

Group of topics (GT) European Green Car Initiative

European Commission
Research & Innovation
FP7 - Cooperation
Maurizio Maggiore

18/07/2011

LEGAL REFERENCE

SST-2012-RTD-1


with reference to:

- ✓ FP7 Specific Programme Cooperation
- ✓ THEME 7 - TRANSPORT
- ✓ SUB-THEME 7.2 - Sustainable Surface Transport (SST)
- ✓ Call:FP7-(SST)- 2012-RTD-1
- ✓ Budget: 91.25M€

Open date: 20 July 2011
 Closure date: 2 December 2011

Legal basis:

Annual SST Work Programme Call text and Call Fiche



Screen 1 of 203

FP7-TRAN

Call title: FP7- SUSTAINABLE SURFACE TRANSPORT (SST)-2010-RTD-1

ANNEX 13 TO THE DECISION

WORK PROGRAMME 2010

Cooperation

THEME 7

TRANSPORT (INCLUDING AERONAUTICS)

- Call identifier: FP7-SST-2010-RTD-1
- Date of publication: 30 July 2009
- Deadline¹: 14 January 2010 at 17.00.00 (Brussels local time)
- Indicative budget²: EUR 93.79 million
- The indicative distribution of the call budget is as follows:
 - EUR 22.895 million for Group of topics (GT) N° 1: The development of rail freight transportation.
 - EUR 20.895 million for Group of topics (GT) N° 2: Eco-innovations in shipbuilding and waterborne transportation.
 - EUR 40 million for Group of topics (GT) N° 3: The 'silectification' of road and urban transport.
 - EUR 10 million for Group of topics (GT) N° 4: The rest of topics of this call.
- The budget for this call is indicative. The final budget awarded to actions implemented through calls for proposals may vary.
- The final budget of the call may vary by up to 10% of the total value of the indicated budget for each call; and
- Any repatriation of the call budget may also vary by up to 10% of the total value of the indicated budget for the call.
- In case the budget of one or more topic groups could not be consumed (totally or partially), the remaining budget shall be transferred to the other topic groups in accordance with the opinion of the evaluation review panel.

• Topics called:

Activity / Area	Topics called	GT N°	Funding Schemes
7.2.1. THE GREENING OF SURFACE TRANSPORT	SST 2010.1.1-4. Carbon footprint of freight transport	1	CP-FP (small or medium-scale focused research)
		2	CP-FP (small or medium-scale focused research)
		4	CP-IP (large scale integrating project)
		2	CP-FP (small or medium-scale focused research)
	SST 2010.1.1-2. Energy efficiency of ships		
	SST 2010.1.1-3. Attenuation of ground-borne vibration affecting residents near railway lines		
	SST 2010.1.1-4. Advanced after-treatment solutions for mitigation of emissions from ships		

¹The Directorate responsible may delay this deadline by up to two months.
²Under the condition that the preliminary draft budget for 2010 is adopted without modifications by the budget authority.

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TOPICS LEVELS

SST 2007-2013

Level 1 (GENERIC)

- Define broad fields of activity
- Normally common to all modes
- Encourage synergies between modes
- Proposal do not need to cover all the topic content

4. Introduction of hydrogen and fuel cell technology in surface transport applications by 2020 as an economic, safe and reliable alternative to conventional engines²⁰.

5. Reduction of external and interior noise and vibration. For road and rail transport the target will be a 10 dB²¹ reduction compared to present noise levels particularly in urban environments.

THE FOLLOWING TOPICS ARE FOR LEVEL 1

SST 2007.1.1.1. Promoting the use of bio-fuels and alternative hydrocarbon fuels

New technologies and innovative solutions for the progressive introduction of bio-fuels and alternative hydrocarbon fuels.

Proposals will cover one or more of the following subjects:

1. adaptation and optimisation of existing power trains (based on gasoline or diesel), systems (including after-treatment), components and materials;
2. new power train concepts with emphasis on efficiency and environmental impact, covering power ranges for all transport modes;
3. effective, safe and clean delivery of these fuels at distribution points.

International Cooperation with Brazil, USA and India is suggested.

Funding scheme: Collaborative Projects small or medium-scale focused research, demonstration and Support actions aiming at coordinating research activities

Level 2 (SPECIFIC)

- Mission oriented
- Explicit in their formulation
- Mostly specific to one mode
- Proposals need to cover all aspects of topic content

THE FOLLOWING TOPICS ARE FOR LEVEL 2

SST 2007.1.1.2 Integrating natural gas power-trains

Demonstrate the full potential of natural gas when applied to a custom designed light duty engine (including, for instance, higher or variable compression rates) integrated with specific after-treatment systems dealing more efficiently and at a lower cost than current technology with the reduction of methane emissions in addition to the other pollutants already treated by three way catalysts. Advanced storage systems and vehicle architectures, as well as multi-grade fuel tolerance and fuel flexibility are additional features to be researched.

The research will lead to increased efficiency by 10 % compared with diesel engines of today (2006), particularly at part load, and ultra low emissions (better than EURO 6 and US tier 2).

