

# Ocean Energy

## Key trends and statistics 2022

March 2023



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# Key findings



## Europe

Competitive advantage is eroding as other countries progress



### TIDAL STREAM

Slow implementation of the EU Offshore Strategy results in low deployment

2022 INSTALLATIONS

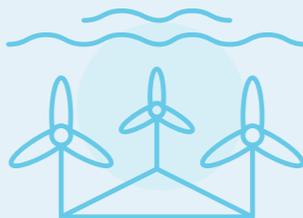
**+67 kW**  
capacity added.

CUMULATIVE INSTALLATIONS

**30.2 MW**  
installed in Europe since 2010.

13 MW is currently in the water.

Tidal energy hits **80.6 GWh** power production milestone.



### WAVE ENERGY

Lowest ever volume of new capacity added

2022 INSTALLATIONS

**+46 kW**  
capacity added.

CUMULATIVE INSTALLATIONS

**12.7 MW**  
installed in Europe since 2010.

400 kW is currently in the water.



## Rest of World



### TIDAL STREAM



China ahead in annual capacity additions for 2<sup>nd</sup> time in 3 years.



### WAVE ENERGY



Greater capacity additions outside Europe for the 5<sup>th</sup> year in a row.



## Global total since 2010



### TIDAL STREAM

2022 INSTALLATIONS

**+1.7 MW**

CUMULATIVE INSTALLATIONS

**41.2 MW**



### WAVE ENERGY

2022 INSTALLATIONS

**+165 kW**

CUMULATIVE INSTALLATIONS

**24.9 MW**



## 2022 Trends

Globally, industrial progress continues but centre of gravity shifting from Europe



Reported private investments fall to €15m in Europe



EU competitors ramp up policy and funding support for ocean energy

- Substantial funding commitments for ocean energy in the US.
- China is catching up on the ocean energy high value patent race.
- UK creates market for tidal energy with revenue support.
- Canada has 2<sup>nd</sup> biggest project pipeline at 32 MW.



## 2023 outlook

Decisive policy actions can provide market visibility and secure Europe's competitive advantage



### TIDAL STREAM

EUROPE

OUTSIDE OF EUROPE



**1.4 MW**

of capacity is slated for installation.



**100 kW**

of capacity is slated for installation.



### WAVE ENERGY

EUROPE

OUTSIDE OF EUROPE



Up to **450 kW**

of capacity is slated for installation.



**500 kW**

of capacity is slated for installation.

## 2022: an upbeat year for ocean energy, but greatest progress made by EU competitors

The global ocean energy sector has continued to advance towards industrialisation in 2022. Recent achievements show that the sector is making tremendous progress on the technological and industrial level, with exciting new funding announcements and flagship projects proving their reliability. Worldwide, funding levels are increasing as many governments make bigger commitments to ocean energy.

An unprecedented strain has been put on energy supplies in 2022. Consequently, governments are increasingly looking to innovative energy sources, such as ocean energy, as a means of strengthening security of supply and strategic autonomy.

However, new policy developments have been patchy, and competitors like the US, Canada and China are seriously shaking up Europe's leadership. Policy support has blossomed in the rest of the world, contrasting with the EU, which is struggling to coordinate the necessary funding frameworks to bring ocean energy to the next level.

The EU Strategy on Offshore Renewable Energy (EU Offshore Strategy), launched over two years ago, set deployment targets for ocean energy of 100 MW by 2025 and 1 GW by 2030.

The first steps to reach these targets have recently been taken. Horizon Europe funding for ocean energy projects has been boosted. Member States have reached 'non-binding agreements' for their respective sea basins, which may someday include ocean energy.

While encouraging, these first steps will not be sufficient to deliver the necessary market visibility or funding commitments. As a result, little progress has been made towards the Offshore Strategy's ocean energy targets.



Photo: Tocado



## Europe: Global competitive advantage is being eroded

Europe's historical leadership in ocean energy is being increasingly and visibly eroded. 2022 was the poorest year to date for tidal and wave energy deployments in Europe. At the same time, competition has moved up a gear, with new devices hitting American and Chinese waters, alongside substantial funding and new policy measures.

The result is that Europe's competitive advantage is shrinking. More than ever, 2023 must be the year in which real steps are taken to safeguard European leadership and fully implement the EU Offshore Strategy's ocean energy ambitions.



### TIDAL STREAM: Sluggish implementation of the EU's ocean energy targets is limiting deployments

#### Capacity additions at an historic low in Europe, despite technology being ready

**Annual installations** – 67 kW of new tidal stream capacity was deployed in Europe in 2022, down from 2.2 MW in 2021 - the lowest amount of capacity added per year since 2010. Although a number of tidal pilot farms have been reliably producing electricity for several years, a lack of action on the EU Offshore Strategy's targets has led to a lull in larger-scale deployments. A significant pipeline of new capacity is scheduled for deployment in 2025-2027 - this can only be realised with the appropriate policy support in place.

