs and initiatives that focus on digitalisation, resilience and sustainability. Under Pillar 3 of Horizon Europe, clusters may access funding for European Innovation Ecosystems (EIE) to build interconnected, inclusive innovation ecosystems with European partners. The Horizon 2020 cluster facilitated funding for new industrial value chains (INNOSUP-1) earmark up to 70% of funding support which SMEs and emerging industries can utilise to innovate and expand interregional and cross-sectoral value chains.

4.3 Best Practice (I): Policy learnings from leading OWE nations

Ireland can learn much from already established centres of excellence in OWE generation. Sections 4.4 and 4.5 briefly outline, respectively, case studies for both industry collaboration and Community Benefit Funding. In this section we examine key drivers of success in four leading European OWE nations and the insights that Ireland, and the South East, can gain from them: Belgium, Denmark, Germany and the UK. Table 5 below shows 2023 data of the energy mix for Ireland and these other four peer countries. At 37.0%, Ireland compares favourably in terms of the share of electricity generated by wind power which come mostly from onshore wind farms in the hinterland areas. But there are key differences in the development of OWE in these four benchmark countries that must be borne in mind.

Table 5: Electricity generation mix in Ireland, UK, Denmark, Germany & Belgium

Country	Electricity generated by wind
Denmark	57.60%
Ireland	37.00%
UK	28.70%
Germany	27.00%
Belgium	19.00%

4.3.1 United Kingdom/Scotland

The UK was among the world's first industrialised countries and for two centuries its leading maritime power. The resultant legacy of heavy maritime engineering and, more recently, infrastructure developed to serve its significant oil and gas industries add to its extensive coastline to create the world's largest OWE generating nation. Leveraging deep financial services expertise and markets, the UK has pioneered the use of Contracts for Difference (CfDs) to incentivise long-term private sector investment in OWE. As a result, it has achieved significant scale and consequently reduced the LCOE well ahead of schedule.

Within the UK, Scotland is of particularly interest to Ireland. Its government has set a target of 11 GW for 2030 and Scotland's strong culture of stakeholder inclusion is similar to Ireland. A Scottish Offshore Wind Energy Council (SOWEC) brings together the Holyrood administration, Highlands and Islands Enterprise, Scottish Enterprise, Skills Development Scotland, the Energy Skills Partnership and industry bodies such as Scottish Renewables. Unlike Ireland, however, Scotland enjoys Chain and Anchor ports, developed to serve the oil industry (such as Montrose) which are easily transitioned to serve the OWE industry. Scotland has a more immediate lesson for Ireland. The success of both its *"Green Freeport"* and Floating Offshore Wind Manufacturing Incentive Scheme (FLOWMIS) are incentivising private sector investment and employment in OWE manufacturing, supply chain and port activities.

4.3.2 Denmark

In terms of OWE potential, Denmark is the country most similar to Ireland. It has a similarly sized population, a similarly high share of coastal population (which is also on the lower end of the EU's population density spectrum) and a relatively small legacy of heavy engineering compared to Germany, the UK and Belgium. Denmark is the first country to pioneer OWE generation with the Vindeby wind farm constructed in 1991. Denmark was also the first country to achieve a bid price of below €50 per MWh. In April 2024 Denmark launched its largest offshore wind tender to date, offering no subsidies to compete to generate 10 GW by 2030. Key factors in Denmark's success include a strong maritime legacy, shallow seas, and a large accessible coastline.

4.3.3 Germany

Germany has an extensive North Sea coastline with relatively shallow waters, close proximity to large industrial cities and is one of the world's leading centres of engineering, logistics and technology. Since 2017 Germany requires all renewable energy projects to be subject to auctions. In 2024 Borkum Riffgrund 3 wind farm was installed with a capacity of 913 MW, becoming the first OWE farm globally to be awarded without subsidy and the first German OWE farm to exceed 900 MW capacity.

4.3.4 Belgium

Belgium's success in offshore wind generation is all the more remarkable because of its very short coastline of just 60km: Just a fraction of the coastline of the South East region. Belgium's strong industrial legacy and powerful, highly mature, port infrastructure and high population density means there is both a strong demand for renewable energy and a very high capacity to integrate OWE energy into industrial supply chains.

Learnings for Ireland

Ireland, like Denmark, enjoys an extensive coastline and a high share of coastal population. Unlike Belgium, the UK or Germany, Ireland lacks heavy industrial capacity and has modest port infrastructure. What Ireland does have, however, is a strong presence of large multinational companies including companies in the digital, Artificial Intelligence (AI) and "Big Data" sectors. Ireland's strong agricultural economy creates a high potential for renewable fertiliser and biomethane industries that, through carbon capture strategies, can integrate into a future green Hydrogen supply chain. The opportunity for EU funding in sustainable innovation and infrastructure strongly supports this direction. In defining and implementing such a strategy, inspiration can be drawn from models of best practice elsewhere in the EU

4.4 Best Practice (II): Industry Collaboration

To implement a regional OWE strategy successfully, lessons need to be learned not just from national stories, but also from stories of regional collaboration. In turn we look in this section at the goals, partners and stakeholders, funding models, infrastructure requirements and green hydrogen relevance of two case studies: The UK Dogger Bank Wind Farm and the Hyoffwind hydrogen production project in Belgium. These offer both short and long-term learnings for Ireland.

4.4.1 Collaboration Case Study 1: Dogger Bank Offshore Development

The Dogger Bank Offshore Wind farm, located in Hartlepool England is of significant interest to Ireland because of its scope and the overarching advantages it offers to the UK. Located 140km off the North East coast of England, the project is a 3.6GW capacity offshore development, which will be achieved through the deployment of 277 towers. Eastgate Engineering, a Waterford-based firm, is contracted to provide mechanical and electrical activities for the pre-assembly of the towers and nacelles. When the Dogger Bank Wind Farm is up and running, it will be capable of supplying enough electricity for six million homes. Eastgate currently employs 200 people, mostly out of its larger operational office on Teesside in the UK and has plans to double its workforce by the end of this year. A focus on the activities of Eastgate Engineering in the Dogger Bank offshore wind farm development is provided in Appendix III.

Description and Goals

The Dogger Bank Wind Farm is being developed in three phases in three locations in the Dogger Bank offshore development zone, at distances of 130 kilometres to 190 kilometres off the North-East coast of England to create what will collectively be the largest OWE farm in the world with a combined capacity of 3.6 GW, capable of powering 6 million homes annually.

Partners and Stakeholders

The Dogger Bank Wind Farm is a joint venture between SEE Renewables, Equinor and Vårgrønn. SSE Renewables leads construction of the project and Equinor will be lead operators of the wind farm. This development is supported by tax incentives that promote local employment on OWE projects.

Funding models

The initiative is private-funded. Dogger Bank Wind Farm funds community initiatives in collaboration with local authorities in the region and in June 2024 announced additional funding of £25 million to support coastal communities throughout the North and North East of England over its expected 35-year operational lifespan.

Port and Other Infrastructure

In March 2021 the UK government announced the investment of £95 million to build two new offshore wind port hubs on the Humber and on Teeside. These will have the capacity to house up to seven manufacturing facilities to support 'next generation' OWE project development and were at the time estimated to lead to the creation of 3,000 jobs for each of the two ports. Grid connections have been enhanced to facilitate completion of the final stage of the project.

Green Hydrogen relevance

A final phase "D" was originally intended to power the UK's largest green onshore Hydrogen plant. However, this plan was suspended in March 2024 in favour of a refocus on electricity generation, which was prompted by the confirmation of an onshore grid connection infrastructure within the vicinity of the offshore wind farm.

Relevance to the South East

The project is relevant to the SC-DMAP in three aspects: Firstly, its link to regional economic employment incentives. Secondly, the role of Waterford based Eastgate engineering in demonstrating Ireland's ability to create success stories in the OWE supply chain. Finally, the reversal of plans in relation to green hydrogen underscores the importance of long-term preparation and planning to reach this final, ambitious, stage of creating an OWE economy.

4.4.2 Collaboration Case Study 2: Hyoffwind

Belgium's emerging OWE innovation ecosystem of private, public and research organisations provide a good model for Ireland to follow. This is because Belgium's complex model of stakeholder engagement models our own to some degree in requiring collaboration between different levels of government. The HyoffWind project is also a good example of complex stakeholder and partner engagement and is of additional interest because it epitomises a mature stage of OWE in that it involves green hydrogen production on a significant scale.

Description and Goals

Hyoffwind aims to develop large-scale hydrogen production through collaboration between complementary players to build, operate and maintain offshore wind farms, Hydrogen facilities and natural gas handling and transmission systems. Despite high business risk and the need for government support across permitting, regulatory and pricing domains, the financial closing to launch the project was announced on 24th July 2024, some four years, and nine months after the original feasibility study publication. The facility will have an initial production capacity of 14,000 tons of green hydrogen per annum with the possibility for future expansion.

