

Submission on Draft Offshore Renewable Energy Future Framework Policy Statement 2024

By the National Maritime College of Ireland. February 2024.

The National Maritime College of Ireland

Opened in 2004, the National Maritime College of Ireland (NMCI) is Ireland's national and only institution for the education and training of maritime professionals including professional civilian and naval seafarers. NMCI has educated the southwest region's supply chain professionals since 2008. NMCI is a significant contributor to maritime research & innovation in Ireland and internationally. NMCI is a Constituent College of Munster Technological University (MTU) and a strategic partnership with the Irish Naval Service.

A public sector institution, NMCI has a mandate to strategically meet the maritime and related education, training, research and innovation needs of the Irish state and its citizens, to support the economic and social growth of the Irish nation, and to enhance Ireland's reputation in the maritime world.

Situated on a dedicated campus in lower Cork Harbour, NMCI is a crucial state asset in ensuring the continued supply of maritime and supply chain professionals to work in Ireland's public and private sector maritime and supply chain organisations. NMCI and its highly educated, experienced and professional staff are a critical enabler toward fulfilling Ireland's ambitions under the Harnessing Our Ocean Wealth strategy that aims to propel the country to the forefront of innovative and sustainable maritime and marine activity globally. NMCI will play a pivotal support role to Ireland's emerging offshore renewables sector, a sector that will enable Ireland to meet its decarbonisation and global warming mitigation commitments in the years ahead, this was reflected in the recent BVG Report.

NMCI graduates circa 170 maritime and supply chain professionals annually and prepares circa 100 of those maritime graduates to also complete their maritime Certificate of Competency, as issued by the Irish Maritime Administration. Circa 5,400 maritime professionals from all over the World and 600 Naval Service personnel, train at NMCI each year, conducting professional short courses.

The Halpin Centre for Research and Innovation is based at the NMCI and has supported 40 EU projects with a total value of approximately €125 million.



The NMCI Campus, Ringaskiddy, Cork Harbour.

Academic Courses offered at the NMCI

The following degree level courses are offered at the NMCI:

Full time:

- Bachelor of Science Nautical Science
- Bachelor of Science (Honours) Nautical Science
- Bachelor of Science Marine Engineering
- Bachelor of Science Marine Electrotechnology

Part time:

- Certificate (SPA) Coast Guard Search and Rescue
- Certificate (SPA) Customs and Global Trade
- Bachelor of Business Supply Chain and Transport Management
- Bachelor of Business (Honours) Global Supply Chain Management
- Master of Science Global Sustainable Supply Chain Management
- Master less than 500 GT (Fisher transition course for ORE)

Courses in Development

- Bachelor of Science (Honours) Marine Engineering
- Bachelor of Science (Honours) Marine Electrotechnology
- Bachelor of Science (Honours) Supply Chain Management
- Master of Science Engineering Operations and Management
- Master of Science Maritime Management

A detailed list of the short professional courses required by mariners is provided at Annex A of this submission. All of the courses delivered by NMCI must satisfy Maritime Education and Training Standards and are QQI approved and meet ISO 9001 quality management standards. Additionally, all courses comply to the International Maritime Organisation (IMO) STCW convention and also align to European Directives where necessary.

Facilities at the NMCI

The NMCI has the following facilities:

- 28 Bridge simulators, including a full 360 full mission bridge,
- Engine room simulator,
- Environmental pool, including HUET hoist,
- Fire Training Unit
- Mechanical and Electrical Engineering Workshops
- Working at Heights for GWO qualifications
- High Voltage workshop

NMCI observations on relevant questions relating to the ORE Future Framework Policy Statement 2024

Question 2(B) – In relation to National Security/Department of Defence interaction with ORE Development, are there any issues you would like to highlight?

The extant lack of a National Security Strategy and an associated Maritime Security Strategy creates a significant gap in Ireland national security framework. Given the level of funding both nationally and from international investors, there is an expectation that Ireland has the ability to provide an adequate level of deterrence across its maritime domain. It is necessary for national security and defence agencies to be able to deny deniability to any state or non-state actors wishing to interfere in Irelands area of interest.

A key area which must be addressed is the need for the national Maritime Security Act (2004) to be updated and for legislative powers to be provided to the Naval Service, thereby ensuring they are the lead national agency for the provision of maritime security and defence on behalf of the state. The recent Commission on the Defence Forces highlighted that the current provision is not adequate and thereby unsuited to the likely future ORE security needs.

