

3. OBJECTIVES AND PRIORITIES:

3.2. Priorities for the objectives of ensuring sustainable and efficient transport systems in the long run, with a view to preparing for expected future transport flows, by supporting innovation and new technologies for all modes of transport

3.2.1. Deployment of innovation and new technology actions in all transport modes, according to points (a) to (d) of Article 33 of the TEN-T Guidelines.

Priority open to all Member States

General Objective

The general objective is to support the deployment of a sustainable and efficient transport system and to promote the decarbonisation of all transport modes along the core network corridors. New technologies and innovative solutions shall be deployed on the core network with particular emphasis along the core network corridors.

Specific Objectives

In order for the core network¹ to keep up with innovative technological developments and deployments, the aim shall be in particular to:

- (a) support and promote the decarbonisation of transport through transition to innovative and sustainable transport technologies;
- (b) make possible the decarbonisation of all transport modes by stimulating energy efficiency introduce alternative propulsion systems, including electricity supply systems, and provide corresponding infrastructure. Such infrastructure may include equipment and tools necessary for intelligent and sustainable integration with electricity grids and other facilities necessary for the energy supply, may take account of the infrastructure-vehicle interface, may include intelligent platforms needed for interoperability and may encompass telematic applications;
- (c) improve the safety and sustainability of the movement of persons and of the transport of goods;
- (d) improve the operation, management, accessibility, interoperability, multimodality and efficiency of the network, including through multimodal ticketing, coordination of travel timetables;

Studies with integrated (pilot) deployment (also referred to as "pilots", "real-life trials") and works are eligible. Studies without integrated (pilot) deployment, i.e. pure paper studies, are **not** eligible. Priority will be given to such studies and works that consider using innovative financial instruments developed by the European Union to achieve a wide-scale roll-out of the technology.

I) Overview

The general objective may be achieved through the implementation of new technologies and innovative technological and organisational systems, based on a market-oriented approach. Supporting the innovation pipeline, this objective may increase the successful deployment of upstream Research and Innovation. In all studies a real-life trial must take place, which

¹ Regulation (EU) No 1316/2013, Annex I, Part I.1. "CEF, Horizontal Priorities"

dominantly aiming at preparing the wide-scale roll-out into the market by moving towards viability, i.e. by bringing unit costs down and improving the understanding of client's needs.

Transport infrastructure and related infrastructure, facilities, vehicles (only the innovative parts of vehicles) and services as described in points (a) to (d) of Article 33 of the TEN-T Guidelines (specific objectives above) may be supported. Each innovation topic must be in line with the policy framework established by the Commission for example for actions on alternative fuels the "Clean Power for Transport: a European alternative fuels strategy"² and the European Strategy for Low-Emission Mobility³

In the context of this priority, innovation means the implementation of a new or significantly improved product (goods and/or service), which is ready for deployment, while a market-orientated solution is still being sought. The earlier development and demonstration phases of this product are considered as research activities which are not covered by these priorities.

Innovation of operational processes may be funded under this call, including fleet management, marketing and consumers management, load and fuel management, multimodality and interoperability with respect to all travel phases.

Union support is also available for the improvement and deployment of telematics applications, coming to support decarbonisation of transport, however telematics shall be only a secondary element within the transport solution, with a view for example to enable roaming functionality, interoperability, multimodality and compatible ticketing systems.

Priority shall be given to projects of high Union added value, which can for instance be demonstrated by including results from projects funded under the Commission's Research and Innovation Framework Programmes. In such cases the project's title and Commission reference code shall be inserted in the proposal.

This part of the call is only open to actions (studies and works) located on the core network as specified in the maps of the TEN-T Guidelines, with particular emphasis along the 9 core network corridors as listed in Annex I, part 1.2 of the CEF Regulation.