Partners and Stakeholders

The lead partners of this project are Parkwind, EOLY and FLUXYS. Parkwind develops, builds, operates, and maintains offshore wind farms, Eoly develops, builds, operates, and maintains hydrogen facilities and is an energy producer and fuel supplier and FLUXYS develops, builds, operates and maintains natural gas handling and transmission systems. Further partners now include Virya Energy, Messer, John Cockerill Hydrogen, BESIX and BESIX Environment.

Funding models

This project receives financing from the EHB, the Flemish regional government (through its Innovation and Entrepreneurship portal, Vlaio, and Department of Environment) and the European Wind Initiative. The project was promoted to prepare an Important Projects of Common European Interest (IPCEI) Framework agreement for Hydrogen (which make it possible for hydrogen projects to be financially supported up to 100% of "the market failure" in accordance with EU State aid rules[29]).

Port and Other Infrastructure

This project involves a "power to gas" industrial scale installation of 25 MW electrolyser to convert offshore wind turbine generated renewable electricity into green hydrogen to supply state-of-the-art LNG infrastructure**.**

Green Hydrogen relevance

The relevance to green hydrogen production is high (reflecting the strong industrial base around Antwerp-Zeebrugge port) and therefore of longer-term strategic relevance in planning out to 2050

Relevance to the South East

In spite of its goals – hydrogen production – being of longer rather than nearer term relevance, Hyoffwind's complex stakeholder environment and rich partnership engagement suggest that this model could present beneficial learnings for the South East Partnership. Additionally, the merger of Antwerp and Zeebrugge – separated by a distance of 107 kilometres - ports in April 2022 to create what is now the second largest port in Europe and one of the largest in the world suggests that closer cooperation between Waterford, New Ross and Rosslare ports – which are separated by a distance of 70 kilometres – could be actively explored.

[29] Other EU funding instruments such as the Fuel Cells and Hydrogen Joint Undertaking (FCH JU) calls for CAPEX support, the LIFE Integrated project and Horizon 2020/Europe which is aimed at research and development (low TRL) were all deemed out of scope for HYOFFWIND.

4.5 Best Practice (III): Community Benefit Funding

As acknowledged in a recent World Bank study[30], securing community benefits for offshore wind projects can build trust, ensure positive local economic and social impacts and assist the commercial success of OWE projects. Key principles set out in that paper include:

- The importance of directing community benefit funding to communities most affected by OWE projects.
- The diversity of possible benefit programmes, ranging from skills, public services and infrastructure, community and social intervention, small business and social enterprise support and environmental stewardship programmes.
- Community Benefit Funds must be part of, and consistent with, a broader strategy of responsible management and governance of OWE projects.

4.5.1 CBF Case Study 1: Orsted Community Grants

Orsted is a Danish multinational energy company and active in OWE projects internationally. It runs four Community Benefit Funds in the UK and has awarded over £11.2 million to community and environmental projects. The four funds correspond to four wind farms – Walney Extension, Burbo Bank Extension, Hornsea Projects and Race Bank on the East and West coasts of England. These wind farms are part of an overall ambition to deliver 50 GW by 2030 as part of the UK Industrial and Energy Security strategy. In a multi-faceted approach, the UK's Offshore Wind Industry Council is promoting infrastructure investment, skills development and the transformation of local coastal communities[31].

Table 6: Orsted Community grant spending

Offshore wind project	Annual Amount (£)	Skills Fund component (£)
Burbo Bank Extension	225,000	
Walney Extension	600,000	100,000
Hornsea Projects	465,000	75,000
Race Bank	700,000	100,000

These funds are administered by independent grant-making charity GrantScape. Decision making on grant allocation is made by local Advisory Groups composed of community specialists with knowledge and contacts with their locality. Examples of projects funded included grants of £5,000 towards a part time social worker, £19,850 towards YKids limited supporting disadvantaged youth, £25,000 to the Long Sutton Men's Shed and skills funding of training and education in renewable energy and cyber crime prevention as well as funding for marine life rescue.

[30] World Bank, IFC, ESMAP *"The Strategic value of community benefits in offshore wind development"*

[31] The Offshore Wind Industry Council's clustering strategy provides the first of two case studies in Chapter 4.

Relevance to the South East region

The allocation of funds from the four different wind farms to four different funds parallels the SC-DMAP structure of four wind farm areas. These could, equivalently, be linked to the four counties in the South East or, alternatively, to different thematic or sectoral (community and social, environmental, small business, educational) funding streams. The use of locally knowledgeable and connected advisory experts to inform funding decisions is aligned with best practice. One issue to be explored is the extent to which SC-DMAPs CBF revenues could co-fund projects with EU funding.

4.5.2 CBF Case Study 2: The REScoop model (Belgium)

REScoops are Belgian energy cooperatives that are officially recognised in the EU's Clean Energy Package and enable citizens to jointly own and participate in renewable energy or energy efficient projects. REScoops operate on principles of voluntary and open membership, democratic control, direct ownership, autonomy, collaboration between cooperatives, community concern and the provision of skills, training and education. The self-proclaimed benefits of the REScoop model are that it aims to keep money in the local economy and community, promote acceptance of renewable energy and facilitate affordable investments in renewable energy. REScoop activities encompass all areas of energy transition including generation, grid management, heating and cooling and transportation.

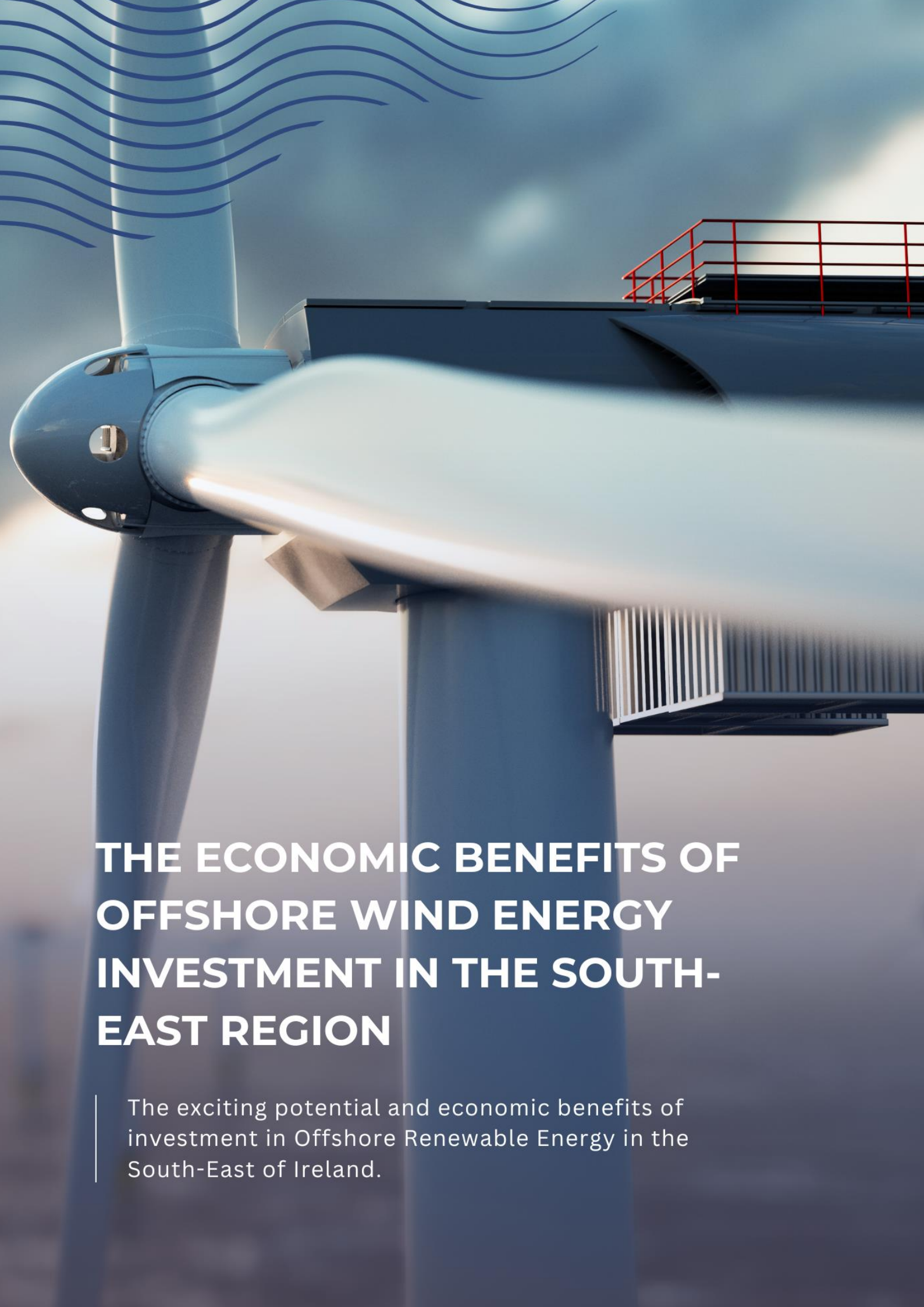
Relevance to the South East region

Whereas the first case study presented learnings in terms of the potential structuring and applications of CBF funding streams, REScoops offer a different kind of learning: Their main relevance is that, in combining industry knowledge with citizen activism, they can form a vital bridge between Local Authorities and renewable energy industry players on one hand and communities on the other, acting as a vital and flexible bonding mechanism in CBF partnership arrangements.