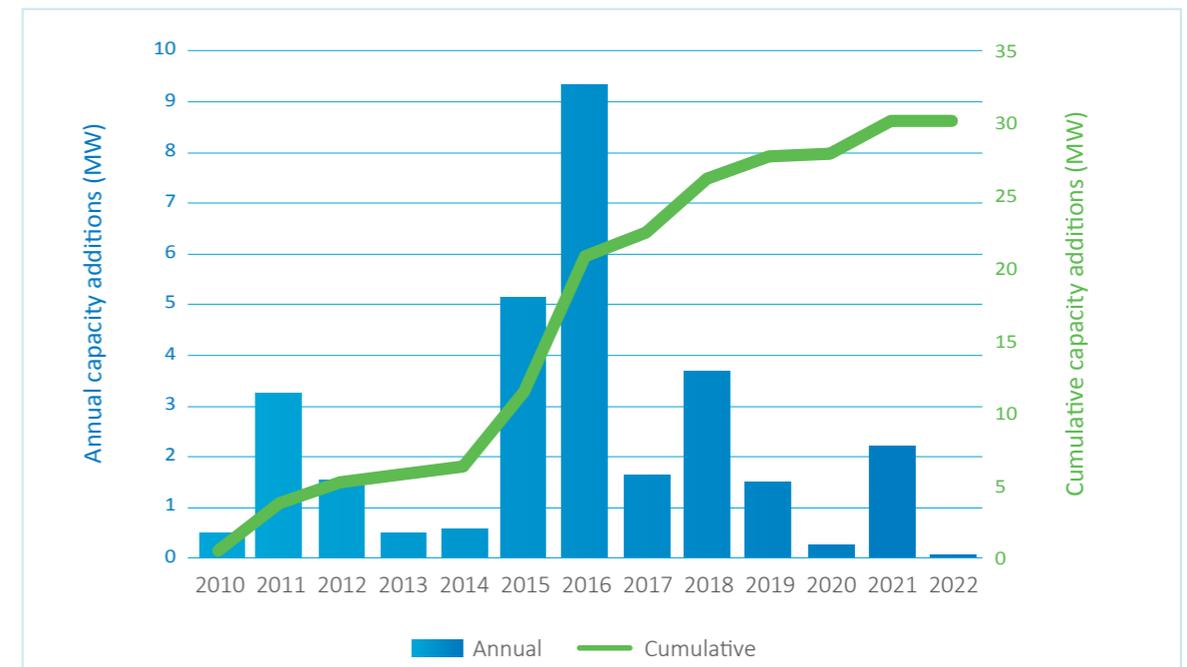


Figure 1: Annual and cumulative tidal stream capacity in Europe

Source: Ocean Energy Europe

**Cumulative installations** – 30.2 MW of tidal stream technology has been deployed in Europe since 2010. Of this, 13 MW is currently operating, and 17.2 MW has been decommissioned as projects have successfully completed their testing programmes.

### Small is beautiful in Europe's 2022 deployments

Three devices were deployed in Europe in 2022 as part of new demonstration projects. Although they are full-scale prototypes, these devices have relatively low generating capacities. Rather than targeting high-volume utility markets, they are designed for specific applications, such as powering isolated communities or remote industries, and are suitable for sites where the tidal currents are less powerful.

Such deployments are more readily achievable in the context of fragmented public funding. Smaller, lighter devices such as these allow for easier deployment and maintenance, resulting in lower overall costs. This also increases the reliability and survivability of the technology, reducing risk and uncertainty for investors.

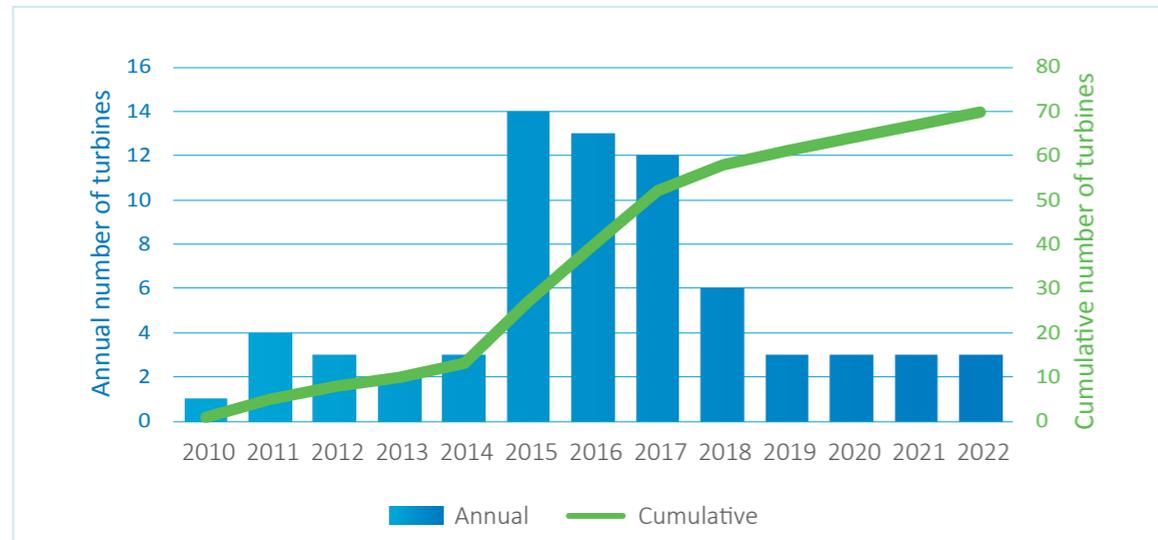


Figure 2: Annual and cumulative tidal turbine installations in Europe

Source: Ocean Energy Europe



Photo: EEL Energy



Country	Map ref.	Location	Device developer	Device name	Type	Capacity device (kW)	Number of turbines	Scale
FRANCE	1	Bordeaux	Hydrokinetic	Evo 25	Vertical Axis	25	1	1
FRANCE	2	Brest	EEL Energy	EEL	Undulating membrane	30	1	1
NORTHERN IRELAND (UK)	3	Strangford Lough	Gkinetic	Gkinetic	Vertical Axis	12	1	1