Funding scheme: Collaborative Projects large scale integrating projects

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examples

PROPOSALS apply to TOPICS

SST.2012.x.y.z

Each **TOPIC** (SST. 2011. x.y.z.) refers to an Activity (x), an Area (y) and specifies the type of proposal in terms of:

- ▶ **S&T Content**

- ▶ **Scale**

- ◆ **Small Scale : EC funding less than 3 M€**

- ◆ **Large Scale : EC funding more than 3M€**

- ▶ **Funding scheme**

- ◆ **Collaborative Projects: CP, CP-IP, CP-FP, CP-SICA**

- ◆ **Coordination and Support Actions: CSA-CA, CSA-SA)**

Topics are either **Level 1** or **Level 2**

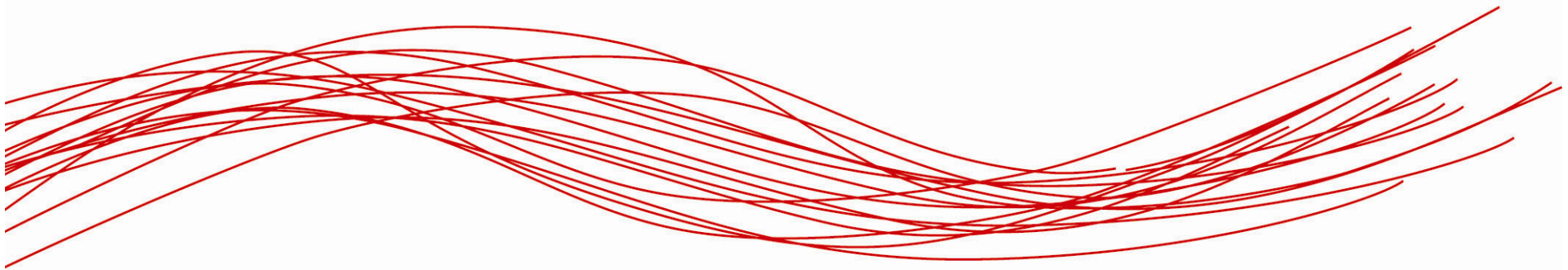
According to the degree of specification in the WP



→ *Since 2010*

Calls Specifications

FP7-SST-2011-RTD-1



- Date of publication: **20th July 2011**
- Deadline: **2nd December 2011**
- Total indicative budget RTD-1 for EGCI: **37 M€**

GC.SST.2012.1-2. Smart infrastructures and innovative services for electric vehicles in the urban grid and road environment

Level 1 CP-FP- Call : FP7-SST-2012-RTD-1

- **Contents and scope:**

- ▶ Innovative solutions for recharging stationary EV minimising risks deriving from vandalism.
- ▶ Data security standards and crypto measures to ensure privacy protection.
- ▶ Innovative location based Demand Management systems.
- ▶ Intelligent coordinated systems (micro-grids) that balance the simultaneous demand.

- **Expected impact:**

- ▶ Demonstrate the enhanced attractiveness of electric mobility.
- ▶ Economics of the needed investments.

GC.SST.2012.1-3. European strategy for rare materials and their possible substitution

Level 2 CSA-SA- Call : FP7-SST-2012-RTD-1

- **Contents and scope:**

- ▶ Prediction of the long term needs of the European electric vehicle industry for strategic materials.
- ▶ Access to alternative supply.
- ▶ Alternative materials and technologies.
- ▶ Options to replace rare earth materials.
- ▶ Recycling and reuse options.
- ▶ Economic, social and environmental risks of shortages.
- ▶ Political situation and development of solutions at a global scale.

- **Expected impact :**

- ▶ Materials roadmap and recommendations for strategic plans to solve the specific long-term materials issues for the Electric Vehicles sector.

GC.SST.2012.1-4. Modelling and testing for improved safety of alternatively-powered vehicles

Level 2 CP-FP- Call : FP7-SST-2012-RTD-1

- **Contents and scope :**

- ▶ Solutions for improving the crashworthiness and performance of future generation alternatively-powered vehicles.
- ▶ Evaluation criteria with regard to injury prevention of occupants of electrical and light-weight vehicles.
- ▶ Analyse the weight saving potentials.
- ▶ Verify technological feasibility and economic viability of the solutions proposed.
- ▶ Possible clustering with GC SST 2012.1-4

- **Expected impact :**

- ▶ Improved performance in terms of combined injury prevention, safety in asymmetric crashes.
- ▶ Low environmental impact of next generation alternatively-powered vehicles, at an acceptable cost.

GC.SST.2012.1-5. Integration and optimisation of range extenders on Electric Vehicles

Level 1 CP-FP- Call : FP7-SST-2012-RTD-1

- **Contents and scope :**

- ▶ Optimisation of the ICE used as the range extender and of its after treatment system.
- ▶ Impact on optimal battery capacity.
- ▶ Advanced control strategies.
- ▶ Modularisation.
- ▶ Performance, safety, recyclability and cost.
- ▶ Characterisation, standardisation and synergies with other applications.

