


Offshore floating solar

Market models and demonstration projects



Blue Session – Oostende 8 February 2024

*Simon Stark, CTO
Dutch Marine Energy Centre (DMEC)*



Innovations supported by DMEC



Marine energy sources

Wave & Tidal energy,
Offshore solar, Salinity,
Floating offshore wind



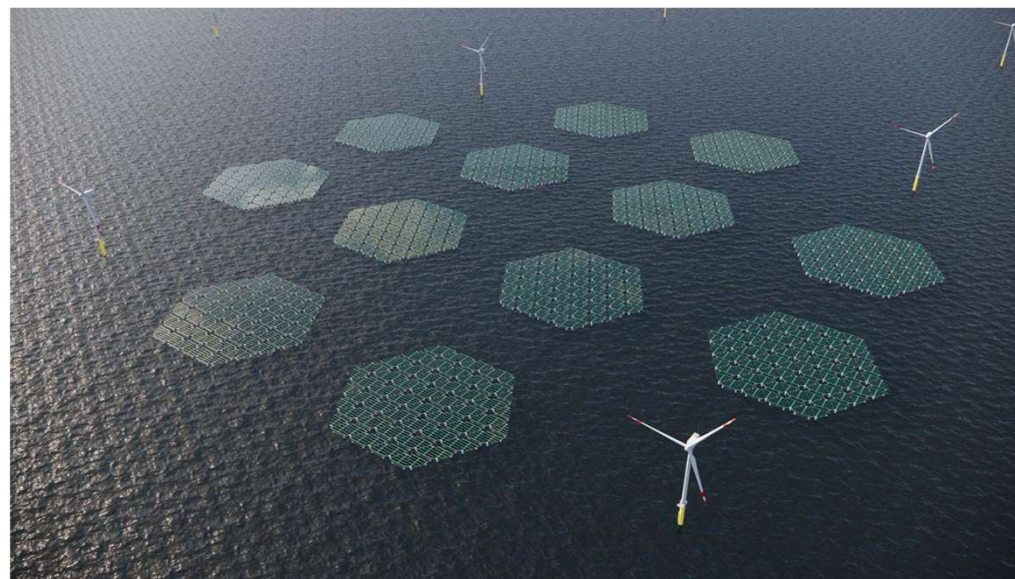
Offshore storage & power-to-X