4.6 Conclusions

Ireland's location in the North East Atlantic offers exceptional potential for offshore wind energy (OWE). To realize this potential, the EU's broad policy support and funding mechanisms must be fully utilized. The Renewable Energy Directive enhances spatial planning, price support, and grid connection, while the Connecting Europe Facility and EU Taxonomy boost investment in generating capacity and infrastructure. Additionally, the EU is implementing short-term tactical supports like the Wind Power Package, Wind Charter, NZIA, and refining regulations around corporate social responsibility directive to facilitate sustainable investment.

Looking ahead, the EU and Ireland's National Hydrogen Strategies envision large-scale industry and shipping near ports close to OWE farms. By 2050, with an estimated 50 GW of OWE capacity and 17 GW of Interconnectivity, Ireland could produce 100-116 TWh surplus energy, enabling significant hydrogen production. This renewable hydrogen can serve various sectors in mainland Europe, including heavy transport, aviation, and heavy engineering, and potentially create new industries like sustainable fertilizers and alternative maritime fuels.



THE ECONOMIC BENEFITS OF OFFSHORE WIND ENERGY INVESTMENT IN THE SOUTH-EAST REGION

The exciting potential and economic benefits of investment in Offshore Renewable Energy in the South-East of Ireland.

5 THE ECONOMIC BENEFITS OF OFFSHORE WIND ENERGY INVESTMENT IN THE SOUTH-EAST REGION

5.1 Introduction

The exciting potential of wind energy for Ireland is illustrated by the recent Wind Energy Ireland Annual report[32]. In 2024, wind energy generation in Ireland provided 32% of Ireland's electrical energy needs, almost one-third. However, noting the significant amount of energy that could not be generated on windiest months due to insufficient grid capacity, the same report underlines the importance of strengthening the grid in order to avoid wasting such energy. Grid strengthening is needed to minimise 'constraint' and 'curtailment' so as to maximise the transmission of generated electricity, and to facilitate the storage, conversion or export of any remaining surplus energy.

Compared to an average wholesale price of electricity in Ireland in December 2024 of €136.99/MWh and a maximum of €249.37 (due to elevated gas prices), the price of electricity is generally significantly reduced on days with the most wind power, and in that month reached less than €80/MWh.

This chapter summarises the economic benefits to Ireland from large scale deployment of OWE, as set out in primary research conducted by others, with a view to using those results to assess the benefits to the OWE development in South East in so far as we can estimate them.

The principal sources of primary research are the studies commissioned by DECC and published in 2023 and 2024[33]. We additionally report findings in relation to the key areas of the local South East economy likely to benefit from OWE related spending out to two-time horizons, 2035 and 2040. To provide a contrast with these findings, we later report high level targets set out in a recent report in the UK.

The table of potential benefits set out in Section 5.2 are dependent on the necessary policy supports being implemented, as outlined in Chapter 2, including critical investment in port and other infrastructure. Nonetheless, the evidence available is a strong indication of potentially significant benefits.

[32] Wind Energy Ireland, "Annual Wind Energy Report 2024", Jan 2005

[33] From AFRY & BVGA national studies

In presenting these findings we are conscious that economic GVA, employment, and CBF, while vital preconditions to maximising the economic benefit of OWE, are in themselves insufficient. Section 5.3 addresses four more strategic economic objectives that a successful long-term OWE strategy should target:

- The creation of a renewable energy hub in the South East.
- The creation of a Centre of Excellence of OWE in the South East.
- Benefits to parallel industries (manufacturing, logistics etc).
- Promoting digitisation as the South East's "core" global offering.

5.2 Overall Economic benefits of OWE investment

5.2.1 'Extensive' national studies by AFRY & BVG

In the studies commissioned by DECC, already mentioned, consultants AFRY and BVGA obtained results for economic output, employment and tax revenue gain on a national basis. This analysis examined three scenarios for the level of capacity achieved by 2050, namely a baseline scenario of 16 GW and two further scenarios of 37 GW and 50 GW capacity respectively. For each of the latter two scenarios, results were calculated for three different levels of interconnectivity: "Domestic Net Zero" (DNZ); "Well Connected" and higher "Stretch" interconnectivity (IC) levels, of 10 GW, 12 GW and 17 GW, respectively. These correspond, respectively, to IC levels required to in the journey towards a net zero economy to halve carbon emissions (Domestic Net Zero), to facilitate good management of OWE surplus to achieve a good national energy mix (Well-connected), and to enable large scale exports including of green hydrogen (Stretch) respectively. Figure 31 presents these scenarios visually.

The first set of extensive studies conducted by AFRY and BVGA examined the overall economic benefits of Ireland's development of OWE in line with national deployment targets. A further study was conducted by BVGA for DECC in 2024, published to accompany the publication of the SC-DMAP last year, and focussed on the national and local benefits of the proposed 'Phase 2' developments in the South Coast DMAP. ISEOWP wanted to find out the economic impact within its sub region, constituted by the 4 South East counties, Carlow, Kilkenny, Waterford and Wexford, which would naturally be a part of the overall benefits to the South Coast set out in the latter study. The simplifying assumptions by ISEOWP were that:

- FTE Years in any one year could be used to roughly estimate the number of actual jobs in that year.
- 75% of the GVA and jobs benefits projected for the South Region would benefit the South East, where the main construction and O&M activity would occur.
- All of the Community Benefit Funds would flow to the South East.

The full set of results relevant to the national, South Coast and South East regions is set out in Table 7 below.

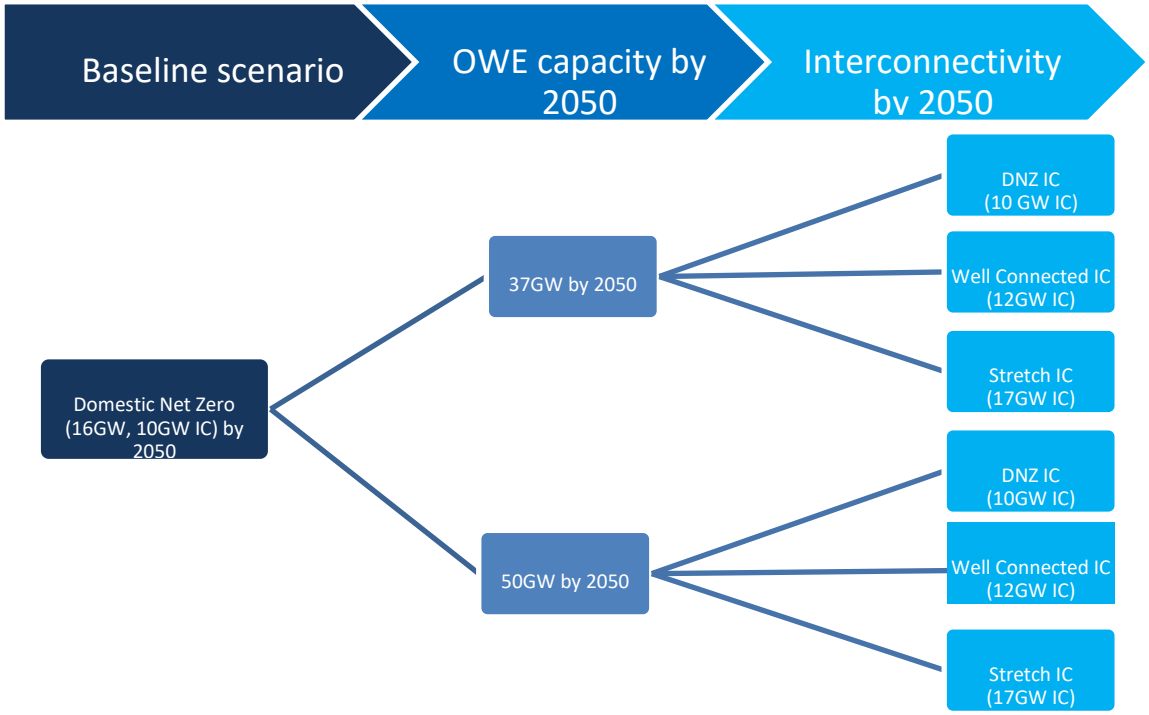


Figure 31: Scenarios examined in National studies by AFRY & BVGA

The table includes two broad sets of data, separated by the heavy black line:

- Potential benefits set out in the reports commissioned by DECC to guide their development of OWE policy.
- ISEOWP's own estimates based on the first set of data, setting out potential GVA and employment in the South East region, as well as CBF payments.