Figure 3: Tidal stream deployments in Europe in 2022

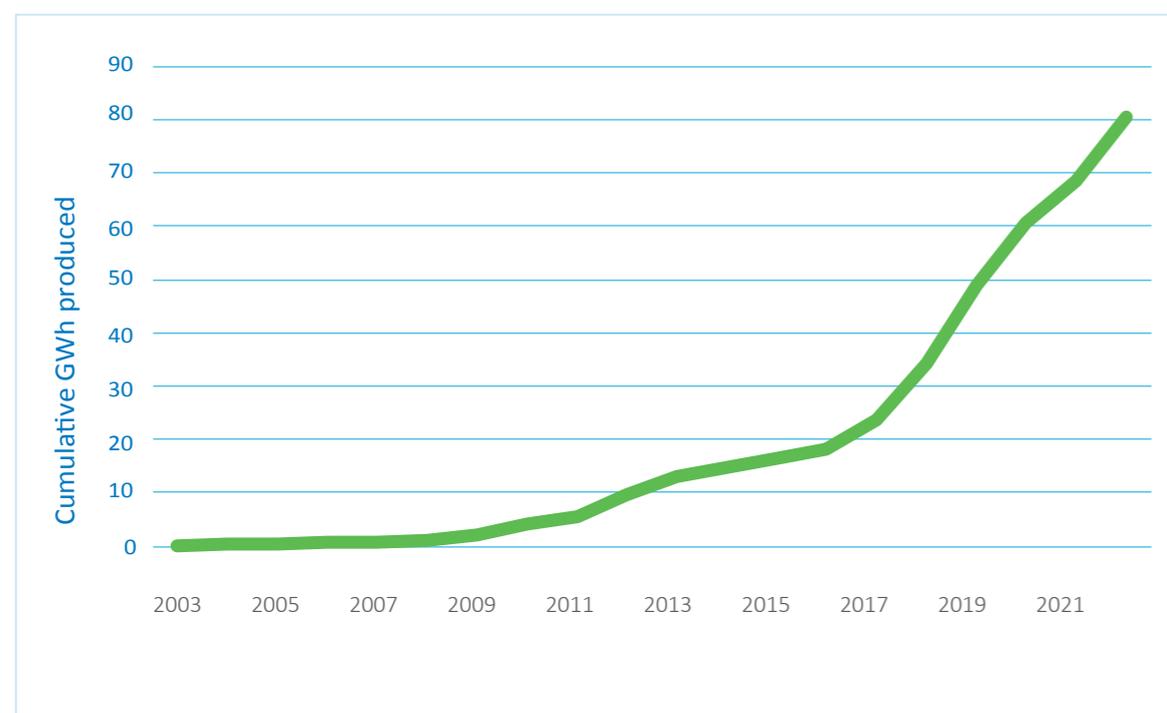
Source: Ocean Energy Europe

### Tidal stream hits historical 80.6 GWh production milestone

Electricity generated by tidal stream devices continued to increase steadily in 2022. This is thanks to the high availability of the turbines, which were able to reliably produce power throughout the year.

The European tidal stream sector exported 11.9 GWh in 2022, led by flagship projects in Scotland including MeyGen, Orbital Marine Power's O2 and Magallanes' ATIR turbine, and Tocardo's Oosterschelde plant in the Netherlands.

This is a remarkable achievement – but it is driven by past policies and investments. Renewed policy and funding efforts are needed if Europe is to maintain this progress.



**Figure 4:** Cumulative power produced by tidal stream in Europe (GWh - Gigawatt hours)

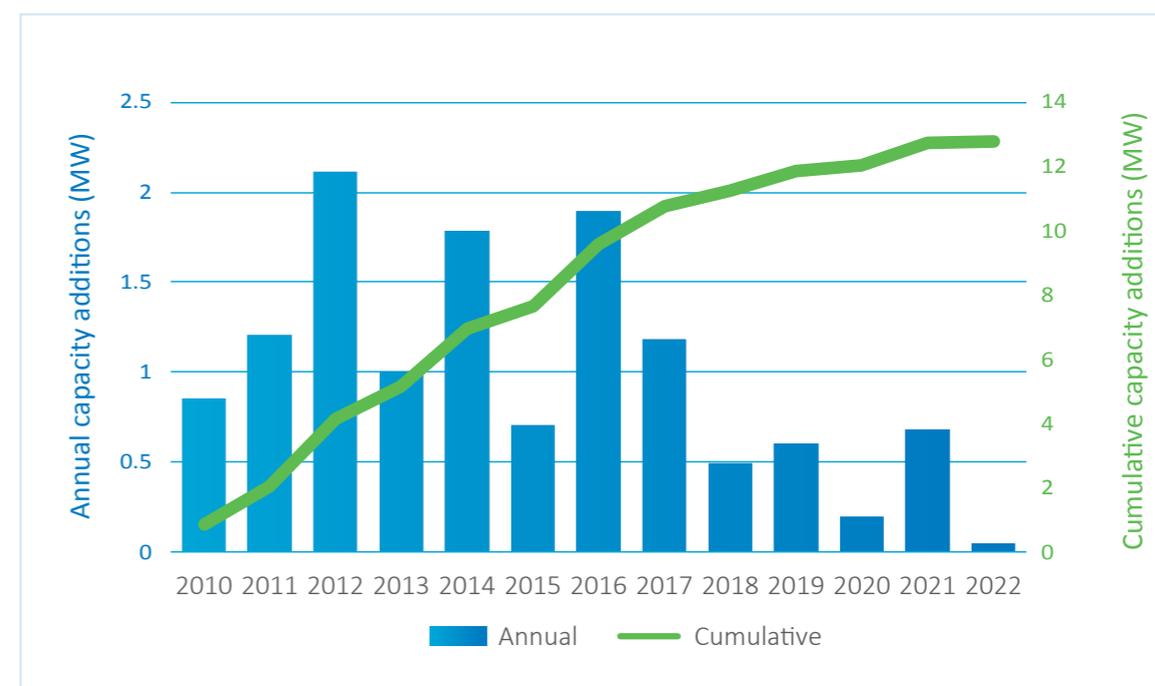
Source: Ofgem Renewables, public releases from developers, information supplied to OEE by developers