Offshore hydrogen &
batteries and Innovative
vectors



Nature inclusive designs

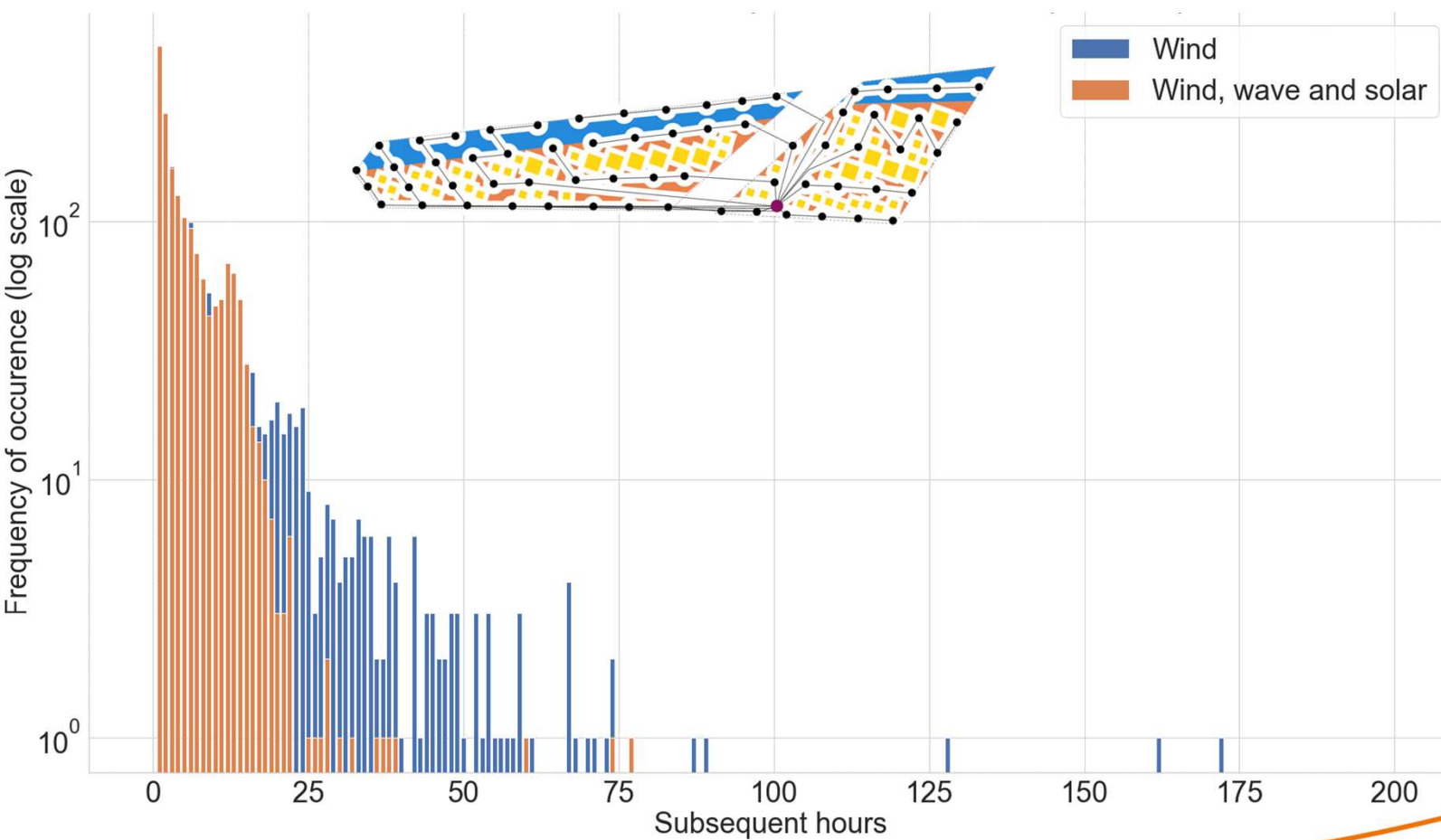
Physical & process innovations
to avoid, reduce, & offset
impact or enhance nature



This project has received funding from the Europeans Union's Horizon 2020 research & innovation programme under grant agreement number 101036457.



