



## EUROPEAN COMMISSION

Executive Agency for Small and Medium-sized Enterprises (EASME)  
 Department B - LIFE and H2020 Energy, Environment, Resources  
 Unit B3 - LIFE and CIP Eco-Innovation  
 Head of Unit

### EVALUATION SYNTHESIS (SUMMARY REPORT)

#### Award Criteria according to Call for Proposals 2016

Proposal number: **LIFE16 ENV/IT/000442**

Proposal acronym: **LIFE SAVE**

Maximum amount of the grant (maximum funding from the EU in €): **1,814,187**

Award Criteria	AW1	AW2	AW3	AW4	AW5	AW6	AW7	Pass Score*	Overall Score
Max. score and Min. passing score	20 (pass 10)	20 (pass 10)	20 (pass 10)	10 NA	15 (pass 7)	10 (pass 5)	5 NA	85 (pass 55)	100 NA
Final scores	16	14	15	10	10	7	3	62	75

(\* Total score must be at least 55 according to criteria 1 + 2 + 3 + 5 + 6 )

#### 1. AWARD CRITERION 1 - Technical coherence and quality

- The preoperational context is well described and provides sufficient information to assess the problems and threats targeted, as well as the status of technical preparatory work. In particular, the project provides a sufficient overview over environmental problems and threats, status of previous R&D, tests and prototypes. For instance, a test version of the proposed kit made by on-the-shelf components has been developed and installed on an existing car in order to verify the feasibility of the proposed solution. The need for authorisations and permits is correctly covered by the proposal.
- The project planning is clearly presented and provides a robust project for achieving the objectives proposed, and the proposal includes obligatory monitoring, dissemination and management actions. All project beneficiaries have clear responsibilities. The actions clearly state how, where, when, and by whom they will be undertaken. They are properly described and quantified, and there is sufficient information to confirm their eligibility as well as the technical readiness of the proposal. Also, the technical scale is sufficiently clear. Four kits and vehicle prototypes will be assembled and homologated thus allowing a demonstrative evaluation of environmental and economic performance indicators. Vivid diagrams showing the technical features of the proposed solutions are provided.
- In addition, the proposal includes a clear strategy on how to plan for maintaining the actions and their results after the project is over. This would be done by regularly updating of the regulatory status, presenting a specific Decree by Italian Minister of Transport to norm similar kit solutions in order to facilitate their diffusion as well as to establish the required supply-chains, up-scale capabilities and commercial networks. Also, a business plan and replicability strategy will be elaborated (see also Criterion 3). The applicants will additionally allocate personnel in order to ensure the continuity and permanence of the project results. They will also commit resources in order to ensure information and dissemination beyond the project's lifetime by enabling existing scientific networks in the view of related scientific publications.
- In terms of weaknesses, since most of the impacts of the project, including the environmental benefits, are related to the large-scale commercialization of the proposed solution, it would have been more valuable to include the establishment and the entry into business of the NewCO, expected within 6 to 12 months after the 24-month-project, within the project duration. In case the project is recommended for funding it is advised, during the revision phase, to include the establishment of the NewCO as project deliverable. This may also include, if necessary, the 12-month extension of the overall project duration.
- As for Action C.1, reports on progress on performance indicators are not foreseen at each official reporting schedule as prescribed in the relevant Guidelines for the Applicants.

- The official reporting (progress, Mid-term, Final) schedules as listed under deliverables are not consistent with those as in the Activity Report in Form C2. .
- The following mandatory mean is not reported on the list of deliverables: notice boards. An external audit is mandatory for all beneficiaries requesting an EU contribution of at least €325,000; eProInn and Solbian should foresee it in its costs and deliverable.