II) Action Types

Actions to be selected under this priority shall concern works and studies (with pilot deployment activities). Priority is given to such studies:

- Studies with pilot deployment shall concern a real-life trial (rather than just a demonstration), in which the commercial aspects are a key element and must be present. A dual optimisation shall therefore take place: (1) the optimisation of the technology to bring unit costs down, and (2) the optimisation of the business-client relation to better understand and address the client's needs, including analysing client's satisfaction, and overall market demands, develop a strong business case that would set targets for commercial viability. At the end of the trial, as part of the study, an analysis must be made, showing how to scale-up the trial to mass application, in the form of a business plan. In fact, on the basis of the resulting optimal solution, the roll-out of the innovation onto, at least, a significant part of a corridor in at least 2 Member States shall be elaborated. This must be presented as a deliverable of the study.

Finally, such documentation should allow the evaluation by a bank, such as the European Investment Bank, on whether private investments may come in at the end of the trial. In this

² COM(2013)17 of 24 January 2013

³ http://ec.europa.eu/epsr/pdf/publications/strategic_note_issue_17.pdf

respect, attention shall be given to the opportunities offered by the new financial instruments provided by CEF, EFSI (Juncker Plan), Green Shipping Guarantee Programme and other such schemes. This includes attention to constituting viable partnerships and consortia suitable to receive such type of financing.

- Works shall address the roll-out of the innovative solution onto a significant part a core network corridor and shall take place in at least 2 Member States.

In summary, for the innovative actions three types are envisaged: (A) Studies with regional or local pilot deployment in at least one Member State and (B) Studies with pilot deployment on a scale of a core network trajectory/corridor of at least 500 km serving at least two Member States or achieving coverage of minimal density of at least 2 complete Member States. Type (C) actions are works and applicable to roll-outs on the core network in at least 2 Member States.

For types (B) and (C) the roaming/cross-border functionality and interoperability of solutions, including cross-borders, shall be addressed and effectively implemented in order to allow public accessibility of the infrastructure, on a non-discriminatory basis.

III) Individual Budgets

As an indication of total project sizes it is advised to aim for the eligible budgets at up to EUR 20 million for type A and up to EUR 50 million (indicative maximum) for type B. In case more than EUR 50 million is required for an action, it shall be carefully examined whether the action is of the type C (= works). Total project sizes shall normally be at least EUR 1 million to achieve an adequate European dimension.

Within grants for "studies with integrated (pilot) deployment", as described above, a co-financing of eligible costs of the "mobile equipment (i.e. vehicles)", shall not exceed:

- 30% for ships and rail mobile equipment;
- 10% for road mobile equipment.

The above co-financing will apply if the following conditions are met:

- The mobile equipment is secondary to the infrastructure part of the action;
- The application explains how the EU support for the mobile equipment will contribute to accelerating the market roll-out, which is planned after the trial/or pilot test;
- The eligible costs of mobile equipment must only relate to the financial difference between a usual, conventional solution and the use of a new technology (e.g. the additional financial effort of using fuel-cell hydrogen instead of diesel propulsion)
- It is priced separately in the grant application presenting a thorough financial information about costs;
- Mobile equipment remains for at least 5 years registered and is operated in a Member State

The interface between infrastructure and vehicles (e.g. the telematics link, the charging cable, adaptors, etc) as well as mobile infrastructure (e.g. innovative cranes, innovative reach-

stackers, innovative fuel supply vehicles, etc) are considered as eligible if they are part of the action.

For type C actions (works) with its low Union funding rate and limited maximum amount, it is recommended to consider the new financial instruments available under the CEF and EFSI (Juncker Plan) managed by the European Investment Bank (EIB). Here an application may be made at any time and in addition to the Union grant. For EIB support the conditions published by the EIB apply.