Multi-use scenarios

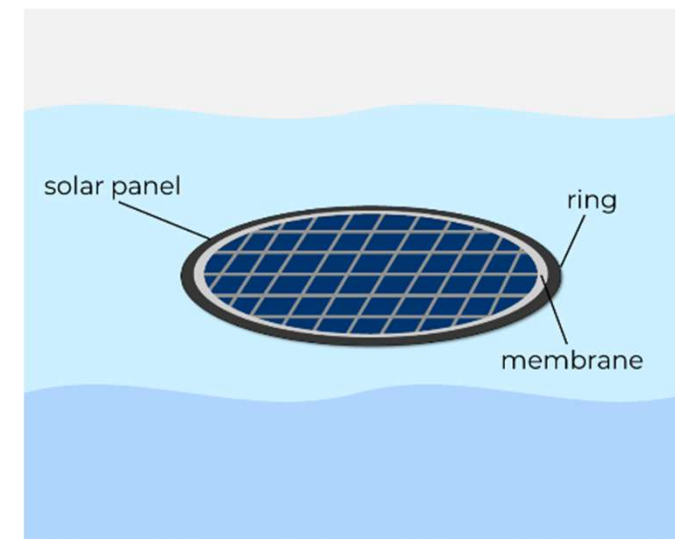
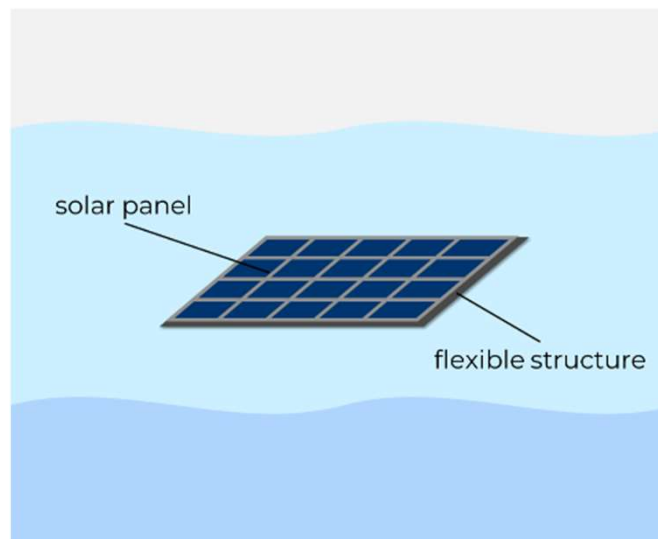
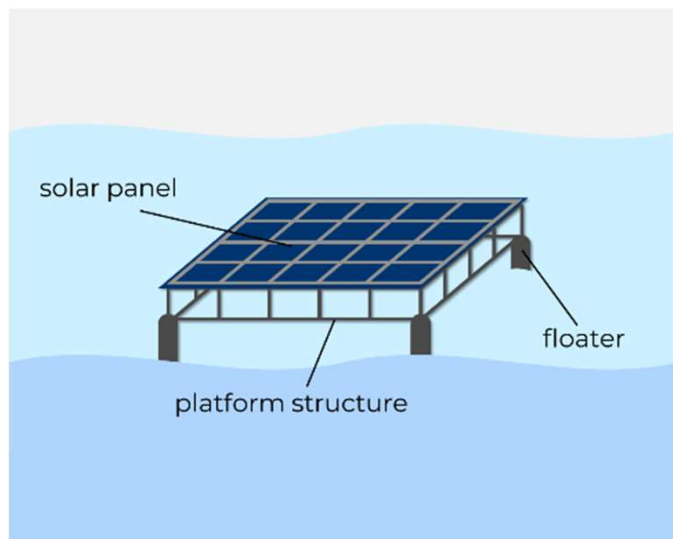


**Hours of low output
decreased by >85%**












Offshore floating solar market review



Floating solar concept assessments



European Developers

Country	Name	Description
 Netherlands	Bluewater & Genap	Foil concept/flexible pontoon concept
 Norway	Fed Olsen 1848	Pontoon concept
 France	HelioRec	Flat mat system based on floating pontoons
 Norway	Moss Maritime	Elevated system based on steel, rectangular platforms
 Netherlands	Oceans of Energy	Flat mat system based on floating pontoons
 Norway	OceanSun	Floating "fish farm" foil concept
 Austria	Swimsol	Elevated system
 Belgium	SeaVolt	Elevated system based on 4 big steel floaters
 Germany	SINN Power	Elevated system
 Netherlands	SolarDuck	Elevated system based on aluminium, triangular platforms
 France	SolarInBlue	Elevated system based on steel



