

Green Deal Call National Online Info Event

Energy & Mobility

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Green Deal Area 2: Clean, affordable and secure energy

LC-GD-2-1-2020: Innovative land-based and offshore renewable energy technologies and their integration into the energy system

Significant changes are to be expected in the published call in September compare to the published draft of May:

Subtopic 1: Development of land-based renewable energy technologies and their integration into the energy system,

Renewable energy-based systems for district heating and cooling (DHC) and for cogeneration of heat and power (CHP)

Subtopic 2: Demonstration of innovative technologies to enable future large scale deployment of offshore renewable energy

Efficient, cost-effective, affordable and secure technologies using: wind, solar, wave and/or tidal resources

Subtopic 1: Development of land-based renewable energy technologies and their integration into the energy system

Research and Innovation action (RIA)

EU contribution:

EUR 3–6 million

Budget:

EUR 18 million

Develop innovative solutions for district heating/cooling (DHC) or for cogeneration of heat and power (CHP) using renewable energy

- For CHP solutions: minimum capacity 2,5 MW.
- **Important:** sustainability of the proposed solutions in environmental, social and economic terms and requirements of the final users.
- Projects should bring the proposed solutions to TRL 4-5.

Expected Impact

- Projects will bring clear benefits in terms of reducing greenhouse gas emissions, air pollutants emissions and the use of fossil fuels.
- They will also demonstrate that an affordable, reliable, secure and flexible DHC and/or CHP systems based on onshore, local renewables can be designed to be adaptive and scalable according to the energy demand.

CHP: Combined Heat and Power
DHC : District Heating and Cooling

Subtopic 2: Demonstration of innovative technologies to enable future large scale deployment of offshore renewable energy

Innovation action (IA)

EU contribution:

EUR 20–35 million

Budget:

EUR 68 million

Proposals must address:

- **Offshore renewable energy power generating systems:**

innovative integrated offshore wind, wave, tidal and/or solar systems, on a floating or fixed-bottom substructure

and/or

- **Grid infrastructure:**

real life demonstration of innovative Direct Current (DC), AC/DC hybrid technologies and systems as a supporting step towards large offshore DC, AC/DC hybrid grids

The project should bring the demonstrated technologies to TRL7

Expected Impact

- The project should clearly **demonstrate all potential impacts** on the future roll-out of large-scale deployment of offshore renewable energy, the **market perspective** considering existing or alternative (decentralised) systems and all other **environmental (like GHG reductions), ecological, social and economic impacts** along the value chain.
- It should **increase incentives for investment and economies of scale in offshore** bringing down costs and create new business models and services.

LC-GD-2-2-2020: Develop and demonstrate a 100 MW electrolyser upscaling the link between renewables and commercial/industrial applications

Innovation Action (IA):

Special funding

rate: 50 %

EU contribution:

EUR 25 – 30 million

Budget:

EUR 60 million

- Development and demonstration of a 100MW electrolyser.
- The system will provide grid-balancing services as well as supplying renewable hydrogen to a commercial/industrial application.
- Avoid downstream hydrogen compression facilities.
- 5 year duration with at least 2 years of operation.

Expected Impact

- Technological impacts
- Operational and environmental impacts
- Cost competitiveness impacts
- Additional end study impacts addressed directly to the European Commission

Proposals are expected to bring the technologies from TRL 6/7 to TRL 8 at the end of the project.

LC-GD-2-3-2020: Accelerating the green transition and energy access Partnership with Africa

Innovation Action

EU contribution:

EUR 5 – 10 million

Budget:

EUR 40 million

At least two partners from at least one African country must be part of the consortium.

Actions should demonstrate innovative sustainable energy solutions that consider climate adaptation and climate mitigation in the African social, economic and environmental contexts.

The solutions may address:

- developments in the areas of renewable energy sources for off-grid communities, and integration into existing energy system,
- energy efficiency

Solutions should consider:

- African urbanised and rural contexts
- water-energy-food nexus, sustainable energy access, electricity/cooking
- improved health, economic wealth and jobs

Expected Impact

Demonstrators providing evidence of short-term expected impacts:

- technologically reliable and economically viable solutions;
- proven positive environmental, health, climate, social and economic impacts of the renewable energy solutions;
- climate adaptation and climate mitigation potential of the solutions;
- strengthening of the joint EU-AU Climate Change and Sustainable Energy Partnership efforts, with emphasis of improving the visibility of EU Science Diplomacy actions in Africa.

