Building a Paris Agreement Compatible (PAC) energy scenario

CAN Europe/EEB technical summary of key elements

June 2020

2.10 Mobilising ocean energy

Key assumptions

- Although tidal, wave, ocean thermal and salinity gradient energy are still in their infancy, conditions for market introduction are good. Assumptions are mainly taken over from the European Commission and short-term market analysis.[1]

Evolution of energy supply

The accessible ocean energy potential of 3,360 MW installed capacities is mainly mobilised between 2025 and 2030. Electricity generation reaches 2 TWh in 2025 and multiplies five-fold to reach 10 TWh in 2030. The share of ocean energy in final electricity demand remains marginal with a maximum of not more than 0.2%.

Integration of members' and experts' feedback

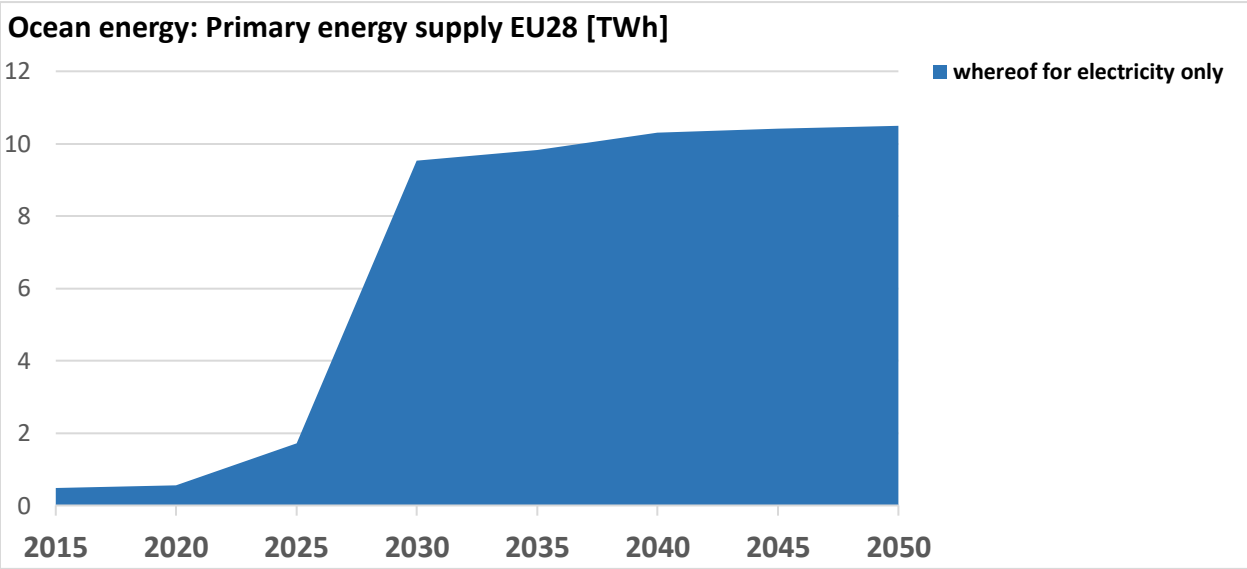
Members and experts from the ocean energy industry confirmed key assumptions of the PAC scenario.

Sensitivities and limitations

Research and industry currently cannot provide robust trajectories for the development of ocean energy capacities beyond the year 2030. In a simplified approach, the PAC scenario assumes that ocean energy technologies until 2050 will continue electricity generation at least on the same level as in 2030.

Key results

- Ocean energy is at the brink of market introduction with a positive outlook. It complements Europe's offshore energy portfolio in the coastal regions but plays a marginal role in European energy mix.



1 European Commission/Wavec: Market Study on Ocean Energy, May 2018; Eurobserver: Ocean energy barometer, November 2018.