Oceans of Energy

North Sea Farmers,
Netherlands & Blue
Accelerator, Belgium



SeaVolt

Blue Accelerator, Belgium



HelioRec

Port of Brest, France



SolarDuck

North Sea Farmers,
Netherlands



SolarIn Blue

Sète, France



Offshore floating solar pipeline

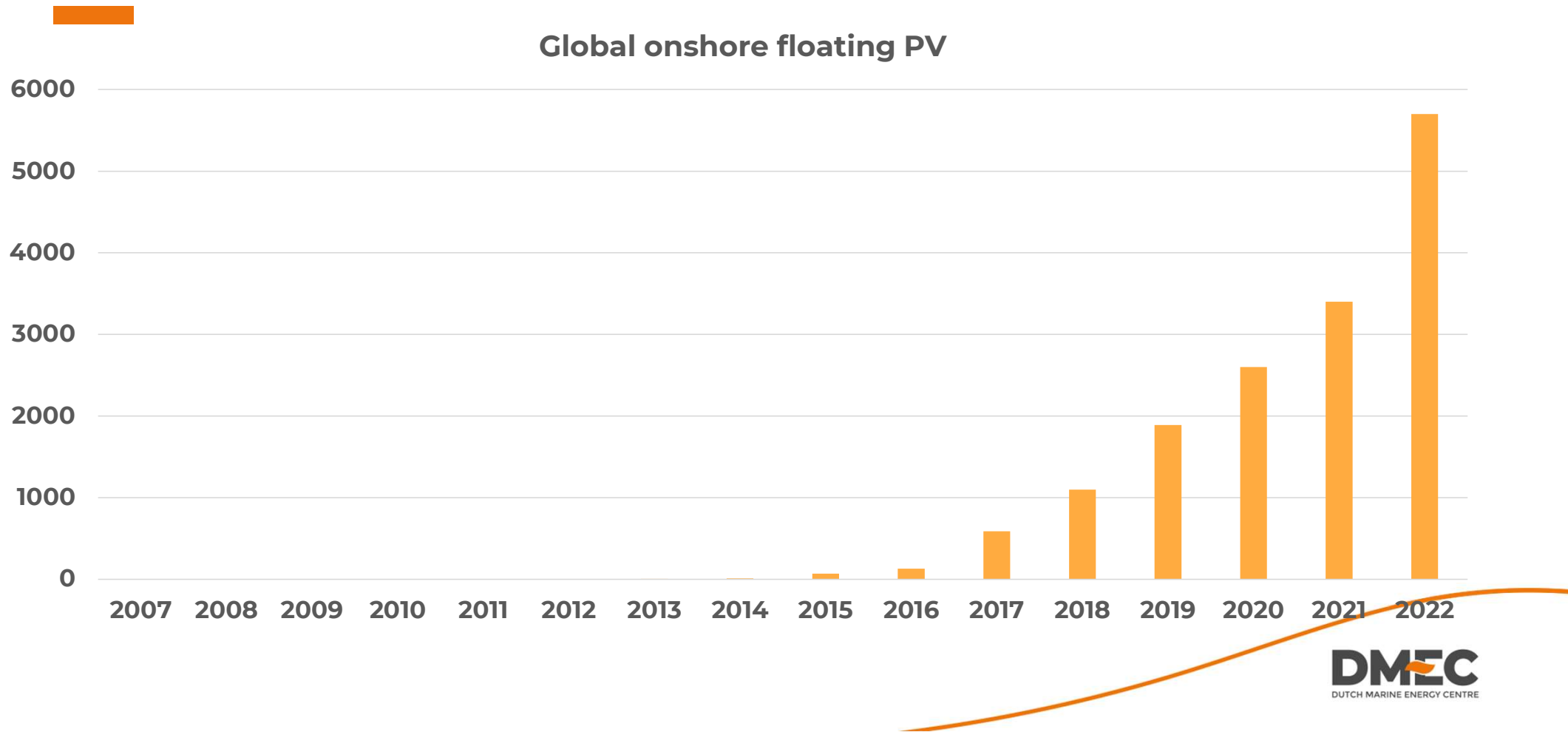
Crosswind/Hollandse Kust Noord	Oceans of Energy	0.5 MW	Netherlands
EU SCORES/NSR 3	Oceans of Energy	2.6 MW	Belgium
Tokyo bay	SolarDuck	0.2 MW	Japan
Tioman island	SolarDuck	0.8 MW	Malaysia
Hollandse Kust West	SolarDuck	5 MW	Netherlands
Gran Canary Islands	Ocean Sun	0.25 MW	Spain
Singapore (Strait & Jurong)	Ocean Sun	2.7 MW	Singapore
Sunset Extension	SolarinBlue	1 MW	France
Mangalore – Arabian Sea	SolarinBlue	1 MW	India