### WAVE ENERGY: Lowest-ever volume of new capacity added

#### Capacity additions plummeted in Europe last year

**Annual installations** – Capacity additions for wave energy in Europe were lower in 2022 than in any other year since 2010. A swifter implementation of the EU Offshore Strategy could have seen more wave devices hit the water in 2022.



**Figure 5:** Annual and cumulative wave energy capacity in Europe

Source: Ocean Energy Europe

**Cumulative installations** – 12.7 MW of wave energy has been installed in Europe since 2010. 400 kW is currently in the water and 12.3 MW has been decommissioned following the completion of testing and demonstration programmes.

### Additional policy and financial support will deliver more wave capacity

Funding programmes to foster innovation and boost future deployments have already proven their efficacy in Europe.

For example, one of the wave energy devices deployed last year, the Archimedes Waveswing, is the product of the Scotland’s innovative ‘Wave Energy Scotland’ programme. This accelerated approach to Research and Innovation (R&I) is continuing under the EU-funded ‘EuropeWave’ programme, run by the Basque and Scottish governments.

Great achievements are possible with the right policy support – and it is crucial to maintain momentum. Additional R&I funding programmes are needed to make the most of current European technological leadership and boost market deployment. Beyond this, it is also essential to preserve support for larger demonstration projects through dedicated calls to bring wave energy to the next level.

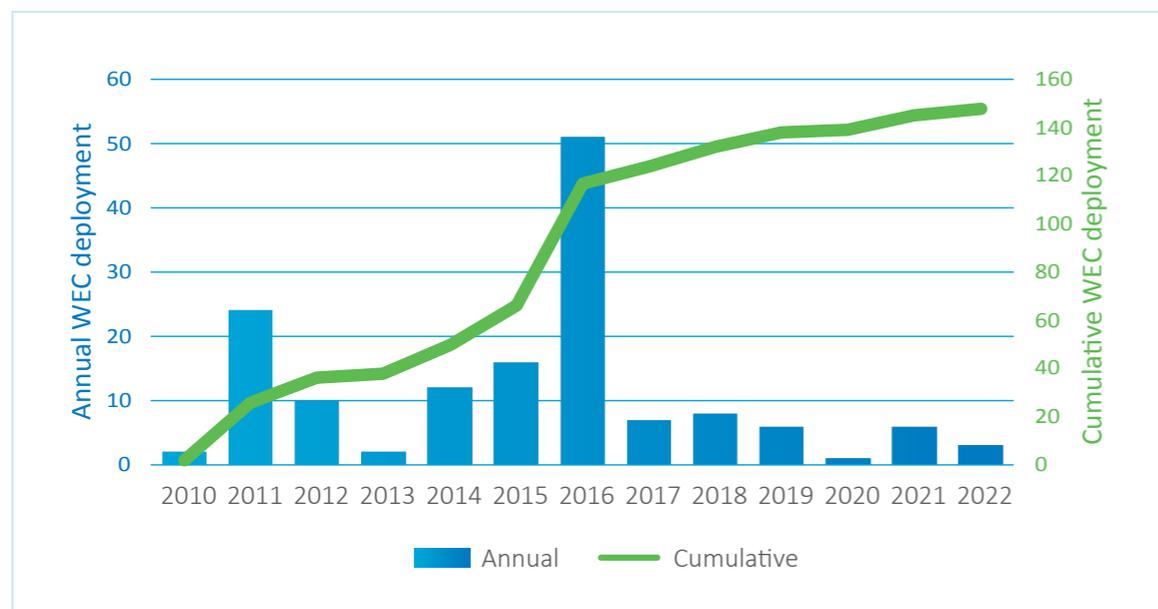


Figure 6: Annual and cumulative wave energy converter (WEC) deployments in Europe Source: Ocean Energy Europe



Country	Map ref.	Location	Device developer	Device name	Type	Capacity device (kW)	Number of turbines	Scale
SLOVENIA	1	Adriatic Sea	Sigma Energy	Sigma WEC	Point absorber	30	1	1
UK (SCOTLAND)	2	Orkney	AWS	Achimedes Waveswing	Point absorber	16	1	N/A
BELGIUM	3	Ostend	Exowave	WEC10	Oscillating Wave Surge Converter	3.5	1	1

Figure 7: European wave energy deployments in 2022

Source: Ocean Energy Europe



Photo: Sigma Energy



# Global: Activity on the rise outside Europe

Cumulative global deployments since 2010 now tally 41.2 MW for tidal stream and 24.9 MW for wave energy.

Canada remains a highly attractive market for developers with a project pipeline of 32 MW. This is thanks to a comprehensive policy framework combining capital grants, a feed-in tariff and dedicated deployment sites. Four European-led pilot farms are moving forward, with consenting procedures completed and deployments expected to begin in 2023.