In summary, the South East region might expect benefits of some €2.2bn in lifetime GVA, 250-650 full time jobs and €29.7m per year in Community Benefits funds, from the development of the full approx. 5GW of OWE in the SC-DMAP.

Table 7: Expected national and local economic benefits

EXPECTED BENEFITS	Timing	Study data for DECC (BVGA)		ISEOWP estimates	
		Lifetime GVA (m€)	Jobs (FTE years)	Jobs[34] (range)	CBF[35] (m€/yr)
National					
1GW, Fixed[36]	2040	820	9,000	250-650	8
Fixed & Floating[37]					
16GW, 10GW IC	2050	1,700	19,000	3,500-8,300	123
37GW, 10GW IC	-	-	-	-	285
37GW, 12GW IC	2050	69,000	820,000	13-31,000	285
37GW, 17GW IC	2050	65,000	770,000	12-27,000	285
50 GW, 10GW IC	-	-	-	-	385
50 GW, 12GW IC	-	-	-	-	385
50 GW, 17GW IC	2050	96,000	1,100,000	17-39,000	385
South, Fixed[38]					
Tonn Nua, 900MW	2035	620	6,900	200-340	6
All SC-DMAP, 4,900MW[39]	2040	2,900	32,200	800-1,000	29
South East, Fixed[40]					
Tonn Nua, 900MW	2035	465	5,175	150-255	6
All SC-DMAP, 4,900MW	2040	2,175	24,150	250-650	29

[34] Assumes FTE years (DECC/BVGA data) in any one year is approx. equal to the number of jobs during that year; ranges from O&M to construction; development stage employment more variable and generally less than O&M stage.

[35] Estimate of Community Benefit Funds, assuming 44% load factor, €2/MWh

[36] BVGA (3) "Offshore renewable energy export potential for Ireland, Workstream 4: Export viability, policy considerations, trade and investment opportunities", Jan 2024. Total jobs, of which approx. 45-50% are direct jobs

[37] Ibid

[38] BVGA (4) "South coast Designated Maritime Area Plan: Regional economic impact of offshore wind development", A report for the Department of the Environment, Climate and Communications, May 2024

[39] Assumes max deployment in full SC-DMAP, 4,900 MW

[40] ISEOWP estimates, assuming three quarters of South GVA & employment in South East during construction, O&M; but all of CBF.

A further useful piece of economic analysis carried out by BVG Associates for DECC, as part of the South Coast economic impact assessment, was their set of assumptions for the breakout of the content for each activity, both nationally and locally, for both 2030 and 2040, as summarised by their Table 2.1, reproduced below as Figure 32.

Supply chain level 1 category	2030		2040	
	South coast (%)	Rest of Ireland (%)	South coast (%)	Rest of Ireland (%)
Development and project management	18	49	18	51
Turbine	2.4 in whichever territory hosts tower factory		2.4 in whichever territory hosts tower factory	
Balance of plant	1.1	2.5	1.1	2.5
Installation and commissioning	8.4	2.3	8.9	3.2
Operations, and maintenance	40	13	42	13
Decommissioning	2.5	2.5	2.5	2.5
Overall local content	14	5.8 to 6.6 depending on location of tower factory	14	6.2 to 6.9 depending on location of tower factory

Figure 32: Trajectory of local content for each supply chain category

It shows the dominant areas of benefits to the local economy in the South region arise from expenditure in the areas of development and project management, and O&M. Just under 20% of development and project management and 40 % of O&M activities are expected to accrue to the regional economy with more modest shares for other activities. Overall, the contribution from OWE supply chain activities to the regional economy is estimated at 14%. It is important to note that these benefits are dependent on supportive investment in critical infrastructures such as ports and the electricity grid, a favourable planning and legal environment and on long-term investment in research and development, skills and innovation.

It is to be noted that the above data refers to the South region and while we have made some simplifying assumptions to enable us to roughly estimate the GVA and employment benefits to the South East from within the South Region, we do not see value in doing the same with these more specific data.

5.3 The Four Economic Objectives of OWE investment

The above benefits are measured on a "static" basis and on a territorial rather than a sector-by sector basis. However, to realise the full potential of the OWE economy, OWE project implementation will – through proactive engagement by the Ireland South East Offshore Wind Energy Partnership and other relevant stakeholders – need to target four key economic objectives:

1. ***The creation of a renewable energy hub in the South East***

In addition to the reputational benefits of locating in a region whose economy is branded as being a clean energy hub, large industrial users of energy – such as Data Centres - can become part of the OWE supply chain and, longer-term, large "hard to abate" fuel consuming industries such as shipping, fertilisers and heating fuel could locate in the South East to avail of local green Hydrogen supply.

2. ***The creation of a Centre of Excellence in the South East***

A Centre of Excellence in the South East can emerge in which the following factors develop and, as they develop, create a virtuous circle of the following activities:

- Research and Development: Fostering innovation and attracting high-value FDI and jobs
- Educational Opportunities: Enhancing local educational institutions for RD&I and training
- Job Creation: Creation of high-value jobs in research, development, and training.
- Energy Cost Savings: Technological advancements leading to cost reductions.
- Investment and FDI Clustering: Attracting investment in RD&I.
- Community Inclusion: Realising significant community benefit (discussed in section 4.4 below).

3. ***Benefits to parallel industries (Manufacturing, Logistics etc)***

A well-planned and sustained investment can lead to job creation and economic growth in the following areas:

- Provision of energy cost saving services improving operational efficiency over a long-term time horizon.
- Investment and FDI Clustering: Attracting investment in parallel industries can lead to FDI clustering. The National Clustering Programme should retain a regional focus in this regard
- Manufacturing of less capex intensive Wind Turbine components.
- Logistics, Transport and Shipping relating to maintenance and operation. This could have knock-on effects in facilitating lower costs and greater efficiency for local non-OWE industries.

- Expanded parallel marketplace for local skills and manufacturing such as high voltage electrical engineering & assembly, maintenance & logistics, etc.

4. Promoting digitisation as the South East's possible first mover advantage

As a crucial centre of ICT research and development in Ireland, the Walton Institute for Information & Communications Systems Science, situated in Waterford, provides advanced next-generation capabilities and application of digital technology, including data analytics and AI. This is potentially a critical differentiator for the South East region as digital technology can be used for:

- Real-time collection and analysis of wind and wave data to enhance operational and maintenance efficiency.
- Processing of long-term trend information relevant to OWE investment (LCOE trends against peer benchmark OWE wind farms).
- Achieving economies of scale and scope through multi-purpose use for other marine purposes (fishery, biodiversity monitoring, spatial planning, naval security, etc).

Appendix IV illustrates a case study of the Institute's ICT research into smart grids and distributed energy units.

5.4 Community Inclusion – a vital social objective

Section 4.5 outlined successful models of Community Benefit Fund activity in the UK and Belgium. The benefits delivered by CBF schemes can include job opportunities, upskilling for marginalised youth and long-term unemployed and an enhanced marketing and branding of community-based OWE powered agri-food and tourism industries. As the road ahead for the development of the South East's, and Ireland's, full OWE potential is a long one, realising significant tangible community benefit will be crucial to maintaining commitment at national and local level to continued growth of the industry. Table 8 below presents a summary of potential substantial Community Benefit Fund revenues which local communities in the South East region can benefit from offshore wind development in the SC-DMAP area.

Table 8: Community Benefit Fund revenues by specific SC-DMAP area

	Tonn Nua	Lí Ban	Manannán	Danu	Total
Area (km^2)	306	386	341	304	
MW/km^2	3	3	3	3	
MW	918	1104	1023	900	
Capacity factor	40%	44%	44%	44%	
Hours	8760	8760	8760	8760	
Projected annual renewable energy production (MWh)	3,216,672	4,255,258	3,943,051	3,468,960	14,883,941
CBF (€ per MWh)	2	2	2	2	

CBF per annum (€)	6,433,344	8,510,515	7,886,102	6,937,920	29,767,882
15 years cumulative (€)	**96,500,160**	**127,657,728**	**118,291,536**	**104,068,800**	**446,518,224**
25 years cumulative (€)	**160,833,600**	**212,762,880**	**197,152,560**	**173,448,000**	**744,197,040**

The cumulative CBFs in the South East over a 15-year period could amount to nearly €450 million, showing that development of OWE in the region could provide socio-economic advantages such as providing scholarships, skill development and training within the community, home energy upgrades to fuel poor homes and community centres and enhance the "communal" collective through social or other supportive programs.