IV) Delimitation to other Priorities of the Work Programme

In general innovation on transport infra-structure for the long distance is a primary element. Telematics, logistics, vehicles, etc, covered by other TEN-T/CEF priorities as their main subject, may only be secondary elements of an innovation action. As an example, in case an action introduces an alternative fuel solely inside an urban node, it shall be submitted to Urban Nodes calls. As a further example, in case an alternative fuel is introduced for 2 ports together with taking up a shipping service between the ports, this application shall be submitted to Motorways-of-the-Sea calls, as the primary element is the logistics chain. All telematics actions having the telematics component as their primary element shall refer to the appropriate telematics calls for the mode of transport concerned (eg RIS, ITS, ERTMS); for example a pure road ITS application shall be submitted to a road ITS call. Under the innovation calls, single ticketing would only be eligible if being part of an innovative solution encompassing more elements, for instance alternative fuels.

V) Detailed Topical Specifications and Restrictions

The following detailed topical specifications and restrictions are done to focus the available resources on a subset of the very wide range of legally allowed innovation and new technology topics for transport, thereby setting temporary political priorities to address the present innovation requirements of the Union. All studies must include (pilot) deployment. **In case there are no specifications or restrictions mentioned for a topic, the full legally possible range of Article 33 (a-d) of Regulation (EU) 1315/2013 applies.**

All specifications and restrictions only apply to the current work programme and call, as follows:

- Actions (studies & works) supporting the decarbonisation of transport by the roll-out of alternative fuels distribution infrastructure. This encompasses the use of electricity, hydrogen, biofuels, synthetic fuels (preferably from biomass), compressed or liquefied natural gas (CNG and LNG), preferably pure bio-methane or blended with bio-methane), or other innovative systems. Infrastructure may also include emission reduction, smart metering and energy storage equipment. Scrubbers are excluded, even if part of mobile infrastructure. Actions may include transportation of alternative fuel units, such as fuel-containers, to hinterland locations, e.g. to supply satellite terminals or to be placed directly at the end-consumer, to enable cost-efficient, multi-modal alternative fuel supply chains. Such units would be regarded as mobile infrastructure.
 - Mono-modal gas terminals are eligible for all modes of transport, except if located in maritime ports.

- Multi-modal gas terminals are eligible for all modes of transport, including if located in maritime ports.
- Maritime ports excluded here may refer to the Motorways-of-the-Sea call.
- Actions (studies & works) for the improvement and deployment of interoperable infrastructure/vehicle interfaces that will support the use of alternative fuels, including telematics applications or energy demand management systems when required. Such applications shall demonstrate their potential or actual contribution to interoperability, multimodality and overall efficiency of the network. The roaming/cross-border functionality and interoperability of solutions (especially for electro-mobility), including cross-borders, shall be addressed and effectively implemented in order to allow public accessibility of the infrastructure, on a non-discriminatory basis. The infrastructure shall use commonly agreed IT protocols and data formats, interoperable Radio Frequency Identification cards, and shall provide static and dynamic data and identifiers to users.
- To facilitate the deployment of a European network of alternative fuels, studies with pilot deployment may be implemented in the form of a grant scheme by public operators only, or by consortia led by public operators. They may support via joint grant schemes or joint procurement, the installation of refuelling/charging stations accessible to public or private economic operators. Such activities may be divided in several phases to address the needs progressively over a time period and/or by location. This shall aim at stimulating the deployment of interoperable infrastructures within the network. Such a progressive approach shall enable action owners to size the financial support to market price developments in a timely manner. For such actions, the planned number of refuelling/charging stations accessible to the public, of users and of emission savings in particular, shall be forecasted. Also, such actions should foresee the optimisation of the business-client relation to address the client's needs and develop a strong business case using targeted marketing and corporate communication actions.
- To improve the operation, management, accessibility, interoperability, multimodality and efficiency of the network, including through multimodal travel planning and ticketing, payment systems, coordination and integration of travel timetables.

In addition, any combination of the above specific subjects may be addressed in an innovative action as long as there is a significant part of the innovative solution is addressing the transport infrastructure.

General observation for all priorities under section 3:

In addition to specific objectives, priority will be given to projects that include the use of private finance, in particular EU-backed finance instruments such as the European Fund for Strategic Investments.