wind & water works

Offshore Wind trade mission to Ireland

11 September – 14 September 2022



Netherlands

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Foreword Rob Jetten Minister for Climate and Energy Policy



Climate change impacts us all. Whether we live on a coastline, in green fields, in a crowded city or alone on a mountain top. This is true both in Ireland, the Netherlands and in other parts of our planet. That is why we are committed to reducing our carbon footprint and fighting climate change.

Wind energy plays a significant role in our transition to a carbon neutral society. In the Dutch part of the North Sea for example, we are now doubling our efforts by planning an installed capacity of 21 GW by 2030. Offshore wind offers opportunities for both our countries to contribute greatly to the European green hydrogen demands of the near future.

Close collaboration between our governments and business communities helps seizing these opportunities and tackling the challenges that come with it. Fortunately we have already seen an increase in cooperation between our governments, for example on hydrogen and port development. And Irish-Dutch business ties have been steadily growing over the past years.

I look forward to further improving our collaboration and growing the ties between us. May the wind always be at our backs!

Rob Jetten

Minister for Climate and Energy Policy

Foreword Arjen Schutten Holland Home of Wind Energy



Here we go again! On behalf of Holland Home of Wind Energy I am delighted to visit Ireland with a Dutch business delegation for the second time this year. This time we are heading to the beautiful city of Cork. The fact that we are visiting Ireland twice within a year with a large trade delegation clearly shows the importance the Dutch offshore industry attaches to the opportunities Ireland has to offer.

The timing is perfect. This summer the Irish government announced that it will increase the 2030 offshore wind target from 5GW to 7GW. The potential of offshore wind in Ireland is obviously much bigger if Ireland succeeds in developing floating offshore wind in the near future. That's why we have broadened the scope of this second trade mission to floating wind, and important topics like port development and hydrogen.

The Dutch supply chain has strong offshore wind capability, stemming from a leading offshore oil and gas industry as well as balance of plant activities in many European and Asian offshore wind markets. In the burgeoning global floating wind industry Dutch companies are already involved in many pre-commercial projects. Dutch offshore wind ports are well developed and are keen to transfer knowledge. As green hydrogen will play a pivotal role in the energy transition, many (pilot) projects are being developed in the Netherlands to bring this energy carrier to the next level. In this respect the inclusion of knowledge institutes in this business delegation is of great importance.

Although Ireland is considered a nascent market in terms of installed capacity, it is home to strong knowledge institutes and numerous companies with capabilities across all phases of the offshore wind supply chain. Irish services are mostly found below the Tier 1 level and can form a perfect match to Dutch contractors. We firmly believe that only by working together EU countries like Ireland and the Netherlands can achieve the ambitious climate and energy security goals set by our governments.

For participants visiting Ireland for the first time, this mission will be an introduction to the Irish offshore wind market and to potential partners. For those who joined the earlier offshore wind mission to Dublin this year it will be an opportunity to deepen contacts and explore additional business opportunities.

I hope that this mission will be an inspiring and fruitful one for both our Dutch as well as Irish partners.

Arjen Schutten Managing Director HHWE



Introducing the Netherlands

Creating resilient and sustainable solutions for local challenges

How do the Dutch make a difference?

Through their interactive approach to finding innovative solutions to the big challenges facing the world today. The Dutch way of thinking and working has been shaped by centuries of living in the low-lying delta of the Netherlands. Through the ages, the Dutch have joined forces to find ingenious ways to tackle challenges like water, urbanisation, energy, food, health and security. By being inventive, pragmatic and open to new challenges, the Dutch have created a flourishing and resilient land.

The Netherlands is a constantly evolving ecosystem of cities, industry, agriculture and nature, all integrated through smart infrastructure. It is a source of knowledge and experience that the Dutch are keen to share with others. Learning from the past to create a better future. Together, seeking sustainable solutions for the most liveable world.