5.5 Conclusions & Policy recommendations

The analysis above points to substantial economic and employment benefits for the South East region from the first order impact of substantial investment in OWE. Realising these first order impacts – and going further to reap the benefits from creating a renewable energy hub, a centre of excellence, developing parallel industries and creating a digital industry OWE comparative advantage – will depend on the **implementation of Government policies in a number of crucial areas.**
These include:

- Ensuring timely and adequate investment in supportive OWE relevant port, grid connectivity and digital infrastructure to support investor confidence in future OWE scale and viability
- Establishing clear, predictable frameworks for seabed-leasing, permissions, offtake and grid connection. Recent initiatives at EU level (see Chapter 3) should be noted in this regard.
- Establishing a clear industrial strategy for offshore wind that targets specific investment in key areas of the supply chain. The Programme for Government strongly supports this. In this regard section 2.2 provides further insight into how this objective can be advanced through the National Clustering Programme and full industry engagement.
- Using tax incentivisation to stimulate the OWE industry, within EU State aid rules. Case study analysis from Scotland (Chapter 3) and recommendations in Chapter 6 elaborate further.
- Collaboration between industry and government to identify and pursue large inward investment opportunities and coordinate support packages.
- Targeted skills development at national and regional levels.
- An integrated approach to national, regional and local planning and a streamlining and where necessary fast tracking of planning permission for OWE and infrastructure development.

Key opportunity

In managing early-stage opportunities, preparation should be undertaken to ensure that the local sectors most likely to benefit from OWE investment (Development and Project Management and Operation and Management) are primed in terms of sector readiness and skills availability.

Finally, realising community benefits will be essential in both channelling and diffusing the economic benefits of OWE investment as widely as possible and in giving evidence of its community relevance from an early stage of policy implementation onwards.

EXCELLENCE THROUGH COLLABORATION: A PLAN OF ACTION

Developing the South Coast's offshore wind potential is nationally important, with strong policy support, funding, and economic benefits.

6 EXCELLENCE THROUGH COLLABORATION: A Plan of Action

6.1 The Case for Immediate Action

Offshore Wind Energy (OWE) presents a transformative economic and environmental opportunity for Ireland's South East. However, **delays—such as to the ORESS auctions—risk undermining investor confidence**. In a global context of rising geopolitical tension and climate urgency, the European Union is accelerating its transition to renewables. The South East must respond with equal urgency.

To fully seize this opportunity, the South East Offshore Wind Energy Partnership must prioritise a coordinated action plan that includes:

- Issuing **Maritime Area Consents (MACs)** for Rosslare Europort and the Port of Waterford
- Accelerating **port infrastructure investment**
- Securing grid interconnectivity for electricity and hydrogen (via gas blending)
- Streamlining planning and regulatory processes
- Strengthening the **skills and talent pipeline**
- Leveraging **EU funding** with well-structured applications
- Mobilising public-private partnerships
- Maximising the impact of the **Community Benefit Fund**
- Applying tested local funding models like **LEADER** and **FLAG**
- Strengthening the case for **national policy and fiscal support**

These are not just desirable outcomes—they are **immediate strategic imperatives**.

6.2 Embedding OWE in the South East Economy

Beyond the immediate construction and O&M phases, the long-term value lies in deeply embedding offshore wind into the region's economic fabric. This means transitioning from energy production to a **renewables-driven industrial economy**.

Key focus areas include:

- Enabling **SMEs to access higher-value supply chain opportunities**
- Supporting **regional job creation and economic diversification**
- Promoting **lifelong learning** and digital transition for small businesses
- Developing **innovation clusters** and public-private partnerships

Institutions like **SETU, Kilkenny and Carlow Education and Training Board (KCETB), and Waterford and Wexford Education and Training Board (WWETB)** will play pivotal roles to prepare future skilled workforce suitable for the offshore sector. As part of their Third Level programs, SETU will oversee the development of skills and research capacity, while the ETBs will coordinate the delivery of practice-based education in a variety of fields relevant to the offshore renewables industry. These advanced courses may take the shape of apprenticeships, traineeships, or certificate programs. The presence of **GreenTech HQ**[41], an innovation hub in Co. Wexford, would foster a skilled workforce localised in the region. As a co-funded initiative between industry & the Department, the skills hub will support the workforce development needs of enterprises within the renewable energy sector through upskilling and reskilling of professionals. Furthermore, it is an integrated part of skills ecosystems and knowledge triangles (together with SETU & two regional ETBs) that would position the South East region at the core of specific value chains and industrial ecosystems for the offshore sector.

6.3 Case Studies: Regional Capability in Action

Local firms like **Eastgate Engineering** and **FLI Precast Solutions Ltd** are already contributing to flagship international OWE projects, including the **Dogger Bank wind farm**—the largest of its kind globally. These examples show that **the South East has the capability and talent to operate at global standards**, and reinforce the case for anchoring future supply chain development locally. Based on 2024 DETE report[42], supply chain opportunities for Irish companies in the offshore renewable energy sector include: geophysical and geodata surveying, controls and instrumentation, project management, engineering & technology (includes construction, electrical, marine, mechanical, renewable technology), land and sea haulage, insurance, and vessel and port facilities. The balance of plant (BoP) sector, encompassing all supporting components and systems in offshore renewable technology, will enhance global competitiveness and establish a supplier-driven collaboration model that ensures equitable socioeconomic benefits to the four counties throughout the various phases of project development. Case studies of local enterprises in the region optimising local supply chain potentials and exporting to global offshore wind markets are detailed in Appendix III.

[41] GreenTech HQ: Pioneering Sustainable Business Excellence in the South East https://www.greentechhq.com/

[42] Department of Enterprise, Trade and Employment. (2024). *Powering Prosperity Ireland's Offshore Wind Industrial Strategy.* Government of Ireland.

6.4 Supporting Policy and Funding Instruments: Unlocking Support

The South East can capitalise on powerful EU instruments designed to back strategic climate and energy investments, including:

- **Connecting Europe Facility (CEF)** – infrastructure support for ports and grid
- **EU Taxonomy** – to channel private investment into green projects
- **DEEP** and **EEFIG** platforms – to de-risk large-scale energy investments

At a national level, the creation of an **OWE Tax Strategy Group** could deliver bespoke fiscal incentives—supporting Budget 2026 proposals and aligning offshore wind with broader industrial policy.

6.5 Developing Skills and Human Capital

Workforce development is central to success. Ireland faces a shortage of skills across the OWE lifecycle, including:

- Project development (EIA, planning, marine, engineering)
- Manufacturing (metal fabrication, composite assembly)
- O&M (safety, offshore logistics, high-voltage systems)

Key actions:

- Launch a **Skills Development Fund** to support targeted training
- Integrate **offshore modules** into Springboard+ and public curricula
- Expand FET and **SOLAS-backed upskilling** for industry needs
- Deepen collaboration with **Skillnets**, **SETU**, and private training providers

6.6 Strengthening the Offshore Wind Partnership

The **Ireland South East Offshore Wind Partnership** brings together regional stakeholders across ports, government, education, community, and business. It meets quarterly, conducts site visits, and operates thematic sub-groups (e.g., supply chain, skills, planning).
Its key ambitions:

- Drive regional foreign direct investment (FDI)
- Support startups and local enterprise
- Leverage infrastructure to attract global operators

- Lead exports of Irish offshore wind services and IP

A standout example is the Walton Institute at SETU, which is developing Smart Grid and digital energy management technologies—positioning the region at the intersection of clean energy and digital innovation.

6.7 National and Regional Policy Alignment

The South East's energy potential is backed by both national and regional strategy documents, including:

- **South East Regional Enterprise Plan (Action 2.1)**
- **Southern Regional Assembly (RSES)** – strategic outcomes include low-carbon economy transition, energy interconnection, and innovation hubs
- Clustering models inspired by **North-East England** show how structured, local ecosystems can attract FDI, skills and community support

6.8 Building the Business Case

To secure national and EU-level support, the region must develop a **fully costed business case** for its OWE strategy. This should include:

- Economic impact modelling (GVA, jobs, tax returns)
- Supply chain and infrastructure readiness (via NACE code analysis)
- Workforce projections
- Spatial strategy for green industrial parks and hydrogen logistics
- Digital and smart energy integration

International exemplars like **He Dreiht (Germany)** and **Hyoffwind (Belgium)** provide strong benchmarks for investment modelling and public-private coordination.

6.9 Strategic Next Steps

As Ireland approaches ORESS 2.1 and EU offshore ambitions accelerate, the South East must act decisively.

Immediate priorities include:

- Fast-tracking investment in **ports, grid, and hydrogen facilities**
- Streamlining planning and regulatory frameworks

- Launching a **Centre of Excellence for Offshore Wind**
- Attracting **large-scale industrial energy users** to anchor demand
- Maximising EU collaboration through networks and funding calls
- Ensuring deep supply chain integration, especially for **inland counties**
- Promoting a **national OWE brand**, anchored in the South East
- Establishing the **OWE Tax Strategy Group** in time for Budget 2026

CONCLUSION

Powering a Regional and National Transformation.

7 CONCLUSION: Powering a Regional and National Transformation

Offshore wind energy has arrived at a pivotal moment for both **Ireland and the South East region**. As Europe accelerates its transition to energy independence and climate resilience, Ireland's unmatched offshore wind resource has positioned it as a **strategic leader in renewable energy**. This potential is not theoretical—EU institutions, investors, and industry experts now regard Ireland as a future **clean energy exporter** and a critical part of Europe's green hydrogen supply chain.