The following medium term impacts are expected:

- creation of new market opportunities for both European and African companies on the African continent;
- technological uptake on the African continent;
- Accelerate achievements of the targets of the Paris Agreement (both continents) plus Green Deal goals

Longer term impacts expected:

- economic growth and job creation, both in the EU and in African countries.
- In addition, the proposed solutions are expected to evidence benefits to contribute to the **Sustainable Development Goals 2, 4, 5, 6, 7, 8, 11, 12 and 13.**

HORIZON 2020 – WORK PROGRAMME 2018–2020

General Annexes – Technology readiness levels (TRL)

TRL	Description
TRL 1	basic principles observed
TRL 2	technology concept formulated
TRL 3	experimental proof of concept
TRL 4	technology validated in lab
TRL 5	technology validated in relevant environment
TRL 6	technology demonstrated in relevant environment
TRL 7	system prototype demonstration in operational environment
TRL 8	system complete and qualified
TRL 9	actual system proven in operational environment

Innovation Action

Research and
Innovation Action

Green Deal Area 5: Sustainable and smart mobility

One Topic

LC-GD-5-1-2020

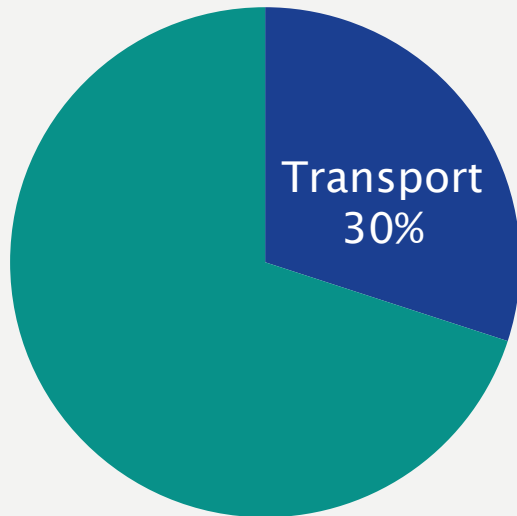
Green airports and ports as hubs for sustainable and smart mobility



Disclaimer: draft text, its content is subject to change

Specific Challenge

GHG Emission



Air/ports as hubs for

- sustainable
- smart
- multimodal mobility

Scope

Perform

1. Large-scale
2. Real-life
3. High TRL

demonstrations of green
airports and ports

6 Technology demonstrated in
relevant environment

7 System prototype demonstration
in operational environment

8 System complete and qualified

Two independent sub-topics

Green airports



Apply either...or

Green ports



Green Airports

Aspects

- multimodality within the airport and to/from cities
- low emission and alternative fuels
- traffic optimisation