Worldwide ranking

- 1st At WEF's ranking of most competitive economies in Europe. 4th in the world. (WEF, 2019)
- 1st Production and auctioning of cut flowers and flower bulbs
- 1st World's largest flower exporter
- 2nd Largest exporter of agricultural products in the world (WTO, 2019)
- 4th Best at Global Innovation Index (GII, 2019)
- 5th Greatest place to live (World Happiness Report, 2019)
- 6th Largest exporter of goods in the world (CIA World Factbook, 2019)
- 7th Largest foreign investor in the world (1,256 billion US dollars)
- 7th Largest recipient of foreign investment in the world (801 billion US dollars)
- 8th Largest importer of goods in the world (507 billion US dollars)

Facts & Figures

- Official name Kingdom of the Netherlands
- Form of government Parliamentary democracy (cabinet of Prime Minister and Ministers) within a constitutional monarchy
- Head of State His Majesty King Willem-Alexander, King of the Netherlands, Prince of Orange-Nassau
- Capital Amsterdam
- Seat of government The Hague
- Administrative structure The kingdom consists of four entities. The Netherlands and three territories in the Caribbean: Aruba and Curaçao and St. Maarten. Number of provinces 12. Special municipalities: The overseas islands of Bonaire, Saba and St. Eustatius, all three of which are situated in the Caribbean.
- Surface area 41.543 km2
- Location Western Europe, by the North Sea, bordering Belgium and Germany
- Number of inhabitants 17.4 million (2021)
- Number of inhabitants per km2 517 (2021)
- Monetary Unit Euro Languages Dutch and Frisian (On the overseas islands also English and Papiaments)
- GDP per capita 51,064 euros (World Bank, 2020)
- Unemployment rate 3,1% (CBS, 2021)
- 90% of all Dutch people speak English

Sources: The Netherlands Compared, CBS, DNB, World Bank, IMF, OECD, WTO, UNCTAD, EIU, IMD Business School

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Bonn & Mees Floating Sheerlegs

Bonn & Mees owns and operates a fleet of 3 seaworthy sheerlegs, with a lifting capacity from 400 up to 1.800 tons.

Bonn & Mees offers their clients a focused service, 24 hours a day and 365 days a year.

The employment of Bonn & Mees guarantees safety expertise, flexibility, creativity and quality. We are closely and continuously following market- and technical developments to ensure a professional answer for the requirements of our clients.

Our equipment is very well maintained and certified according to the latest standards of the (offshore) market.

With our inhouse engineering department we guarantee you a safe and efficient solution for each heavy lift project. Our experienced engineering department has both the theoretical as well as the practical know-how and all the software needed to prepare your project in the smallest detail.

Over the last years we have gained a lot of experience in the wind industry, such as the installation of monopiles, handling of TP's, monopiles and other wind-industry related items.

For the upcoming Irish Offshore Wind Farm projects we are offering the services of our floating sheerlegs including our inhouse engineering experience.

Bonn & Mees Floating Sheerlegs Sluisjesdijk 123 3087 AE Rotterdam The Netherlands

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Company Profiles

For more information and matchmaking possibilities see also https://dutch-trade-mission-offshore-wind.b2match.io/



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Boskalis

We are Boskalis and we create new horizons for our stakeholders. As a leading global dredging contractor and marine services provider, we offer a unique combination of experts, vessels and services. Maintaining the highest safety and sustainability standards, we deliver innovative and competitive all-round solutions to our clients.

For the international offshore energy and renewables sectors we offer an unparalleled range of specialist services as either a service provider or a lump sum contractor for the execution of offshore oil & gas and renewable energy projects.

Boskalis - creating new horizons in offshore wind https://offshorewindsolutions.boskalis.com/

Within the offshore wind industry Boskalis has a successful track record in providing services throughout every phase of a project. We perform geophysical and geotechnical surveys of the seabed, and locate, identify and remove any unexploded ordnance before installing foundations and converter stations. We take responsibility for the procurement of offshore wind turbine foundations and manage the logistical process from the fabrication yard through to the offshore installation for both floating and fixed offshore wind farms. We procure, install and bury export and array cables, and install rock to protect cables and prevent scour damage to offshore foundations. Once the wind farm is operational, we offer long-term subsea inspection, repair and maintenance services (IRM). With our knowledge and experience in the removal of offshore structures we are well positioned to remove offshore wind turbines and cables after their useful life.

corre.energy



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Corre Energy BV

Corre Energy is a leader in the commercialisation, financing, development and operation of Long Duration Energy Storage (LDES) projects, technologies and products that accelerate the transition to net zero and enhance the security and flexibility of energy systems. We unlock the value of renewables by combining hydrogen production with longduration, flexible energy storage. By doing so we can help deliver (more) secure, affordable, green energy.

