



# RENEWABLE ENERGY ROADMAP

Version of April 2022

## LCOE REDUCTION IN WIND FARMS Horizon 2020-2030

Operational expertise (OPEX - AEP)	Value creation (CAPEX - DEPEX)
<p><i>Optimisation of the lifespan, operation, maintenance and energy production of existing installations by means of supporting technological processes and decision models as well as the <b>minimisation of human intervention</b> by means of logistical processes and models supported door digitisation, automation, drones and robotics.</i></p>	<p><i>Developments covering the entire supply chain during the construction of new wind farms: integrated design, taking into account current and future trends, including the optimisation of the industrialisation, foundation works, installation techniques and logistics chain of decommissioning (end of life)</i></p>

SMART - GBF

SMARAGD

CTO

BOPTIC

OPAL

SOILTWIN

Supersized 4.0

RAINBOW

## RENEWABLE ENERGY FRAMEWORK

Immediate surroundings	Scarcity	Regulations & services
<p><i>Initiatives promoting the <b>multiple use of space</b> occupied by wind farms and contributing to efficient and safe exploitation for concessions to be built as well as the use of spaces already occupied by extending the lifespan incl. new business models. Research and innovations concerning the <b>interaction with the marine ecosystem</b>.</i></p>	<p><i>Innovative initiatives that help alleviate the <b>scarcity of staff</b> by providing adequate, targeted training of staff and the transition of staff from other fields. Promotion of initiatives relating to the logistics chain for the use of <b>renewable materials</b> (ecological, biodegradable).</i></p>	<p><i>Investment in the <b>internationalisation strategy</b> to increase the visibility of Flemish know-how about the construction of wind farms worldwide. For the Belgian part of the North Sea and within the scope of the development of new technologies, the <b>necessary regulations</b> to address these trends and create support.</i></p>

MFiland

D4PV@Sea

ELBE+

Inn2Power

## EMERGING TECHNOLOGIES & SERVICES Horizon 2020-2040

Energy management (grid balancing, Power to 'X', storage)	Emerging production technologies
<p><i>New necessary concepts for <b>energy transport, grid balancing, storage and system integration</b> for the benefit of the long-term stability of the offshore net and facilitation of interconnections.</i></p> <p><i><b>Offshore energy to "X":</b> offshore production, storage and transport of H2 (and/or after conversion as feedstock, including CO2 captation at sea) and freshwater production</i></p>	<p><i>Emerging production technologies such as <b>floating energy production</b> (wind, photovoltaic (PV) ...). Development of <b>wave and tidal energy converters</b> and other developments still in their infancy (airborne, OTEC, salinity gradient, algae).</i></p>

Cordoba

SWEET H2(O)

MPVAQUA

H2MYTHIC

BLuERA