Group of topics (GT) European Green Car Initiative

European Commission
Research & Innovation
FP7 - Cooperation

Maurizio Maggiore
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€

Legal basis:

Annual SST Work Programme

Call text and Call Fiche

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

**Level 2 (SPECIFIC)**

- Mission oriented
- Explicit in their formulation
- Mostly specific to one mode
- Proposals need to cover all aspects of topic content
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
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 are 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.
Towards sustainable interconnected logistics - development of standardised and modular solutions for freight transport vehicles, loading units and transhipment 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.