In Denmark, we partner in a Green Hydrogen Hub consortium alongside Eurowind and state-owned Gas Storage Denmark. The consortium aims to unlock the true potential of renewables by combining large-scale hydrogen production with energy storage solutions. The hub will comprise electrolysis co-located with PV and wind parks, and underground compressed air and hydrogen storage on the same site.

We are looking to partner up with renewable developers, utilities, and TSO/DSO's (wind, solar, electrolysis, hydrogen storage, infrastructure, etc) to develop a similar hub and/or extend the value chain.

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Damen Shipyards

Damen Shipyards Group - Oceans of Possibilities

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Damen Shipyards Group has been in operation for over ninety years and offers maritime solutions worldwide, through design, construction, conversion and repair of ships and ship components. By integrating systems we create innovative, high quality platforms, which provide our customers with maximum added value.

Our core values are fellowship, craftsmanship, entrepreneurship and stewardship. Our goal is to become the world's most sustainable shipbuilder, via digitalisation, standardisation and serial construction of our vessels.

Damen operates 35 shipyards and 20 other companies in 20 countries, supported by a worldwide sales and service network. Damen Shipyards Group offers direct employment to more than 12,000 people.

DDC



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Dutch Drilling Consultants

Dutch Drilling Consultants (DDC) is specialized in large diameter drilling. DDC owns a large fleet of pile top drilling rigs to execute the drilling works.

DDC is active in different markets varying from onshore, near shore to offshore and renewables. DDC drills foundations for offshore wind farms, bridges, jetties, oil/gas platforms and ventilation shafts for tunnels. Drilling is our core business, also we can act as a consultant. We have our own inhouse engineering department for the best integration of our services for your foundation drilling projects. Furthermore we supply skilled drilling personnel. Our office is in Waddinxveen, the Netherlands and our yard is in Ridderkerk, near the Rotterdam harbour. At the yard we assemble the constructions and prepare the equipment for transport to projects all over the world.

We can provide & looking for the following:

1. DRILLING SPECIALIST

DDC is the drilling specialist known for sound consultation and advice. We are looking in close cooperation with our clients for the best practical solution. Our in-house engineering department has designed de most challenging projects all over the world.

2. CONSULTANTS

Our expertise is available to you throughout your project. From the pre-engineering and bidding phase, we can assist in the selection of the right equipment for each specific project. We can indicate expected progress rates and advise on any necessary supporting equipment. Our advanced engineering team and high performance equipment allows our clients to reduce their cost. Which can result in a more concurrent bidding.

3. DRILLING PERSONNEL

During the foundation drilling phase our drilling experts are available. From set up the equipment, actual drilling to decommissioning of the drill rig and equipment. Our drilling personnel has extensive field experience and have made many pro-jects a success.

Dutch Drilling Consultants Coenecoop 3 B4 2741 PG Waddinxveen The Netherlands

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Dutch Marine Energy Centre (DMEC)

DMEC is an accelerator for marine energy solutions. We believe that the enormous amount of energy stored in our oceans, seas and rivers will be a crucial driver to realise our global energy transition and foster sustainable growth. By advancing innovation, mobilising capital and shaping policies, we create multipurpose energy solutions for a wide variety of markets. DMEC partners in and leads European funded projects such as EU-SCORES (Horizon 2020) and the Marine Energy Alliance (Interreg NWE). The activities within the projects cover the entire trajectory from concept to commercial deployment and integration of multiple marine energy solutions.

We collaborate with clients in various market segments to identify, explore and realise tailored solutions using innovative marine energy technologies. By investing in our accelerator, we create knowledge on the development of new technologies, certification, and innovative financial mechanisms. This will fasttrack technological development plans and growth strategies of high potential companies. The DMEC team is dedicated to making marine energy the next big thing in energy.