In the US, the Biden administration is allocating circa US\$ 110 million annually to boost the deployment of marine energy and is establishing a massive testing site for wave energy.

Lastly, China has pledged to promote the large-scale deployment of ocean energy, and in 2022 added more tidal energy capacity than Europe.

## TIDAL STREAM: China ahead in global capacity additions for the second time in 3 years

### Single deployment in China outstrips Europe's 2022 capacity additions

In terms of operating capacity, China now boasts the world's second-largest tidal farm, after the addition of a 1.6 MW turbine in 2022 brought the farm's capacity to 3.3 MW. The grid-connected Hangzhou LHD demonstration project, off Xiushan Island, in Zhoushan is supported by the Chinese government.

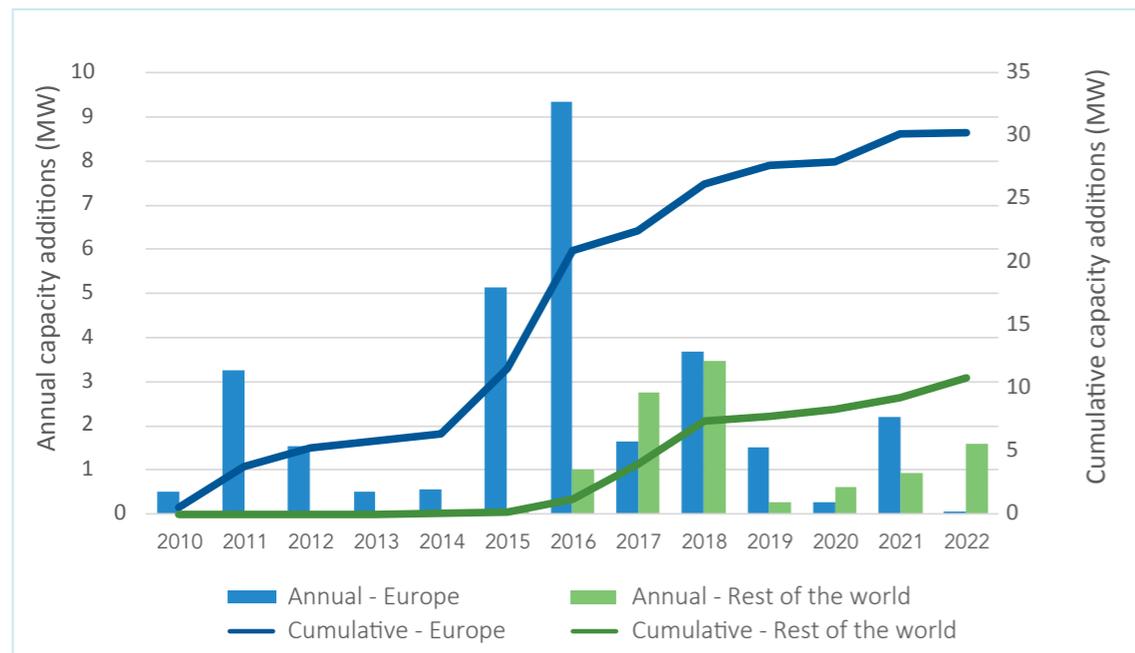


Figure 8: Installed global tidal stream energy capacity

Source: Ocean Energy Europe

Country	Location	Device Developer	Device name	Type	Capacity (kW)	Number of turbines
CHINA	Xiushan Island, Zhejiang Province	Hangzhou LHD United Energy Corporation	Endeavour	Horizontal axis	1600	1

Figure 9: Tidal stream installations beyond Europe in 2022

Source: Ocean Energy Europe



Photo: Hangzhou LHD/Seetao



## WAVE ENERGY: Countries outside Europe top capacity additions for fifth year in a row

### Gap is narrowing on cumulative installed capacity

Three devices were deployed outside of Europe in 2022, which collectively had more than twice the generation capacity of devices installed in Europe. Europe’s lead in cumulative capacity shrank again in 2022 – there is a very real risk of it being overtaken by the rest of the world in 2023.

Deployments slowed a little in the US in 2022, with one device put in the water, but momentum continues to grow thanks to strong political and funding support. The US is building out a utility-scale, grid-connected test site off the coast of Oregon that can host up to 20 wave devices at the same time, with developers being offered funding to build large-scale prototypes for the site.

Meanwhile in Israel, a combination of public and private support - including feed-in tariffs - enabled Eco Wave Power to deploy the country’s first grid-connected wave power project.