~ 14 MW pipeline

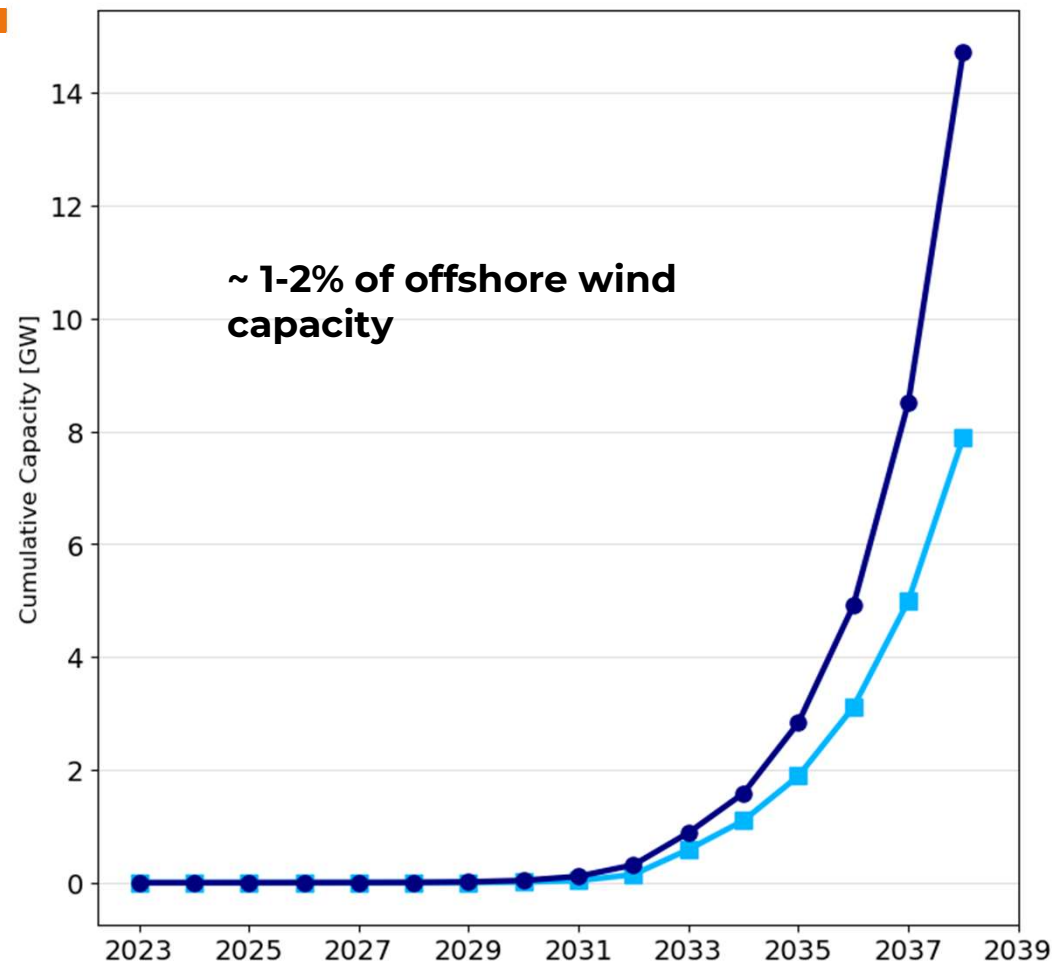
Offshore floating solar forecast



Growth example: Onshore PV



Growth model DMEC



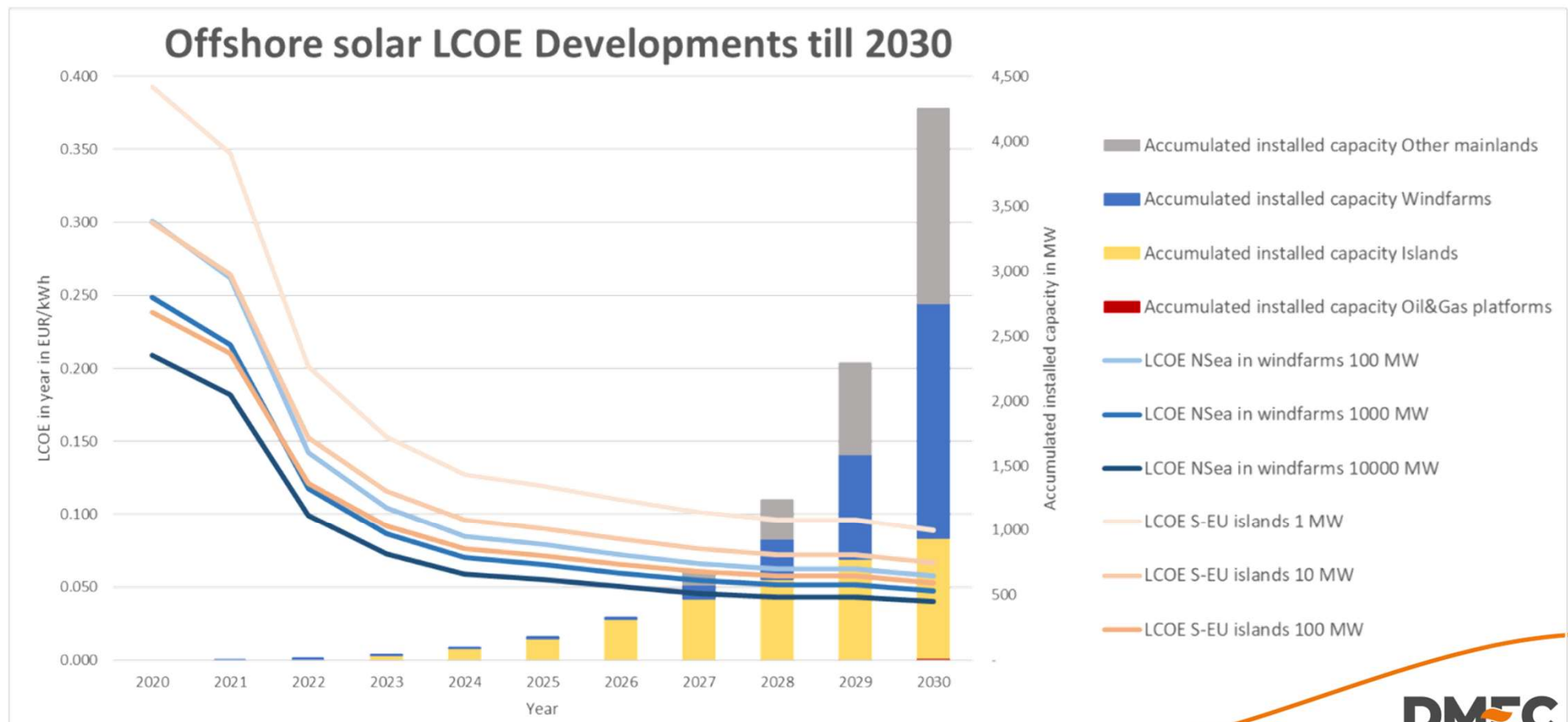
Current LCOE ~350 €/MWh



2033: 50-70 €/MWh



Market and LCOE estimate



Stakeholder event

Presentations and debates on the implications and opportunities of multi-source energy parks.



2 July 2024
Oostende, Belgium



Get in touch

- Learn more about multi-source energy parks
- Explore the potential of research and demonstration projects
- Discover the space of offshore energy innovations



Simon Stark

Chief Technology Officer

simon@dutchmarineenergy.com