Transport

- green energy production
- pilot waste-based biofuels

Energy

- green and smart logistics
- energy efficiency

Terminal

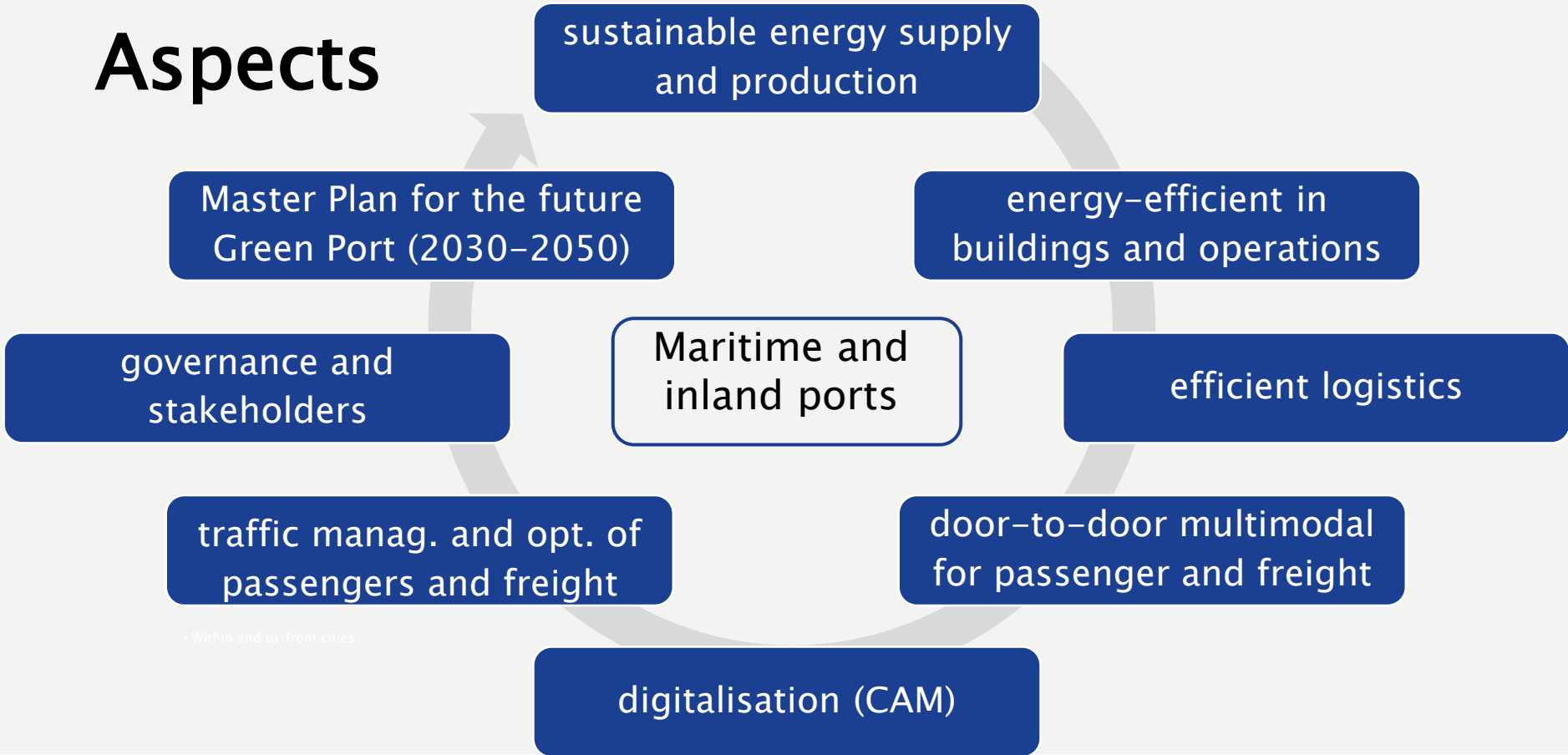
Cross-cutting

- pollution (air quality, noise)
- safety and security
- digitalization

All aspects must be included

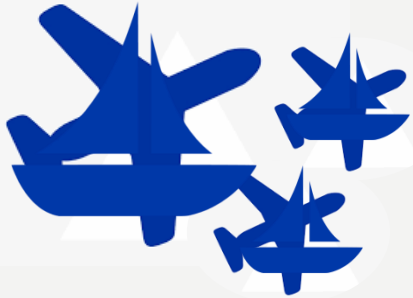
Green Ports

Aspects



Airports and Ports

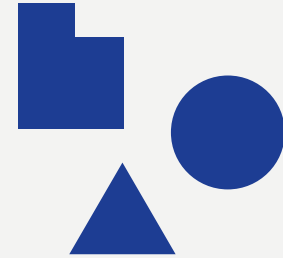
Consortium



1 leading “**Lighthouse**”
air/port and 2 “**Fellow**”
air/ports



Air/ports from 3
different Member
States or Associated
Countries



Mix and integration
air/port, academia,
industry, regulation,
society

Project characteristics

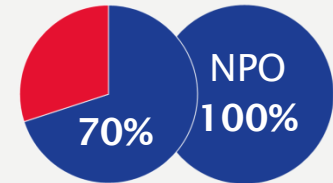
Duration 4–5 years, including

- Ex-ante evaluation
- Ex-post evaluation

Budget EUR 15–25 million

Type of Action Innovation Action

Deadline January 202



Questions