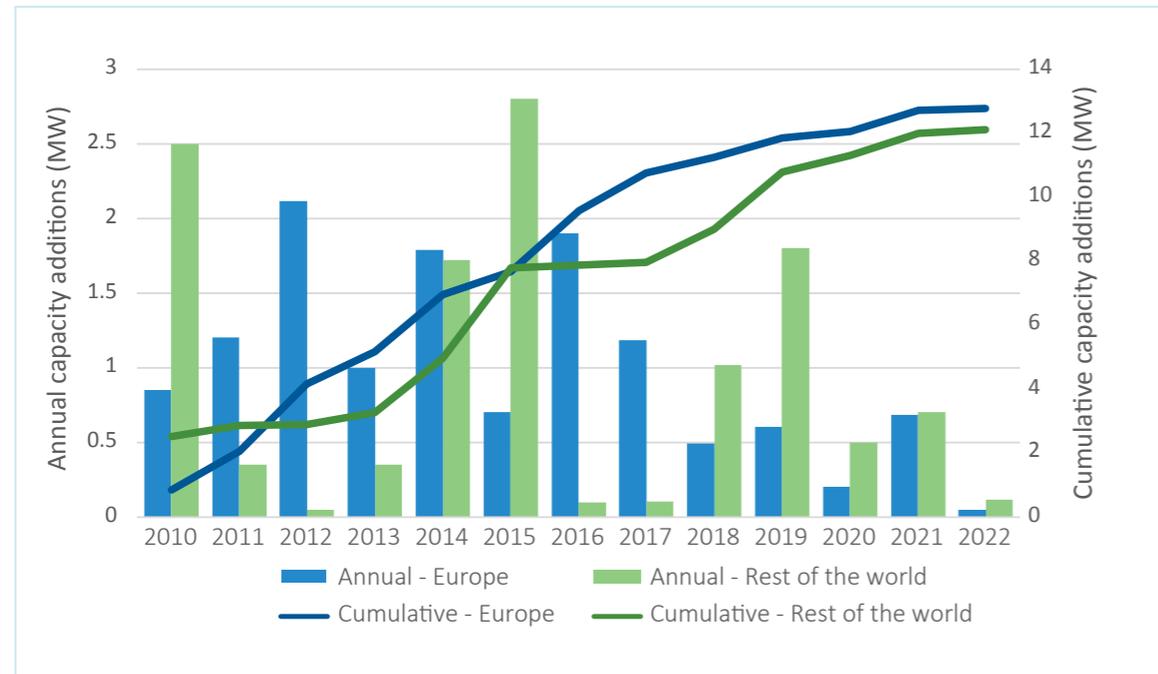


Figure 10: Installed global wave energy capacity

Source: Ocean Energy Europe

Country	Device Developer	Device Developer	Device name	Type	Capacity (kW)	Number of devices
CHINA	Shengsi island	Hann Ocean	Drakoo	Wave Rotor	15	1
US	Washington State	C Power	TigerRAY	Rotating mass	1	1
ISRAEL	Tel Aviv	Eco Wave Power	EWP-EDF WEC	Attenuator	100	1

Figure 11: Wave energy installations beyond Europe in 2022

Source: Ocean Energy Europe



Photo: Hann Ocean



## Finance: Reported private investments fell in Europe, while China is catching up in the patent race

Over the last five years, the EU has trailed China in terms of private investment in ocean energy - the Chinese sector has received triple the amount of investments compared to the EU. This injection of funding has allowed China to increase its share of global ocean energy patents. The EU still retains the largest share of 'high value' ocean energy patents overall, but its advantage has steadily reduced with China taking the lead in the number of high-value patent for the first time over the year 2019<sup>1</sup>.

In 2022, reported private investments in Europe totalled €15 million – more than two times less than in 2021. Whilst publicly-announced investments only represent a small proportion of overall investment in the sector, they give an indication of overall trends.

This drop in reported investments emphasises the need for policy action at European and national level. European developers need more market visibility and dedicated funding for large demonstration projects to stay competitive in the face of increasing investment elsewhere. Clear policy commitments will leverage private investment, allowing Europe to transform its current technological advantage into growth and sustainable jobs.



Photo: Sabella

<sup>1</sup> European Commission, Joint Research Centre, Ocean Energy in the EU

### Notable investments in wave and tidal energy in 2022 included:

#### SEAURRENT

Closed a  
**€4.8M** funding round

from existing and new shareholders for the development of its tidal energy converter, the TidalKite.

#### ORBITAL MARINE POWER

Secured  
**€4.5M** from individual investors

through the Abundance Investment platform to finance the operation of its O2 turbine.

#### SABELLA

Collected  
**€2.5M** through bond issues

to support several development projects and bring them closer to commercial maturity.

#### QED NAVAL

Reached  
**€1.7M** for the building of its Subhub community demonstrator platform

designed to support the commissioning, testing and installation of tidal turbines.

#### MOCEAN ENERGY

Raised  
**€873,000** equity funding

from existing funders to advance the design of its next-generation Blue Star wave machine.

#### WAVEPISTON

Received  
**€600,000** through capital raised from existing shareholders

to finalise the installation of its full-scale system in 2023.



# Policy: EU competitors ramp up policy & funding support for ocean energy

Policy support for ocean energy is picking up speed outside the EU as more new measures were taken in 2022. The US is showing more and more ambition in ocean energy, making substantial investments in line with its strategy to achieve global leadership in clean energy technologies. The UK has set a strong example for the EU to follow and has managed to create a market for tidal energy with the granting of Contracts for Difference to put 40 MW of projects in the water.

Europe's longstanding competitive advantage in ocean energy is thanks to 20 years of investment in R&I. This lead is becoming increasingly fragile, as competition abroad rises to an unprecedented level. If the right policy support is provided, Europe can strengthen its position and build on its past investments to create growth and job opportunities with the industrialisation of a new sector. This must include clear funding commitments to support larger demonstration projects, which will enable pilot farms to scale up and continue their cost reduction journey.



Photo: Magallanes

## Growing policy support outside the EU

OUTSIDE THE EU



### CANADA

A comprehensive policy package including feed-in-tariffs resulted in a 32 MW pipeline of projects in 2022 in Canada.



### UNITED KINGDOM

The UK government invested £20 million to support the deployment of 40 MW of tidal pilot farms – this alone is equivalent to 40% of the EU Offshore Strategy's targets for ocean energy.