Identify solutions

DMEC works with a wide variety of marine energy technologies and has hands-on experience with testing and demonstrating performance. Based on this experience, we are well positioned to support organisations in their search for a suitable marine energy solution based on their expressed interest. This can be utilities aiming for green and balanced electricity networks, governments seeking to integrate smart solutions in their civil structures or ports and offshore companies looking for ways to make their operations more sustainable.

Explore suitability

We assess local characteristics, conditions and requirements for deployment and match these with the specs of potentially interesting marine energy technologies. The results provide insights into the available resource, the potential business case, as well as the opportunities and risks from a technical, environmental and financial perspective.

Dutch Marine Energy Centre (DMEC) Hellingweg 11d 2583 DZ The Hague The Netherlands

W www.dutch marineenergy. com/

Realise solutions

A sustainable future requires building new connections across sectors, disciplines and regions around a shared purpose and vision. To implement marine energy solutions, we build strategic international collaborations and public private partnerships, and align groups of crucial stakeholders consisting of technology developers, policy makers, project developers, offshore companies, research institutes and investors.

GustoMSC | NOY



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GustoMSC

The pioneers of offshore engineering

NOV is a leading provider of technology and equipment to the global energy industry. GustoMSC, part of our Marine and Construction business, is recognized for providing advanced design & engineering consultancy for mobile offshore units and reliable equipment. In close cooperation with our clients, we translate experience, science and technical knowledge into realistic & innovative ideas.

The performance of new and existing jack-ups, vessels and semi-submersibles is further optimized by our operational support and engineering consultancy. In this way, GustoMSC enables and supports safe and efficient operations at sea, contributing to a sustainable future.

With a multi-faceted product and services portfolio consisting of basic designs of jack-ups, semi-submersibles and vessels for offshore exploration, offshore wind, construction, and production, and by marrying design and equipment, we offer solutions to our client's unique challenges.

Based on its expertise and track record in jack-up vessels and the offshore wind market GustoMSC is well positioned to support clients in conceiving and realizing dedicated and integrated solutions to meet the requirements of the floating and fixed offshore wind markets.

GustoMSC

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Hulst Innovation Cable Equipment BV

HICE provides design, development, engineering, building, installation, rental, and maintenance of innovative steel machinery and constructions.

HICE is specialized in Cable Equipment for On-Offshore wind parks



We offer Innovative solutions for Offshore Wind contractors, HICE is looking for possibilities to provide Irish market for Cable Equipment

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HSM Offshore Energy BV

HSM Offshore Energy has for more than 60 years been a turnkey supplier of platforms, jackets and modules for the upstream offshore energy sector. The World's first High Voltage Offshore Substation for the Danish Horns Rev A Offshore Wind farm was delivered in 2002 and followed by many projects in Europe, including the two largest capacity 700 MW offshore substations for the TenneT Borssele project. Some 3500 MW offshore grid connections have been realised in Denmark, Belgium, Germany, the UK, Scotland and The Netherlands. Our 75.000m² modern facilities in the Rotterdam harbour area feature large covered construction and assembly halls, deep water quaysides and open North Sea access.

Our capabilities cover full EPCIC Offshore HV Substation delivery, including anti scour rock dumping, soil analysis and provision of Jack Up based offshore hook-up and commissioning facilities and full logistic support. The Offshore HV Substation capacity ranges from 160 to 1200 MW. Current certification includes ISO 9001:2025, ISO 14001:2015, VCA/SCC** 2017/6.0, ISO 3834-2, ISO 1090-1, CO2 awareness ladder level 3 and registration with Achilles UNCE.

Late 2021 HSM have, as part of the H2Sea initiative launched a 100MW offshore green Hydrogen production facility together with Dutch Engineering Contractor Enersea and French Hydrogen development specialist Lhyfe.

For the upcoming Irish Offshore Wind Farm projects we are offering full turnkey delivery of Offshore High Voltage Substations, whilst the onshore substation can be included as well making use of partnering agreement with a HV equipment OEM, who also provide full design and grid compliance studies as required.