The current knowledge level of maritime security and defence related issues are not at a mature level nationally and the NMCI remains available to support Government departments in developing this knowledge and expertise. It would be in the national interest for the Department of Defence and senior management from the Naval Service to be members of the ORE Delivery Task Force and provide expert advice and leadership on a workstream which focuses on maritime security and has routine interaction with industry.

Question 4(A) – What structures, measures and intervention can the State and State Agencies implement to assist in the development of a long-term, sustainable skills and workforce pipeline? Provide any recommendations on what the State can do to promote careers in ORE across a range of educational backgrounds and movement from other relevant sectors.

The NMCI was a member of the DECC led workstream 8 which was the Offshore Wind Energy Programme, Expert Advisory Group on Skills and Workforce Requirements. The key findings are presented in the BVG Report titled: 'Building our Potential: Ireland's Offshore Wind Skills and Talent Need'. Based on the recommendations contained within this report, the NMCI chairs the sub-group which will be focussing on 'Promoting Careers in Offshore Wind'.

Additional items are raised below for consideration in the future workforce and sustainable skills:

Contribution to the delivery of national climate targets set out in the Governments Climate Action Plan and Ireland's EU climate commitments.

Developing the infrastructure required to support the development and delivery of alternative fuels that can be manufactured from hydrogen, namely, ammonia, methane and methanol. Synthetic LNG will offer a viable solution as a transition fuel over a 15-year period; however, more research will be required to develop the facilities to ensure the various fuel options are available.

Battery Energy storage systems will provide another option for ships and there will be a need for ports to invest in the necessary Shore-Side Electricity (SSE) infrastructure.

The NMCI will be upgrading its simulation suite to include the following ship types: Diesel Electric Dual Fuel, LNG Fuel, and an LNG Floating Storage Regasification Unit (FRSU).

The upgraded simulators will allow for shipboard and shoreside training operations thereby supporting the national ports in modernising their training procedures.

National need for an integrated logistics policy to be developed?

The development of an integrated logistics policy would have significant benefits for the ORE sector and wider national transportation modes. There is a cross-over between many of the various careers delivering logistics in Ireland and the NMCI provides a range of academic courses for Supply Chain management. Our course graduates come from a myriad of industries, highlighting the commonality between SCM concepts, thereby reinforcing the need for standardising key processes and procedures.

Protecting national port and coastal infrastructure from cyber-attacks?

The need for cyber professionals is becoming an important tenet across the maritime sector, particularly as modern shipping becomes more reliant on IT systems. ORE will require ports for support, therefore, ports by their nature are elements of critical national infrastructure and their security relies on physical and IT/cyber assets. It is both possible to target the physical structure and associated systems of a port, and a ships' supporting IT systems, including navigation and engineering systems. The ability to attack such systems has the capacity to jeopardise maritime operations, disrupt supply chain networks and severely impact national/international trade and commerce.

Threats can emerge from the port of departure or at the port of arrival. It is critical therefore that Irelands ORE maritime sector has mature safety management systems and can mitigate against cyber threats and attacks that specifically target the national maritime ecosystem. Digitalisation will be a key enabler for ORE and the maritime industry, both assets and shore side support, therefore having the national ability to work collectively on sharing information based on a collaborative approach will be integral in protecting the Irish maritime sector from cyber-attacks.

The NMCI is developing modules to better prepare future mariners for the risks associated with digitalisation. The 'Internet of Things' and blockchain technology will be critical components of the future port IT infrastructure and having the knowledge and awareness of how these systems operate will be critical for ship and shoreside personnel. Having knowledge of cybersecurity standards, strategies, legal and policy instruments will be critical as these references can change quickly with the ever-changing nature of IT systems.

It will be necessary to work with EU countries in learning from others experience and incorporating lessons learned into the national port policy to ensure maximum protection. As an example, the NMCI

is collaborating with the National Cyber Skills cluster at MTU to test scenarios on cyber ranges. These exercises range from beginner to expert level and incorporate 'Capture the Flag' scenarios which require detailed analysis to locate the threat being presented.

National need for greater focus on diversity and inclusion across the maritime and ORE sectors.

There is minimal focus on EDI across the ORE and maritime sector at present. There is no central funding for supporting such initiatives and it is a significant obstacle to attracting new talent to the national maritime sector.

It should be noted that 50% of the population live within 5km of the coast, therefore, the maritime sector will have access to a large workforce. It is concerning that despite short commutes to work, and guaranteed work (maritime sector operates 24/7) that individuals choose to ignore a satisfying career in the maritime sector. Additionally, the maritime sector is patriarchal in nature at present and there needs to be more work done on highlighting the need for more diversity across all roles, both ashore and at sea.