### CHINA

China promoted the large-scale development of ocean energy in the outline of its 14<sup>th</sup> Five-Year Plan.



### US

The US provided the biggest ever investment for clean technologies in the IRA. In addition, the infrastructure law provided US\$ 112 million for ocean energy in 2022. Another US\$ 110 million was requested by the Biden administration for 2023.



WITHIN THE EU



### SPAIN

The Spanish government released €200 million in grant programmes to support R&I and testing of offshore projects.



### THE EUROPEAN UNION

€78 million of the Horizon Europe 2023-24 Work Programme has been allocated to wave & tidal pilot farm demonstrations.

The Innovation Fund has a 2022 'Mid-Sized Window' which is more favourable to renewables including ocean energy.

'Non-binding commitments' between national governments for each sea basin establish a framework which may benefit ocean energy in the future.

# Project spotlight



## HANGZHOU LHD UNITED ENERGY CORPORATION

### China home to the second most powerful tidal farm in the world



One of the world's largest single tidal current energy units, the 'Endeavour' was successfully launched on the Xiushan Island in the Chinese province of Zhoushan, Zhejiang.

Developed by the Chinese Hangzhou LHD United Energy Corporation, the total capacity of the demonstration project has now reached 3.3 MW, making it the second most powerful pilot farm in the world.

Photo: Hangzhou LHD/CFP

## ECO WAVE POWER

### Public-private funding puts Israeli wave plant in the water



Eco Wave Power started the testing of its wave energy pilot project at the Port of Jaffa in Tel Aviv, Israel. The project benefits from a Feed-in Tariff (FIT) set by the Israeli Electric Authority and is being executed in collaboration with and co-funding from EDF Renewables IL and the Israeli Energy Ministry.

The company was awarded a grant in 2018 by the Ministry of National Infrastructures, Energy, and Water Resources for the expansion of the pilot installation and its connection to the grid.

Photo: Eco Wave Power

## CORPOWER OCEAN

### CorPower unveils its first commercial-scale wave device



The launch of the C4 wave energy converter in Aguçadoura, Portugal, in early 2023 will mark a decisive stage of the HiWave-5 project.

CorPower Ocean's flagship project plans to deliver a four-system wave array of 300kW each and create the biggest grid-connected wave farm in the world. The Swedish developer has invested €16 million in the building of a manufacturing facility to support its operations in northern Portugal.

Photo: CorPower Ocean

## MINESTO

### Minesto is moving up a gear in the Faroe Islands



After the successful deployment of its first tidal kite, the Dragon 4, in Vestmannaasund in 2021, the Swedish company is about to add a second unit, which will double the capacity of the mini-array.

In 2023, Minesto is also planning to deploy its latest scaled-up tidal kite, the 1.2 MW Dragon 12. The D12 will lay the groundwork for the first phase of another tidal project located in the Faroe Islands, in Hestfjord.

Photo: Minesto

# 2022 ocean energy highlights

## JANUARY

**Sabella and Nova Innovation** gained consents for a 12 MW tidal project off the Welsh coast.

## FEBRUARY

- ▷ **Nova Innovation** secured agreement from Crown Estate Scotland to develop a 15 MW tidal array in the Shetlands.
- ▷ **HydroWing** secured a berth with 30 MW potential in Wales to demonstrate the next-generation of Tocado turbines.
- ▷ The Chinese developer **Hangzhou LHD United Energy Corporation** deployed the 1.6 MW Endeavour turbine off the Xiushan Island.

## MARCH

- ▷ The Welsh **Morlais** project was awarded €37m from EU Structural Funds to provide tidal infrastructure.
- ▷ **Hann-Ocean Energy** deployed its 3rd generation wave energy converter in Shengsi, China.
- ▷ **SIMEC Atlantis Energy** re-deployed its 1.5 MW AR1500 turbine at MeyGen in Scotland following maintenance work.

## APRIL

- ▷ **C-Power** started demonstration of its TigerRAY wave device in the US.
- ▷ **Sustainable Marine** supplied power to the grid in Canada's Bay of Fundy after achieving connection of the PLAT-1 device.
- ▷ **Sabella** re-deployed its 1 MW tidal turbine in the Fromveur Passage, Brittany, France after introduction of a smoothing out function to improve the quality of the current fed into the grid.

## MAY

- ▷ The **FastBlade** tidal turbine testing facility opened for business in Scotland.
- ▷ **Novige** received a multi-million Euro grant to build a full-scale 500 kW wave energy device through the EU's LIFE programme.

## JUNE

**CorPower Ocean** unveiled its first commercial-scale wave energy converter, the C4, intended for deployment in Northern Portugal.

## JULY

- ▷ Energy Commissioner Kadri Simson visited the **Tocado** tidal installation at the Eastern Scheldt in the Netherlands and called for rapid deployment of tidal energy.
- ▷ **Orbital Marine Power** secured €9.2m via the Scottish National Investment Bank and individual investors.

## AUGUST

- ▷ **CalWave** completed demonstration of its wave energy converter for 10 months off the coast of San Diego, with no maintenance required throughout.
- ▷ Spain unveiled its draft plan of aid programmes totalling €200m to boost marine renewables.
- ▷ **Eco Wave Power** started operation of its newly-installed wave energy project at the Port of Jaffa in Israel.