Hulst Innovation Cable Equipment BV

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Wilfred van Bergen Commercial & Business Development Manager E w.vanbergen@iv-one.nl M +31 (0)6 27 82 55 91

Iv-Offshore & Energy b.v.

BRINGING THE OFFSHORE ENERGY TO LIFE.

Iv-Offshore & Energy has a long history in the Offshore Industry. Like so many other companies, we also started in the Oil & Gas business offshore and upstream. From the beginning of this century we have also been active in Offshore renewable energy, in the form of offshore wind. Iv-Offshore & Energy has - together with the yard HSM Offshore – executed the EPC contract the first offshore substation HORNS REV A, which is currently owned by Energinet. Since this first station we have successfully executed dozens of projects, both HVAC and HVDC and from Early concepts and FEEDs to Detailed Design. Since 2020 we have also been active in Offshore Hydrogen. In this new market of Hydrogen, the PosHyDon project is our first project and currently in the fabrication phase before FAT. This is what we at Iv-Offshore & Energy believe is the next important step in the energy transition. And presently, we are working in our R&D of floating Substations both HVAC and HVDC.

In addition to our activities in regular offshore wind for the development of HVAC and HVDC offshore substation, we are fully engaged in the development through our internal R&D of offshore hydrogen production and floating offshore substation. We have already applied for and granted several patents for these developments and expect to be able to go to a scale test in October 2023. This puts us way ahead of the market. We see Ireland as a potential and very interesting market for both of these developments.

We therefore participate in this mission, with the aim of making new contacts for both current and, in particular, future developments. This can be with developers, governments and other interested parties. LOBSTER



Stephan Rutten CEO E stephan@lobster-robotics.com M +31 (0)6 20 12 81 01

Lobster Robotics

Lobster Robotics is a technology startup from Delft that has developed a lightweight Autonomous Underwater Vehicle (AUV) called the Lobster Scout that can perform autonomous inspections of subsea assets such as cables and monopiles, environmental surveys and seabed mapping.

The Scout is different from existing solutions because of its small size and weight that allow launch & recovery from a vessel as small as a RIB. It is designed to operate in swarms which can cut survey time in 10 simply by launching more Scouts. These innovations yield significant cost savings for subsea data gathering and reduce CO2 emissions from survey operations.

We offer data gathering services and we are now looking for launching customers.

Iv-Offshore & Energy b.v. Noordhoek 37 3351 LD Papendrecht The Netherlands

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Lobster Robotics

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MONOBASEWIND

Monobase Wind B.V.

Monobase Wind's core business includes offshore wind substructure design, engineering, and naval architecture. Monobase Wind is a group of offshore heavyweights leveraging 85 years of experience in the Offshore Oil & Gas and Offshore Wind industries to bring you foundations that work, as we have done consistently for decades.



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Monobase Wind offers two patented foundation solutions. First and foremost we have developed a unique hybrid floating foundation design together with Daewoo E&C, combining the best of both worlds from SPAR and semisubmersible floaters. We are looking for local supply chain partners and possible series fabrication facilities as well as access to demonstration sites i.e. 1 to 5 units.

Subsequently, Monobase Wind has also designed a smart self-installing gravity base foundation. The ideal solution for deep water bottom-fixed offshore wind and /or difficult soil conditions i.e. rock or ice seabed.

Both foundations consist of both concrete and steel components.

Monobase Wind B.V.

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NjordIC B.V.

NjordIC B.V. is a Dutch based independent consultancy company. NjordIC specialises in Unexploded Ordnance (UXO) consultancy and EOD (Explosive Ordnance Disposal)management in the maritime environment.

In our work we apply our thorough market sector insights and our consultancy, risk management and EOD-management services. Our extensive knowledge and experience in the field of UXO survey, identification, clearance, and disposal operations gained in multiple projects, enables us to take care of all Client's UXO needs.

The project control in our field of operations often seems limited. Budgets are frequently overrun, and schedules are exceeded because unexpected circumstances occur during the project. This calls for a firm and risk-based project management. NjordIC's phased approach to UXO risk mitigation ensures just that. Our approach reduces the uncertainties in each subsequent project phase. The level and extent of activities in each phase depend upon the findings of the preceding phase. Thus, a manageable UXO risk mitigation process is established.