There is no core funding to promote careers in the maritime industry nationally and empirical evidence shows that other sectors have benefited from targeted campaigns to increase EDI. The fishing industry and agriculture industry have both worked arduously to improve their statistics, with a focus on enhancing public engagement and increased knowledge awareness.

National need to develop a new strategic narrative and associated communications plan in order to enhance the maritime and ORE sector in the mind of the public?

Ireland does not have a national strategic culture which understands and values the contribution of the maritime sector to Ireland's national economy. This is evident in the lack of public policy in the area, as there is no national maritime education and training policy and there is no funding provided to advertise and attract young people to careers at sea.

As an example, both Teagasc and BIM are resourced to support their respective industries and engage nationally across primary and secondary schools, thereby highlighting careers in their respective sectors. BIM have introduced an excellent initiative called 'The ARC' (Aquaculture Remote Classroom) which is a mobile unit that travels around the country to raise young people's awareness of aquaculture.

With the exception of the NMCI and IMDO, there is no national focus on highlighting the maritime sector (ships and shoreside) as viable career options. This has a detrimental impact on promoting career opportunities across the maritime sector, particularly as parents will be involved in the decision-making process. There is an urgent need for a perpetual national PR campaign, including school visits and information seminars. The NMCI would benefit from having a unit similar to the ARC to promote maritime and ORE careers across the country. At present the NMCI relies on goodwill from lecturing staff to attend career days at various locations across the country, which is not a long-term sustainable solution.

The recent ascendancy of the maritime sector through ORE and the subsequent rush to develop maritime training courses by organisation's with no knowledge of the maritime sector highlights the lack of understanding and knowledge nationally. This further reinforces that there is an urgent and

significant need for a comprehensive public awareness campaign to be developed, and there needs to be acknowledgement that Ireland already has a designated national centre for such training. The NMCI has the capacity and expertise to deliver the training required to sustain the demand for ORE related training, assuming a sustainable funding mechanism is provided.

The future maritime and ORE sectors will rely on stevedores, marine pilots, tug masters, boat handlers and a variety of other key roles that are not being replaced in a sustainable manner at present as the incentives for undertaking a career in the maritime sector can be cost prohibitive. Compare this with the subsidies and grants available to individuals in the fishing sector to undertake initial training and upskilling courses. It would appear that careers in the commercial maritime industry are not being adequately incentivised.

For example, there is significant difference between the Cadet Funding Schemes used in Ireland and the UK and a short comparison is provided below:

Ireland - Cadet	United Kingdom - Cadet
<p>LNG Carrier based in UK</p> <ul style="list-style-type: none"> 15.7% of the costs are recoverable via ISEAS* 	<p>LNG Carrier based in UK</p> <ul style="list-style-type: none"> 67 % of the cost outlay is recoverable via SMarT*
<p>Cruise company in UK</p> <ul style="list-style-type: none"> 14% of the cost outlay is recoverable via ISEAS 	<p>Cruise company in UK</p> <ul style="list-style-type: none"> 63 % of the cost outlay is recoverable via SMarT

*ISEAS – Irish Seafarers Education Assistance Scheme

*SMarT – Support for Maritime Training in the UK

There needs to be a greater level of support provided to the IMDO and NMCI in order to enhance the visibility of careers across the maritime sector, working in tandem with national ports and the Irish Chamber of Shipping.

Question 4(B) – Are you aware of initiatives in other jurisdictions or at a European level that would be relevant to Irelands ambition of building sustainable skills and workforce pipeline for offshore wind?

The NMCI is proud to be a member of Irelands T-Shore Steering Committee which is an EU funded project – additional information available at <https://t-shore.eu/about-us/>

T-Shore was established to address the challenges facing the offshore wind industry in Europe by developing training programmes, a training library, and centres of vocational excellence (CoVEs) to provide workers with the skills and competencies they need to succeed in the industry. As Irelands designated centre for maritime training and education, the NMCI has an important role to play in supporting the development of a national Centre of Vocational Excellence (CoVE) as we bring state of the art purpose-built facilities and decades of experience and knowledge.

The main goals of T-Shore are provided below:

1. Development and creation of a European network of VET schools and VET training centres in offshore wind energy.
2. The establishment of strong links between businesses and VET providers and combining these stakeholders to meet the industry's real skills and training needs.
3. Defining a range of new competency profiles and developing advanced digital and evidence based educational training methods and materials in a work-based learning environment.

Question 4(D) – How can the Government ensure policy is kept in line with evolving technological innovation and developments in ORE devices? What structures and Government procedures should be implemented to future-proof the ORE planning process and account for technological shifts?