- **Expected impact :**

- ▶ Overall performance, particularly in terms of the expected CO₂ emissions reduction of the range-extended EV.
- ▶ Safety, recyclability and life-cycle sustainability.
- ▶ Helping European automotive industry to maintain world-class status

GC.SST.2012.1-6. Advanced energy simulation and testing for Fully Electric Vehicles (FEV)

Level 2 CP-FP- Call : FP7-SST-2012-RTD-1

- **Contents and scope :**

- ▶ Numerical stimulation, virtual prototyping and physical testing to :
- ▶ Investigate solutions for improving the efficiency and performance of future generation EV and their constituent components and sub-systems.
- ▶ Assess energy efficiency and related increase of autonomy.
- ▶ Verify the technological feasibility and economic viability of the advanced solutions proposed.

- **Expected impact :**

- ▶ Demonstrate that the advanced modelling and testing tools can be used to ensure improved energy efficiency and performances of the next generation EV and HEV.
- ▶ Reduction of testing time for life cycle testing up to 50%.
- ▶ Real world testing of batteries on the test bench instead of field testing.
- ▶ Reduced development time.
- ▶ Increased reliability and durability as well as reduced validation time.

GC.SST.2012.2-1. Extreme low rolling resistance tyres

Level 1 CP-FP- Call : FP7-SST-2012-RTD-1

- **Contents and scope :**
 - ▶ Design of new tread pattern for reduced rolling resistance.
 - ▶ Modification of chemical composition of the tyres.
 - ▶ Smart solutions for tyre pressure, temperature and condition monitoring/adaptation systems.
- **Expected impact :**
 - ▶ Demonstrate the maximum potential for low rolling resistance tyres.

GC.SST.2012.2-2. Complete vehicle energy management

Level 2 CP-FP- Call : FP7-SST-2012-RTD-1

- **Contents and scope :**

- ▶ Optimised power management and distribution.
- ▶ Optimised control of electrified auxiliaries and synergies for cooling performance.
- ▶ Advanced vehicle aerodynamics. Reduced friction between moving parts in all vehicle sub-systems.
- ▶ Energy recovering/scavenging/harvesting.
- ▶ Driver Support (eco-driving/driver-coaching).
- ▶ Energy efficient work environment for the driver.

- **Expected impact :**

- ▶ Demonstrate the potential for improved energy efficiency and the economic viability of advanced complete vehicle energy management concepts.

GC.SST.2012.3-1. Towards sustainable interconnected logistics - development of standardised and modular solutions for freight transport vehicles, loading units and transshipment equipment

Level 1 CP-FP- Call: FP7-SST-2012-RTD-1

● Contents and scope :

- ▶ Specify, demonstrate and recommend a standardised set of load unit sizes and functionalities.
- ▶ Solutions should follow the “well-to-wheel” approach looking at all elements of the logistics chain;
- ▶ Research will evaluate the impact of a new standardised iso-modular units approach for logistics;

● Expected impact :

- ▶ A multiscale standard set of logistic units.
- ▶ Facilitate the integration of today’s independent supply chains.
- ▶ Enable a completely new interconnected logistics organisation to be achieved.

GC.SST.2012.3-1. Improve capturing and sharing of transport data in support of innovative freight transport schemes

Level 2 CP-FP- Call: FP7-SST-2012-RTD-1

- **Contents and scope :**

- ▶ Innovative data gathering methodology.
- ▶ Opportunities for improvements in interfacing between data collection and company transport IT systems.
- ▶ Cross-fertilisation of best practice in freight data collection between countries.
- ▶ Correction of current statistical anomalies and filling in data gaps.

- **Expected impact :**

- ▶ Accurate and timely information system.
- ▶ Better knowledge about the seamless freight transport system to help benchmark market size, structure and trends.

GC.SST.2012.3-3. Platform for continuous intermodal freight transport strategic research and innovation

Level 2 CSA-CA - Call: FP7-SST-2012-RTD-1

- **Contents and scope :**

- ▶ Raising the profile and understanding of new intermodal and freight logistics technologies and business processes.
- ▶ Identifying policies, regulatory measures, financial mechanisms and socio-economic aspects that are required in support of their market penetration.
- ▶ Encouraging greater involvement in and acceptance of innovations in the public as well as private sector.

- **Expected impact :**

- ▶ Assessment and consensus building amongst, and between, industry and authorities on intermodal logistics market developments.
- ▶ Identification of standardisation, harmonisation and innovation requirements.
- ▶ Accelerated exploitation of research results and innovations in the domain of intermodal and freight logistics.

GC.SST.2012.3-4. Green hubs enabling co-modal network design

Level 2 CP-FP- Call: FP7-SST-2012-RTD-1

- **Contents and scope :**

- ▶ Integration of terminal networks within the supply chain.
- ▶ Conditions and requirements for inland terminals to participate in seaport hinterland terminal networks.
- ▶ Definition of critical Key Performance Indicators (KPI).
- ▶ Definition of innovative value added services at intermodal terminals.
- ▶ Analysis of the most effective forms of governance;
- ▶ methodology to assess the economic and environmental impact.

- **Expected impact :**

- ▶ Increased productivity of the European industry.
- ▶ Reduced congestion.
- ▶ Enhanced environmental performance of integrated network.
- ▶ Quality standards and increased performance of the freight system.