We ensure safe working conditions for all offshore operations and personnel by managing UXO issues in a more cost efficient, innovative, pragmatic, qualitative, and transparent manner.

NjordIC works in close collaboration with its clients. This not only ensures safe operations, but furthermore, a cost effective realisation of maritime projects with regards to UXO risk mitigation. We care about our client's project goals and alleviate our client's accountability by taking full responsibility for the entire management of the UXO scope of work, providing an all-inclusive package.

NjordIC's consultancy services comprise amongst others:

- UXO Threat Assessments (historical research)
- UXO Risk Assessments
- UXO Risk mitigation
- strategies
- Tender assistance

NjordIC wants to get in touch with OWF developers, offshore contractors, and any other parties who must deal with UXO related risks.

• etc.

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• UXO and EOD-management

Project supervision / client

representation

Budget calculations



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N-Sea

N-Sea is an integrated total subsea solutions provider. We offer a wide range of Survey and IMR services to the energy sector, focusing on the international oil and gas and renewable industry, as well as civil contracting communities.

We meet our clients' needs. How?

By providing effective and cost-efficient solutions for your subsea assets, infrastructure and the surrounding seabed considering a safe environment.

N-Sea delivers subsea: from early stage consenting to decommissioning surveys, from inspection through to maintenance management, we help ensure and assess the state of the seabed and your subsea assets providing the necessary service throughout the entire project lifecycle.

"EXECUTING OUR STRATEGY IN AN IRREVERSIBLE WAY"

We have the ambition to be the go-to total subsea solutions provider. We want to create a sustainable business, be less vulnerable and increase our profitability. To realize this ambition, we have a clear vision and strategy relating our solutions, markets, geographies, and organization. To achieve these goals, we develop our organisation to the level of best in class being fully synchronised with our ambition and strategy by contributing to the following key success factors constantly:

• Qualified and engaged people

- Long term client relationships
- Strategic partnerships
- Innovative solutions
- Safety and quality 100%
- Visible presence

N-Sea

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Port of Amsterdam



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Port of Amsterdam

Port of Amsterdam is the port authority responsible for the development, management and nautical management of the port of Amsterdam, the 4th largest seaport in Europe. We ensure that global cargo flows, European markets and regional facilities strengthen one another. The energy transition, and specifically the development of hydrogen capabilities, is one of our strategic priorities. As Port of Amsterdam, we take the lead and invest in sustainable energy and circular activities, and stimulate the sustainable development of supply chains, always through strong engagement with our stakeholders.

We are dedicated to realising an international green hydrogen supply chain on a commercial scale. Through our H2A-project, we aim to import, tranship and distribute one million tonnes of green hydrogen annually by 2030 via the port of Amsterdam. Thanks to its geographic location, existing infrastructure and entrepreneurial mindset, the port of Amsterdam is a major hub for energy products, and, as such, uniquely positioned to also play a leading role in the green hydrogen ecosystem. In our efforts to realise such a value chain, we seek to establish partnerships with parties active in the production and export of green hydrogen.



CC-

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Primo Marine

Primo Marine is an independent technical advisor with a wealth of expertise in subsea cabling and pipeline engineering, from landfalls to subsea marine infrastructures. With an extensive track record, including the provision of expertise to many of the largest installation projects and offshore wind farms to date.

We can offer specialist expertise in the field of subsea cable engineering and risk assessment.

- Strategy & Innovation
- Market Intelligence & Due Diligence
- Permitting & Consenting
- Tender, Contract & Project Management
 Safety, Quailty & Assurance
- Offshore Representation & Marine Warranty
- Survey, UXO management & engineering
- Route Design & Engineering
- Burial & Protection Studies
- Orcaflex Dynamic Analysis
- Landfalls & Shallow Water Studies
- MetOcean & Workability Analyses
- Installation Engineering, Studies & Procedures
- Construction Engineering
- Operations & Maintenance
- Repair Support, 24/7 Emergency Response
- High Voltage Technology, Testing & Terminations
- Greenification / New Technologies

Primo Risk & Control

- Marine Warranty Surveyors: Exclusively dealing with subsea cables
- Technical Lead for cable insurance claims
- Technical Authority for developers
- Insurance Representatives protecting the insurer offshore
- Technical Due Diligence for submarine cable projects
- Expert Witness Services
- Root Cause Analysis reports for subsea cable issues

We are looking for in country partners and expansion of our in country network.