As outlined previously in this submission, the NMCI contends that Ireland requires a national Maritime/ORE Centre of Excellence and the NMCI's location in Cork Harbour provides an excellent opportunity for the creation of an expert led cluster. The future ORE industry will rely on the availability of technical skills which include electrotechnology, cyber, AI, blockchain technology and the 'internet of things', all of which can be delivered at the NMCI.

As a constituent college of MTU, the NMCI engages collaboratively with the National Cyber Skills cluster and can work with industry to test and develop the necessary networks and systems that the future ORE sector will require as automation and robotics become more prevalent. Furthermore, a vibrant and supported R&D sector will allow Ireland to become a leader in the development and use of future technologies across the ORE spectrum, thereby positioning Ireland as a global leader in this sector.

At present, the approach to R&D set out in the draft Framework, the draft ORE Roadmap and the draft Offshore Wind Industrial Strategy is dispersed across too many agencies, does not provide for the medium to long-term and does not achieve its full potential in order to capitalise on Ireland's R&D achievements and state of the art facilities, such as the NMCI and MaREI based in Cork.

The NMCI would support the need for a separate research and development policy to be developed for ORE, with input from the various national and international stakeholders and remaining cognisant of the SEAI ORE Roadmap.

This concludes the NMCI observations on the Draft Offshore Renewable Energy Future Framework Policy Statement 2024.

NMCI Contact

[Redacted contact information]

Annex A – List of approved and accredited short/micro-credential courses provided at the National Maritime College of Ireland

OPITO:

HUET CAEBS (Compressed Air Emergency Breathing System)
HUET EBS (Emergency Breathing System)
MIST
FOET CAEBS
FOET EBS
Offshore Lifeboat Coxswain x 5 (Supplementary Fall Training Twinfall) (Initial Twinfall) (Initial Freefall) (Further Twinfall) (Further Freefall)
BOSIET EBS
BOSIET CAEBS
Digital Online BOSIET
CAEBS Standalone

2024 onwards (Depends on demand)

BOSIET for Renewable Energy (Transition) – Full Access
FOET for Renewable Energy (Wind) – Full Access
BOSIET for Renewable Energy (Wind) – Full Access
BOSIET for Renewable Energy (Wind) – Limited Access
BOSIET for Renewable Energy (Wind) – Full Access Upgrade
FOET for Renewable Energy (Wind) – Limited Access
BOSIET for Renewable Energy (Transition) – Limited Access

STCW:

Full Courses:

Designated Security Duties (DSD)
PSSR
Medical First Aid (MFA)
Med Care
Basic Gas
Elementary First Aid (EFA) Full
Personal Survival techniques (PST) Full
Basic Oil & Chem
Proficiency in Survival Crafts and Rescue Boats (PSCRB)
Fast Rescue Boat (FRB)
Advanced Fire Fighting (AFF)
Fire Prevention and Fire Fighting (FPFF)

Refresher Courses:

Personal Survival Techniques (PST)
Fire Prevention and Fire Fighting (FPFF)
Advanced Fire Fighting (AFF)
Proficiency in Survival Crafts and Rescue Boats (PSCRB)
Fast Rescue Boat (FRB)

Target Courses:

Advanced gas
Security Awareness
Crowd Control
Safety Training Hospitality Staff

GWO Existing:

Manual Handling
Sea Survival & Transfer
Fire Awareness
First Aid

GWO 2024:

Working at Heights
Electrical Safety (Virtual Reality - VR)
Pressure Fluid Safety (VR)
SST Slinger Signaller (VR)
BTT Hydraulics (VR)
Basic Safety (VR)
Lift User (VR)
BTT Mechanical (VR)
BTT Installation (VR)
Lift Commission Maintenance (VR)
Lift Commission Inspect (VR)

GTSS:

Port Safety and Security Awareness
Dry Cargo Operations & Chartering
An Introduction to LNG
LNG Carrier Operations In Port
LPG Operations in Port*
Introduction to LPG*
Oil & Shipping Operations Course
Oil Tanker Operations in Port
(RAS) Seismic Replenishment at Sea
Ship to Ship (STS) Transfer Simulator

LNG Ship to Ship Operations
A Commercial Course on Ship-to-Ship Transfer
A Complete Guide to Bunkering
Bunker Operations
Rummage for Customs
LNG Demurrage
Terminal Operations
Deep Rummage for Customs
Anti-Piracy
Prevention of Sexual Harassment in the Workplace
Tug Master Operations
Team Building
Safe Operations Course
Leadership and Development Course
Leadership & Management Course.