For the South East, the convergence of national policy, European support, and regional capability presents a once-in-a-generation opportunity. The draft revised **National Planning Framework** forecasts rapid population and workforce growth across the region. Simultaneously, the **Future Framework for Offshore Renewables** and **Programme for Government** policies prioritised offshore wind as a cornerstone of Ireland's low-carbon industrial future. With over **434 kilometres of coastline**, strong port infrastructure, and proximity to major interconnectors (Greenlink and Celtic), the South East is **geographically and strategically positioned** to lead.

Under the **South Coast Designated Maritime Area Plan (SC-DMAP)**, the region is targeted for between **4.2 GW and 5.6 GW** of offshore wind capacity. This forms a vital part of Ireland's national targets: **5 GW by 2030**, **20 GW by 2040**, and **37 GW by 2050**—with a more ambitious **50 GW export-focused scenario** being modelled by DECC. In that scenario, Ireland could meet a substantial share of **Europe's green hydrogen demand**, particularly from industrial economies like Germany.

The projected economic benefits are transformative. Depending on scenario assumptions, South East's derived share of socioeconomic benefits from proposed 5GW of OWE installed capacity in the 4 maritime areas are **€465 million to €2.2 billion as GVA** contributions to the regional economy and **250 – 650 new jobs** created spanning project development, construction, operations, and supply chain roles.
Critically, the **Community Benefit Fund (CBF)**—mandated under the ORESS framework—is expected to deliver **nearly €450 million** to local communities over the next 15 years. These funds will support energy efficiency, skills training, coastal resilience, and community infrastructure, offering visible and equitable returns on offshore investment across towns, villages, and coastal areas.

At the national and European level, support frameworks are firmly aligned. The **EU Offshore Wind Strategy**, **Net-Zero Industry Act (NZIA)**, **Renewable Energy Directive**, **European Hydrogen Bank**, and **Connecting Europe Facility** are streamlining policy, funding, and permitting—reducing barriers and increasing investor confidence. Ireland is now fully embedded in these processes, with the South East region acting as a vital early-stage implementation zone.

As highlighted throughout this report, the South East is not starting from scratch. With its 110+ Sustainable Energy Communities, SETU's growing clean-tech research capabilities, active cluster networks, and committed regional leadership, the region already has the institutional architecture to deliver.

The road ahead requires continued urgency, cross-sector collaboration, and strong local-to-national alignment. But with the wind at its back—economically, politically, and literally—the South East can become not just a hub of renewable generation, but a **model for inclusive, innovation-driven, climate-resilient economic transformation**.

APPENDIX I – REFERENCES & MAP CREDITS

AFRY (1). *Offshore Renewables Export Surplus WS2 – Electricity Interconnection Quantitative Assessment Report. A report to the Department of the Environment, Climate and Communications, 2023*

AFRY (2). *Offshore Renewables Surplus Potential WS1 – Market Analysis. A report to the Department of the Environment, Climate and Communications, 2023*

AFRY (3). *Offshore Renewables Surplus Potential WS3 – Renewable Hydrogen, A report to the Department of the Environment, Climate and Communications, December 2023*

Belgian Offshore Wind: Innovation and Investment, An ex-post analysis, Wyns T, Vrije Universiteit Brussel, 2023

Breyer S, Cornet M, Pestiaux J, Vermeulen P (2017) *The Socio-Economic Impact of the Belgian Offshore Wind Industry* (Belgian Offshore Platform) updating Bréchet T, Eyckmans J (Climact)

BVG Associates (1). *Building our Potential Ireland's Offshore Wind Skills and Talent Needs.* Ireland, 2024

BVG Associates (2). *Offshore renewable energy export potential for Ireland. Workstream 5: Optimised financial and economic return to state and local communities. A report for the Department of Environment, Climate and Communications, 2024*

BVG Associates (3). *Offshore renewable energy export potential for Ireland.* Workstream 4: Export viability, policy considerations, trade and investment opportunities. *A report for the Department of Environment, Climate and Communications, 2024*

BVG Associates (4) *South coast Designated Maritime Area Plan: Regional economic impact of offshore wind development,* Report for DECC, May 2024.

Byrne Ó Cléirigh Ltd Ecological Consultancy Services Ltd (EcoServe) (2000). *Assessment of Impact of Offshore Wind Energy Structures on the Marine Environment.* School of Ocean and Earth Sciences, University of Southampton

Commission for Regulation of Utilities (2024). *National Energy Demand Strategy.* Ireland

Cornwall Insight (2022). Improving revenue certainty and risk allocation for new renewable generators.

Department of Communications, Climate Action & Environment (2019). *Climate Action Plan 2019: To Tackle Climate Breakdown.* Government of Ireland.

Department of Enterprise, Trade and Employment (2022). *Mid-Term Progress Report South East Regional Enterprise Plan to 2024.* Government of Ireland.

Department of Enterprise, Trade and Employment (2022). *Regional Enterprise Plan To 2024. South East.* Government of Ireland.

Department of Enterprise, Trade and Employment (2022). *South East Regional Enterprise Plan to 2024. Overview of actions.* Government of Ireland.

Department of Enterprise, Trade and Employment (2023). *Shannon Estuary Economic Taskforce Report.* Government of Ireland.

Department of Enterprise, Trade and Employment (2024). *Powering Prosperity Ireland's Offshore Wind Industrial Strategy.* Government of Ireland.

Department of Environment, Climate and Communications (*2022). Territorial Just Transition Plan EU Just Transition Fund.* Government of Ireland.

Department of Environment, Climate and Communications (2023). *Climate Action Plan 2024.* Government of Ireland.

Department of Environment, Climate and Communications (2023). *Offshore Wind Delivery Taskforce.* Government of Ireland.

Department of Environment, Climate and Communications (2024). *Draft Offshore Renewable Energy Future Framework Policy Statement. Government of Ireland.*

Department of Environment, Climate and Communications. (2024). *Future Framework for Offshore Renewable Energy: Policy Statement.* Government of Ireland.

Department of Finance*. (2024). Budget 2024 Economic & Fiscal Outlook.* Government of Ireland.

Department of Public Expenditure and Reform (2021)*. National Development Plan 2021-2030.* Government of Ireland.

Department of Public Expenditure NDP Delivery and Reform (2024). *Infrastructure Guidelines Supplementary Guidance: Measuring & Valuing Changes in Greenhouse Gas Emissions in Economic Appraisal*. Government of Ireland.

Department of Rural and Community Development *(2021). Our Rural Future Rural Development Policy 2021-2025.*Government of Ireland.

Department of the Environment, Climate and Communications (2023). *National Policy Statement Electricity Interconnection.* Government of Ireland.

Department of the Taoiseach (2020). *Programme for Government Our Shared Future.* Government of Ireland.

Department of the Taoiseach (2024). *Climate Action Plan Progress Report.* Government of Ireland

Draft Offshore Renewable Energy Future Framework Policy Statement (2024). Prepared by the Department of Environment, Climate and Communications. Government of Ireland.

Draft Revised National Planning Framework (2024). Government of Ireland.

Draft South Coast Designated Maritime Area Plan for Offshore Renewable Energy Government of Ireland (2024).

Draghi, M. (2024). *"The future of European Competitiveness Part A: A competitiveness strategy for Europe*". Publications Office of the EU. https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

EU taxonomy regulation (2020). Official Journal of the European Union. https://eur-lex.europa.eu/eli/reg/2020/852/oj

European Commission (2019). *European Green Deal Annex.* Brussels.

European Commission (2019). *The European Green Deal.* Brussels.