Primo Marine

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Royal HaskoningDHV

Royal HaskoningDHV is an independent, international engineering and consultancy company with 135 years of experience. Our professionals deliver services in the fields of maritime, energy, industry, aviation, buildings, infrastructure, mining, transport, urban and rural development and water. Backed by expertise and experience of 6,500 colleagues across the world, we work for public and private clients in more than 150 countries.

With more than 40 years of experience in the consent, design and construction of wind farms around the world, Royal HaskoningDHV has been working at the forefront of wind energy since the industry's inception. We have supported offshore wind farms from the first nearshore projects to today's ambitious multi-gigawatt projects. We have assisted the development and delivery of wind projects across UK, Europe and globally. Our experience from early site selection, feasibility, design and consenting through to the operational phase, working alongside developers has equipped us with the knowledge to provide expert solutions for challenging issues including: environment and consenting, finance and investment, transport and logistics, health and safety, civil and marine engineering design.

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Smulders NV

Smulders is an international organized steel construction company with approximately 1200 employees. The Group has branches in The Netherlands, Poland, Belgium, UK, France, Abu Dhabi, Qatar, Taiwan, Malaysia and India. The core activities are divided over 3 market segments: Wind & Renewables, Offshore Oil & Gas and Civil & Industry. The Group has over 50 years of experience in the engineering, construction, supply and assembly of steel constructions. In 2022, we will deliver our 2.350th offshore wind turbine foundation and 32nd High Voltage Offshore Substation.

In 2013 Smulders became part of Eiffage Métal, a subsidiary of Eiffage SA.

Smulders designs, fabricates, commissions and installs for the Offshore Wind Industry:

- Offshore Foundations: Transition Pieces, Jackets, TriPods, Floating Foundations
- High Voltage Offshore Substations, both AC and DC



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SPT Offshore

SPT Offshore is a Business Unit within DEME Offshore specialized in suction pile foundations and anchors. In our 25 years of existence we were involved in the design, supply and/or installation of over 1,000 suction piles, including 107 wind turbine foundations up to 10 MW.

Suction pile installation is silent. The installation force is generated by water pressure difference hence a minimum of energy is required to install a suction pile foundation. Suction pile structures can be fully decommissioned and even be reused.

Combined with the one-piece lift solution it can be considered as the most energy effective and silent foundation solution.

We offer a noise free solution for fixed turbine and substation foundations as well as anchor solutions for floating wind turbines. All based on proven technology.

Together with our industry partners we're developing the so-called Tri Suction Pile Caisson (TSPC). The TSPC combines the fabrication advantages of a monopile with the installation advantage of a suction pile jacket and more: the TSPC can be split and float on the suction pile base. Because of the buoyance smaller Heavy Lift Vessels are required for foundation for larger turbines and in deeper waters. A second development with comes with the TSPC is the self-deploying scour protection system of which the first commercial application was already done.

For floating offshore wind suction pile anchors will be in many occasions the most advantage solution as suction piles anchor combine the following advantages in particular besides the noise free and fast installation:

- Large holding capacity also in vertical direction for tension leg moorings
- Combination of multiple anchor lines
- Limit amount of sediment required.

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Energy

Senior business developer Wind

TNO, Netherlands Organisation for applied scientific research

TNO the Netherlands Organisation for Applied Scientific Research, Wind Energy group

TNO, the Netherlands Organisation for Applied Scientific Research, was founded by law in 1932 to enable business and government to apply knowledge. As an organisation regulated by public law, TNO is independent: not part of any government, university or company. Since April 1st 2018, the Energy Research Centre of the Netherlands, ECN, has joined forces with TNO and has

ECN (Energy research Centre of the Netherlands) has been the Netherlands flagship R&D and services centre for sustainable energy technologies. In the field of wind energy, ECN was a true pioneer and technical authority. It's internationally leading position has been built up through 40 years of dedicated investment and experience. At present as TNO Wind Energy, in-depth knowledge of the whole wind power plant system is combined with world leading full scale test facilities and accredited measurement experts. Today, TNO Wind Energy's core mission is to reduce the cost of offshore wind energy. This is achieved by applying innovative solutions in the industry and driving ground breaking R&D forward. TNO Wind energy supports companies at the design, implementation and operational level.