## SEPTEMBER

- ▷ **SIMEC Atlantis Energy (now Proteus Marine Renewables)** re-deployed its third AR1500 turbine at MeyGen in Scotland.
- ▷ The European Parliament endorsed a new target for innovative renewables, including ocean energy.
- ▷ **Minesto** completed the installation of subsea infrastructure including cables to prepare for deploying its second Dragon 4 tidal kite in the Faroe Islands.
- ▷ 5 wave energy projects reached Phase 2 of the **EuropeWave** programme, focussed on designing a scale prototype intended for open-water trials during Phase 3.

## OCTOBER

- ▷ The US Dept of Energy announced its largest-ever investment in tidal energy of US\$35m, one of 4 announcements totalling US\$110m for ocean energy in 2022.
- ▷ Austrian manufacturer **Andritz HYDRO** presented a commercial offer for its new Mark 2 turbines, including guarantees that significantly de-risk the technology for investors.

## NOVEMBER

**QED Naval** collected €1.7m through crowdfunding for the deployment of its Subhub tidal platform.

## DECEMBER

**Sabella** obtained certification of the power curve of its D10 turbine immersed off in the Fromveur Passage, by Bureau Veritas.



## 2023 outlook: A chance to provide market visibility and reinforce Europe's competitive advantage

2022 has seen good progress in funding and policy support for ocean energy deployments worldwide, which have boosted the development of wave and tidal energy at both R&I and pre-commercial demonstration stages. Most of these developments, along with new capacity additions, have taken place outside of the EU.

One of the key reasons that the EU's leadership is under threat is the slow implementation of the EU Offshore Strategy's ocean energy deployment targets (100 MW by 2025 and 1 GW by 2030).

Initial steps so far – such as a boosted Horizon Europe budget – will help, but will not be sufficient to safeguard the EU's competitive advantage.

Europe still benefits from historical investment into ocean energy R&D. And 'non-binding commitments' between Member States provide a framework which can be repurposed to support ocean energy. So a swift implementation of the Strategy is possible and would quickly restore Europe's leading global position.

The planned revision of EU National Energy & Climate Plans (NECPs) in 2023 is an excellent opportunity for Member States to commit to ambitious objectives for ocean energy. The European Commission can boost national ambitions for ocean energy, via new and existing funding instruments.

The Green Deal Industrial Act and Sovereignty Fund could also be a critical tool to realise the EU's ambitions for the sector – a dedicated ocean energy policy and fund for ocean energy within these instruments would be transformative.



Several ocean energy projects are well-advanced and will enter a decisive phase in 2023 - with positive market signals and the right support, they could reach financial close by the EU Offshore Strategy's 2025 deadline. Making sure these projects are realised is essential if the EU wants to reap the benefits of past investments and remain at the forefront of ocean energy.

While 2023 will see more European deployments than in 2022, there will still be insufficient volumes of ocean energy hitting the water. With a project pipeline of at least 70 MW that could be deployed between 2025 and 2027, more political action is needed now if Europe is to regain its momentum.



## TIDAL STREAM: Strong pilot farm pipeline can safeguard Europe's global leadership

### Europe

Deployments in Europe are set to increase in 2023. At least 1.4 MW of capacity is slated for installation. As 2023 gets underway, Nova Innovation has already extended its tidal farm in the Scottish Shetland islands with two additional 100 kW turbines. This makes it the largest array in the world, with six turbines in operation.

Another full-scale deployment is expected to hit European waters in 2023. Swedish developer Minesto is planning to deploy a full-scale unit of its Dragon Class tidal kite, the D12, in the Faroe Islands.

### International

Outside of Europe, new installed tidal stream capacity in 2023 will be at least 100 kW, as European developer Nova Innovation will deliver its first turbine in Canada's Bay of Fundy.

There is a significant pipeline of 32 MW underway in Canada composed of several demonstration projects that could hit the water within the next two years in Nova Scotia.

It is likely that China will seek to complete its LHD demonstration project in the coming years, with the deployment of another tidal turbine of at least 1 MW in Xiushan Island.



## WAVE ENERGY: Secure Europe's competitive advantage and boost future deployments

### Europe

In 2023, Europe should remain just behind the rest of the world in terms of new wave energy capacity additions. At least 450 kW of wave energy should be deployed, with most new capacity coming from full-scale devices in Spain and Portugal. This includes the deployment of CorPower Ocean's new C4 in Portugal, and Wavepiston's modular device in Spain.

### International

Elsewhere in the world, 500 kW of new installed capacity could be added in 2023. The Irish developer Ocean Energy has partnered with the US manufacturer Vigor to deploy their device off the coast of Hawaii during the coming year.

## METHODOLOGY

The data of this report are based on information provided by ocean energy developers, publicly available specialist sources, third-party and national government websites. Deployment figures are extracted from the Ocean Energy Europe database. The [methodology](#) outlines the approach taken for key sections of the report and includes a definition of the parameters studied in the report.

## DISCLAIMER

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**COVER PHOTO:** Courtesy of Orbital Marine Power



## Want to go into more detail?

Did you know that Ocean Energy Europe members can request information from our 'Kit-in-the-Water' database about projects deployed around the world?

Contact us now to find out more about this and the many other benefits of OEE membership!

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**Ocean Energy  
Europe**

### About Ocean Energy Europe

Ocean Energy Europe (OEE) is the largest network of ocean energy professionals in the world. Our mission is to create a strong environment for the development of ocean energy, improve access to funding, and enhance business opportunities for our members.

Over 120 organisations, including Europe's leading utilities, industrialists and research institutes, trust OEE to represent the interests of Europe's ocean energy sector. If you're active in the ocean energy sector, we can help your business grow.

As a not-for-profit organisation, every euro invested in OEE is used to promote the European ocean energy industry.

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