European Commission (2023). *Commission Recommendation C/2023/1553 of 12 December 2023 on transposing Article 30 on national energy efficiency funds, financing and technical support of the Directive (EU) 2023/1791 on energy efficiency*

European Commission (2023). *Study on the allocation of costs and benefits for offshore infrastructure in EU sea basins.* Brussels

European Environment Agency (March 2024) *Energy Consumption from renewable sources in Europe*

European Network of Transmission System Operators for Electricity (2024). *Offshore Network Development Plans 2026 – Guidance Document*. Brussels

Eurostat (2024) *"Electricity from renewable sources up to 41% in 2022"*, February 2024

Federal Ministry for Economic Affairs and Climate Action (2023). *Information trip from Ireland to Germany Generation, storage and distribution of green hydrogen.* Germany

Gavin & Doherty Geosolutions / Wind Energy Ireland

Government of Ireland, *Terms and Conditions ORESS Tonn Nua Offshore Wind Auction,* October 2024

HM Government (2023). *Offshore Wind Net Zero Investment Roadmap.* UK

International Energy Agency (2023). *World Energy Outlook 2023*

Irish Fiscal Advisory Council, *"Fiscal Assessment Report: Ireland's Bounty"*, December 2024

Irish Fiscal Advisory Council & Climate Change Advisory Council, "A colossal missed opportunity

Ireland's climate action and the potential costs of missing targets", March 2025
Kilkenny County Council (2021). *Kilkenny City & County Development Plan Vol 1 County 2021-27.*
Konstantelos, P., Moreno, R., Strbac, G. (2017). *Coordination and uncertainty in strategic network investment: Case on the North Seas. Energy Economics*. Volume 64, Pages 131-148
KPMG (2021). *Powering a Green Economy*. Ireland
Krohn S, Morthhorst P.E., Awerbuch S *The Economics of Wind Energy: A report by the European Wind Energy Association,* European Wind Energy Association *(2009).*
National Hydrogen Strategy Government of Ireland (2023).
Poudineh, R., Brown, C. and Foley, B. (2017) *"Economics of Offshore Wind Power, Challenges and Policy considerations"*, Palgrave, Pages 69-76.
Statistics in Focus 47/2009 *"Nearly Half of the Population of EU countries with a sea border is located in coastal regions",* Eurostat Unit E1, Farms, Agro—environment and rural development.
Neilson, B., Costello, M.J. (1999). The Relative Lengths of Seashore Substrata Around the Coastline of Ireland as Determined by Digital Methods in a Geographical Information System.*Estuarine, Coastal and Shelf Science.* Volume 49, Issue 4, Pages 501-508
Offshore Wind Delivery Task Force (2024). *Offshore Wind Energy Programme: Annual Review 2023 and Key Actions for 2024.* Government of Ireland.
Offshore Wind Delivery Taskforce (2024). *Offshore Wind Energy Programme Annual Review 2023 and Key Actions for 2024.* Government of Ireland.
Renewable Uk (2024*). 2024 Offshore Wind Industrial Growth Plan: Expanding the Horizon of the Uk's Offshore Wind Supply Chain.*
REPowerEU at a glance (2022). https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en
Solas (2024), *Green Skills 2030*
South East Energy Agency (2024). Review Of EirGrid Shaping Rev 1.1 In the Context of Their Transmission Grid Development in The South East Region.
Southern Regional Assembly*. Regional Spatial & Economic Strategy for the Southern Region, 2020*
Squirrel Lane consultants, *South Coast Designated Maritime Area Plan¸* 2025
Sustainable Energy Authority of Ireland (2024). *First Look: Renewable Energy in Ireland.* Government of Ireland.
Sustainable Energy Authority of Ireland (2023). *National Energy Projections 2023 Report.* Government of Ireland.
Sustainable Energy Authority of Ireland (2024) "*Offshore Renewable Energy Technology Roadmap" Government* of Ireland prepared by BVG Associates and supported by Beauchamps.
Sustainable Energy Authority of Ireland 2018 *An economic analysis of wind farm externalities and public preferences for renewable energy in Ireland.* Cairnes school of business and economics, NUIG and TEA
Teagasc, Rural Economy and Development Programme. *Wind Energy Fact sheet*Waterford City & County Council (2022). *Waterford City & County Volume 1 - Written Statement Development Plan 2022-2028.*
Wind Energy Ireland (2022). *Bridging the Gap: Towards a zero-carbon power grid*. Baringa Partners LLP and TNEI Services.
Wind Energy Ireland (2024). *Building our Potential: Ireland's Offshore Wind Skills & Talent Needs*
Wind Energy Ireland (2024). *Cutting Carbon, Cutting Bills: Analysis of Savings in Gas Consumption Delivered by Wind Farms in 2023*. Baringa Partners LLP and TNEI Services.
Wind Energy Ireland. (2022). *National Port Study*. Gavin & Doherty Solutions.

Wind Europe, *"Rebound in wind energy financing in 2023 shows that the right policies attract investors"*, March 2023
World Bank, IFC, ESMAP *The strategic value of community benefits in offshore wind development,* 2024
Wyns, Thomas (2023). *Belgian offshore wind: Innovation and investment an ex-post analysis.* University of Brussels

Map Credits

EMODnet Bathymetry World Base Layer version 1. GGS Geo Consultancy (2021): EMODnet Bathymetry consortium. Creative Commons Attribution 4.0 International https://doi.org/10.12770/386fe2aa-84c4-4cea-9e22-fcba4d5f2e75

Copernicus Land Monitoring Program – EU-DEM v1.0 – © CCME (2022), provided under Copernicus by the European Union and ESA, all rights reserved.

OPENSTREETMAP – Vector data © OpenStreetMap contributors. Data is available under the Open Database License

Mean Windspeed 100m - SEAI via WMS from atlas.marine.ie Licenced under Creative Commons Attribution 4.0 Licence

DMAPS Proposal Boundary Department of Housing, Local Government and Heritage. Available at data.gov.ie and licenced under Creative Commons Attribution 4.0 licence.

Ireland's South Coast Designated Maritime Area Plan (SC-DMAP) for Offshore Renewable Energy. Department of the Environment, Climate and Communications. Available at https://tinyurl.com/249mjjcb

APPENDIX II – HOW THE COMMUNITY BENEFIT FUND & DEVELOPMENT DELIVERY PLAN (DPP) WORKS

Since the outgoing *Programme for Government, Our Shared Future*, ensuring community benefit has been at the heart of sustainable energy policy with a strong role for community participation in delivering the 70% renewable electricity target by 2030. The main strands to the community features involve a distinctive community category within the Renewable Energy Support Scheme (RESS) auctions, an enabling framework to support communities to develop projects, a mandatory community benefit fund of €2/MWh and mandatory investment opportunities for citizens and communities in RESS projects. A *Community Benefit Good Practice Principles* Handbook has been developed also.

The Operation of Community Benefit Funds are specified in the 'CBF Guidance for the Community' developed by each ORESS-1 Fund Administrator in collaboration with the CBF Committee. Generators ensure compliance with the Terms and Conditions and this Rulebook while Fund Administrators facilitate local communities in maximising the opportunities of the CBF on behalf of the Generator. Cross-sectional and representative geographical representation are a key element of the approach.

Clear Terms and Conditions are set out for each wind auction[43] that specify the legal basis, market definition, administration, qualification and winner selection processes and obligations – and most of all the CBF funded community obligations – attached to each auction. The most recent of these is for the Tonn Nua auction (ORESS 2.1) due later in 2025.

The CBF Committee is composed of a minimum of 7 members and a maximum of 20 members, inclusive of at least two members who are non-sectoral (i.e., representing the general community), representative organisations or representative groups, such as Local Authorities, Local Community Developments Networks, Local Enterprise Offices, and Regional Development agencies. Remaining members will be appointed to the CBF Committee based on evidence of their local community connection, relevant specific experience/skills/expertise in relation to community development and experience in promoting sustainable development goals (SDGs) and/or community investment.

The Fund Administrator and CBF Committee must work to ensure a balanced representation or dominance of any one group. The CBF Committee must at all times be appropriately representative of the local community in respect of the ORESS 1 Project and must prioritise the joint development of a plan in relation to the delivery of CBF Funding to the CBF Target Local Community.

[43] See for instance 'Government of Ireland, *Terms and Conditions ORESS Tonn Nua Offshore Wind Auction*', October 2024.

The resultant "Development Delivery Plan" (DDP) is developed in consultation and collaboration with the local community in respect of project and key local stakeholders.

The DPP seeks to:

- Identify key priorities and needs across Target Local Communities.
- Set out a simple and straightforward approach and strategy for future CBF funding that may help to address these key priorities and needs and that aligns with other objectives and
- At the local, county, regional and national level where applicable and appropriate give appropriate consideration to medium-term and long-term community priorities and multi-annual funding initiatives.
- Align with UN Sustainable Development Goals (SDGs).
- Clarify key priorities and needs in marginalised communities, new communities and other similar groups and how CBF funding may help to address such key priorities and needs; and
- Consider communities, groups or areas which are in particular need of support.

The DDP could, for example, choose to reserve some of the CBF funding for initiatives that address drivers of social or economic disadvantage among communities, encourage better energy sustainability solutions, benefit the local fishing community, support marine biodiversity and conservation, or enhance a particular location or area.

An example of the CBF in action is the 2019 Celtic Interconnector Community Benefit Fund established in 2019. This €2.4 million fund is being used to promote community, sustainability and biodiversity objectives over a four-year period from 2023-2026. It identifies small towns, medium towns and large towns along the route from Knockraha to Youghal with a view to benefitting areas of deprivation as identified by Pobal's HP Deprivation Index. The fund can be used to match funding from other existing funding programmes such as LEADER. The needs of local communities are identified from data gathered from consultation, including SWOT analysis.

To widen participation, considerations could be given to reviewing the operation of CBF as follows:

- Identify examples of best practice – such as the EirGrid Interconnector CBF – to guide future projects.
- How to enable beneficial engagement with inland as well as shoreline communities and economies.
- Aligning Development Delivery Plans (DDP) with Local Development Strategies (LDS) to ensure best practice approaches to consultation, financial planning and governance.
- Modify alignment requirements to emphasise more local and regional policy priorities.