To offer:

- System design of floating wind turbine
- Optimal layout of wind farms

become TNO Energy Transition.

- Installation strategy modelling
- O&M strategy modelling
- Power to X configurations (e.g. hydrogen)
- System integration of large scale renewable energy
- Wind resource measurement

In Ireland looking for:

- Partner for research on above topics
- Developer for consultancy services

 Authorities for policy collaboration (zoning plans, annual energy production, wind speed measurements, data validation)

- Floating LiDAR validation

Input/review/analysis on Wind Resource Assessment data

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Delft University of Technology (TU Delft)

TU Delft is one of the largest technical universities in Europe and a leader in wind energy research and innovation. Its wind energy institute overarches research across five different faculties and disciplines, including rotor aerodynamics, hydrodynamics, site conditions, system design, wind turbine and farm control, condition health monitoring, electrical aspects. Recently, a university-wide Floating Renewables Lab was set up to coordinate the research on floating wind energy (amongst others) and perform hybrid testing in that area.

We offer a range of numerical models and experimental facilities to design and test floating wind turbines and farms, from detailed component level to system level analyses. We are interested in data from floating wind turbines and/or their components.

Delft University of Technology (TU Delft)

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Van Oord Offshore Wind

At Van Oord Offshore Wind, we provide end-to-end solutions, we combine Client's requirements, innovative project design and engineering services with our a diverse fleet of Offshore Wind Installation Vessels to deliver your project in time. Being a part of Van Oord, and with our experience of well over 20 years, we are specialists in the realisation of offshore windfarms, including full EPCI and Balance of Plant (BoP).

With MPI Offshore we support our Clients in heavy maintenance and decommissioning activities.

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Arjan Keuzenkamp Manager Business Development Floating Renewables E arjan.keuzenkamp@vanoord.com M +31 (0)6 54 25 60 80 Our versatile fleet consists of offshore wind installation vessels MPI Resolution, MPI Adventure, Aeolus, Boreas (under construction), heavy-lift installation vessel Svanen, cable-lay vessel Nexus and Calypso (under construction) and our powerful trenchers Dig-It and Deep Dig-It. We work closely with our clients, we work safely and with respect for one another and the environment. Working together proactively on safety is a natural part of that.

We are looking for partners in the full value chain of floating and bottom fixed offshore wind to support us with the delivery and maintenance of future offshore wind farms in Ireland.





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XELLZ B.V.

XELLZ[®] provides a complete solution for the Heavy Lift & Project Freight and Logistics industry from the shipper's perspective, with in-house integration into the transport & logistics and supply chain process.

At XELLZ we believe that it is our responsibility to operate lean and with no duplication of processes and creating project logistics cost savings while on a project for our customer. It's our core belief that only when processes and operations are to the max of its simplicity, while keeping a high standard, that there is optimum control on project logistics execution and cost. It is also our obligation to see to it that a project logistics operation is done in an open book policy and with complete transparency whereby no items, duties, or responsibilities are hidden from our customers.

Using our in-house developed, the state-of-the-art IT technology combined with the latest in project logistics management, we lower the total cost of project logistics with over 25%, as well as offering 100% transparency across the entire project lifetime.

With our project Logistics Operations Control Center (LOCC) we have the best project logistics management in the industry with our IT platform system, mobile applications, and our in-house developed Video Inspection Reporting tools (VIR), your project gets the best of all worlds.

XELLZ has its offices in Ireland and as such offer their complete range of services which are related to the offshore, and onshore, project logistics management. XELLZ shall have a Logistics Operations Control Center in Ireland, where XELLZ operates any size and level of complex projects from a logistics perspective.

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Mission team

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