BEST PRACTICE CASE STUDY – GWYNT Y MÔR OFFSHORE WIND FARM, NORTH WALES[44]

RWE adopted a multi stakeholder partnership approach to developing the Gwynt y Môr Community Fund, which will invest in the region of £19 million over the offshore wind farms lifetime. An advisory group, with members from the public, private, education and training, and voluntary sectors, pooled their expertise and local knowledge to develop the very best structure and delivery mechanism for the fund, building on the feedback from the community consultation on the fund. This partnership approach resulted in a bespoke fund - tailored to address funding gaps and build on successful existing funding practices - thus ensuring maximum impact from these new, flexible funds which have the potential to deliver well beyond their original £19 million investment.

Stage 1 – Engaging the Wider Community

In February 2012 RWE listened to the views of over 1,000 organisations and individuals on the potential priorities, structure and operation of the Gwynt y Môr Community Fund. The consultation focused on what priorities the fund should address, how it should be managed, and which communities should benefit.

Stage 2 – The Advisory Group

RWE convened an advisory group of local stakeholders, representing the broad North Wales area to provide advice and expertise to support RWE to take forward the results of the consultation and to develop a fund structure. The group also explored how our funding will work alongside other funding streams and activities to achieve a more joined up approach to funding. Membership of the group included representatives from the Local Authority and Voluntary Sector from each of the three counties (Conwy, Denbighshire and Flintshire) as well as representatives from the Higher Education sector, social enterprise and the business sector. The Advisory Group met at monthly intervals and notes from their meetings were shared on RWE's website to ensure transparency. The area of benefit was finalised and three initial themes agreed.

[44] This is a case study produced by RWE. Additional details can be found by visiting the following URL https://rwe.canto.global/direct/video/u0t3ac408p0ht8urbv892jdt0c/gS569rEgFGdu5vkj4_AtTp3WWw0/original?content-type=video%2Fmp4&name=gwynt_y_mor_full_v2_%28eng_subs%29+%28Original%29.mp4

Stage 3 – Appointing an Independent Fund Administrator

We completed an open procurement process to identify a suitable organisation to manage the fund. This unusual and exciting opportunity received a high level of interest from a range of organisations. The tender opportunity was advertised in the local media, and Gwynt y Môr received 12 expressions of interest and eight full tender submissions. Following a rigorous interview process we appointed a local professional grant maker, Community & Voluntary Support Conwy (CVSC).

Stage 4 – Fund Operation

CVSC employ a full-time fund manager who leads the grant making process and supports applicants to the fund. There is a simple application process. CVSC have recruited a panel of local people who live, work or volunteer in the fund area of benefit. This panel make decisions about funding applications and helps shape the future direction of the fund. The panel operate to clear terms of reference and are supported by the fund manager. ***"The fund is doing great work and is a great example of a community benefit model".*** Peter Davies, Chairman, Wales Council for Voluntary Action.

APPENDIX III – ENGINEERING CASE STUDIES

Case Study 1: Eastgate Engineering

The exciting potential of the South East economy to meet the needs of the OWE industry is illustrated by the case of Eastgate Engineering.

Eastgate Engineering is a Waterford-based engineering company specialising in design, construction, operation and maintenance, and project management for the offshore wind, power and related industrial sectors. The company offers expert electrical and instrumentation services for high-risk, complex projects across offshore wind, power, renewables, and industrial sectors. Eastgate Engineering is currently involved with the Dogger Bank Wind Farm, which is the world's largest offshore wind farm, as well as the "Inch Case" Wind Farm. These two projects combined will have an installed capacity of 4.8GW, almost equal to Ireland's 2030 OWE target of 5GW installed capacity when completed.

Dogger Bank's first three phases A, B and C, will take 3.5 years to assemble with an installed generation capacity of 3.6 GW and an additional phase D will provide a further 2 GW in capacity. Altogether, 277 turbines will be installed offshore, and each turbine can provide enough energy to power 16,000 households and save the equivalent of 9,000 vehicle emissions in a year. The company is working with the world's largest offshore jack-up installation vessel, the "Voltaire" which is also the first ultra-low emission ship of its kind.

Case Study 2: FLI Precast Solutions Ltd

FLI Precast Solutions Ltd has been playing a pivotal role in the development of the Dogger Bank Wind Farm, the world's largest offshore wind farm, situated in the North Sea, 70 nautical miles off the coast of Yorkshire, UK. This project is a landmark in renewable energy, showcasing the potential of wind power in contributing significantly to the energy grid.

FLI Precast Solutions Ltd was entrusted with the design, manufacture, and supply of chamber risers and cover slabs, essential components for the wind farm's infrastructure. Their expertise in precast concrete solutions was crucial in meeting the stringent demands of an offshore wind farm environment.

According to Michael Flynn, Executive Chairman and CEO of FLI Global:

> ***"The FLI Group and FLI Precast are proud to be key members of the engineering supply chain to the offshore wind sector that has the potential to make Ireland a European leader in renewable energy. The FLI Group based in Waterford and Carlow are focused on providing sustainable solutions to our global client base and working closer to home on Dogger Bank and other large infrastructure projects gives us an opportunity to assist in Ireland's ambitions to reach carbon neutrality in the years ahead."***

FLI Precast's manufacturing facility is based in Carlow, Ireland employing over 100 people and playing a vital role in the community there for over 35 years. The Dogger Bank Wind Farm, with its 277 turbines, is set to produce 3.6 gigawatts of power, enough to power approximately 6 million homes. This project is not only a testament to the capabilities of renewable energy but also plays a critical role in the UK's energy security and transition towards net-zero emissions.

APPENDIX IV – EDUCATION AND TRAINING CAPACITY

Case Study 1: Walton Institute for Information and Communications Systems Science

Walton Institute, an internationally recognised ICT research institute in SETU, have dedicated teams focusing on Smart Energy Systems and researching and developing technology for the Clean Energy Transition.

Smart grid overview

The energy industry is going through a paradigm shift from a unidirectional, demand driven model with large, centralised power generation to a market driven by smart grid ideals where supply and demand will be balanced with variable and intermittent renewable energies in a more localised manner. This requires intelligent control systems where the demand profiles in an energy network can be modelled, predicted and optimised against available local generation and potentially wholesale energy market tariffs. These optimisation systems can facilitate greater integration of renewable technologies at a distributed level which is vital for a sustainable future. The team at Walton use neural network-based load models and machine learning techniques to predict the demand profiles of groups of end users across residential, commercial and industrial client bases as well as renewable energy output based on weather patterns and then optimises these supply and demand profiles to maximise the self-sustainability of these local clusters at a distributed level at the site of consumption. These prediction and optimisation techniques enables smart grid technologies to be deployed at consumer sites allowing end users to take control of their energy and become 'prosumers' with the ability to generate energy and trade in the market. Core to the adoption of smart energy systems is the need for interoperability and the ability to interface with grid and prosumer assets. The team at the Walton Institute integrate Internet of Things and Digital Twin techniques and technologies at the asset level to provide those interfaces and manage interoperability issues that can inhibit the deployment of novel techniques designed to integrate Distributed Energy Units (DER) into the grid. These form cyber-physical systems that can bridge the gap between cloud deployed grid protection functionalities and DER assets deployed in the local grid.

Walton Institute have been involved in multiple national and EU projects where we have leveraged these technologies to realise the value of flexibility in Industrial processes to facilitate them to trade in the market. These smart grid techniques have also been deployed for Energy Communities and Energy Parks where local renewable energy can be maximised within local load clusters using battery storage. The EU have also recognised the value of integrating renewable energy technologies at the site of consumption. Accordingly, they have issued several Directives to bring consumers to the centre of the energy transition and empower them to become prosumers and be a central tenant of the Clean Energy Package. It enables participation by individuals and groups in electricity undertakings and markets to generate renewable electricity for its own consumption, and may store, share or sell self-generated renewable electricity within their communities. We are currently trialling these concepts in Energy Communities in other EU jurisdictions where the Directives are being transposed into national legislation.

Offshore Opportunities

Ireland has a unique opportunity to radically increase its renewable energy portfolio by leveraging its offshore resources. However, significant challenges exist in the onshore grid infrastructure. Co-location of energy supply and demand through Energy Parks and Communities can be part of the solution and be a major contributor to our decarbonisation targets. These local hubs can integrate more Renewable Energy, using smart grid technologies to balance supply and demand and maximise self-sustainability. They can facilitate the efficient coordination of energy production, conversion, storage and consumption within local communities and businesses. As heat and transport demand profiles are electrified these Parks can also accommodate the increased loads, alleviating grid congestion and minimising grid reinforcements.

The private sector has a significant opportunity to maximise on this paradigm shift by applying these research findings and interoperable technologies to the energy industry. Walton Institute have developed a funding roadmap designed to guide companies on their R&D journey to stay ahead of competitors. Contact info@waltoninstitute.ie for further information.