## **2. AWARD CRITERION 2 - Financial coherence and quality**

- The budget is justified and coherent; costs are adequate to carry out the actions by the means proposed.
- The proposal is generally assessed to be cost-efficient and represents value for money against the expected environmental benefits and results to be achieved. For a total amount of €3,193,648, the technical upgrading, demonstration and market development of an advanced, sustainable vehicle propulsion system based on photovoltaic energy production would be effectively carried out and promoted.
- The costs for durable goods on Forms F4b and F4c appear reasonable and correctly allocated; they are deemed necessary for the implementation of the proposed actions. The depreciation rules are correctly applied.
- Overall, the budget is well designed and contains no major weaknesses which would hinder a successful implementation; hence, the project can be approved with a minimal effort of financial revision.
- In terms of weaknesses, on Form F1, most staff items regard “manager” positions. Other staff roles are not sufficiently specified in order to assess their relevance for the project. Project management costs are underestimated in relation to the project size and objectives and they have to be increased adding more working days for all partners in Action E.1.
- On Form F2, travel and subsistence costs amounting to €70,900 are too high for a project addressing greenhouse gas emission and carbon footprint reduction and with a local scope.
- On Form F3, core project tasks such as on-the-road tests for performance monitoring for four prototypes, track rent and test drive as well as booster design for the 48 V batteries architecture are outsourced, thus reducing the actual involvement of the beneficiaries into the on-field implementation of the project.
- Moreover, it appears that some subcontractors have been already identified as industrial third parties or, as in the case of the Maltese consultancy company, as local facilitators. In this regard, if contracts are already on place, related costs are not eligible since these have been signed outside the project timeframe. If framework contracts are on place, this can be accepted provided that related specific contracts are signed within the project timeframe. In all cases, award of contacts must follow the rules and principles set in the Annex X (session VII) to the model Grant Agreement. If this is not the case, all relevant expenditures may be rejected. In particular, as for the subcontracting of Bitron, being legally affiliated to the project beneficiary Solbian, this creates a conflict of interest and goes against principles set in the LIFE financial provisions.
- On form F4c, costs for “On-board Emissions Measurement System OBS-ONE GS for tests activities” can be considered as equipment; the applicant should clarify why they have to be included as prototype or move them to F4b and depreciated according. In general, the prototype nature of all cost items in Form F4c has to be clearly justified and, if not, reallocated and depreciated.
- Several cost items for durable goods on Forms F4b and F4c such as “Dedicated Material for prototype testing and components: 4 Wheel Drive rolling test bench” rather appear as lump sums and should be broken down by their actual items.
- In particular, on form F4c, costs related to vehicles prototypes manufacturing amounting to €250,000 are not enough detailed, broken down and fully clear, and they seem relatively high. The applicant has to justify why “high-end” vehicles have to be purchased, considering that the bulk of vehicles on the road, the main vehicles group targeted by the project solution, is not made of high-end vehicles. Furthermore, costs marked as “external assistance” are not fully clear and seem to include some repetitions of what is already included in other F4c costs.
- Costs are not correctly tendered wherever required for non-public entities. In particular, expenditures above €1 30,000 must fall under open tendering procedures. For instance, the prototype items on Form F4c over €130,000, such as “Vehicle Prototypes manufacturing: 2 high-end M1 vehicles for conversion + Mechanical and electric components for modification and kit integration (€ 100,000); 2 Light electric vehicles car frame pro”, must be awarded through an open tender procedure.

## **3. AWARD CRITERION 3 - EU added value: extent and quality of the contribution to the specific objectives of the priority areas of the two LIFE sub-programmes**

- The proposal contributes to the specific objectives of priority area “Environment and Resource Efficiency” as set out in Art. 10 of the LIFE Regulation and targets integrated approaches to the implementation of Air quality legislation as it aims to develop a solution to face environmental challenges encountered during and/or caused by transport as a major responsible for air pollution accounting for about 63% of oil consumption and 29% of all CO2 emissions. Further, the proposal would contribute to the development and demonstration of innovative climate change mitigation technologies, systems, methods and instruments that are suitable for being replicated, transferred or mainstreamed as set out in Article 14 for the LIFE Environment sub-programme.
- The proposal also foresees a direct contribution to the updating and implementation of EU Environmental policy. This would be achieved by providing sustainable traction solutions addressing Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of clean and energy-efficient road

transport vehicles, which aims at a broad market introduction of green propulsion vehicles. Also the National Emission Ceiling (2001), which sets upper limits for each member state for total emission in 2010 and 2020 concerning agents of acidification, ozone pollution and eutrophication (SO<sub>2</sub>, NO<sub>x</sub>, VOCs and NH<sub>3</sub>), as well as Regulation (EC) No 443 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO<sub>2</sub> emissions from light-duty vehicles are involved accordingly.

- Moreover, the proposal presents a credible path to achieve a direct and ambitious environmental impact. This is mainly achieved by combating pollution in urban areas which occur due to greenhouse gas and particulate emissions of conventional vehicles. Pollutants such as nitric oxides, unburned hydrocarbon, carbon oxide and particulate matter will be avoided by substituting thermal powered engines (i.e. spark ignited, Diesel or fuelled by biofuels or natural gas) with the proposed hybrid-electric traction system.
- In terms of weaknesses, although some environmental benefits will be achieved already during the project, environmental benefits become substantial only in a view of a massive deployment of the project solution, with particular regard to the solar-hybrid power electric retrofitting of existing vehicles.
- Being a project on Air, important air pollutants such as NO<sub>x</sub>, CO, PM, HC, have not been properly determined in terms of expected reductions, while only an indicative value is indicated. The baseline situation for these air pollutants will be defined only during the action implementation, while the applicant should have also estimated their expected reduction in order to clearly perceiving the environmental improvement that will outcome from the project.

#### **4. AWARD CRITERION 4 - Contribution to the project topics**

- The project complies with two of the project topics, namely “sustainable mobility projects for those components that are essential for meeting air quality standards focussing on cleaner real world driving, the use of electric or super low emission vehicles and the use of clean alternative fuels” as well as “projects implementing integrated and comprehensive policies for sustainable urban planning and design through innovative approaches regarding urban public transport, mobility and energy efficiency”.
- Further, the proposal satisfies the criterion on demonstration measures new or unknown at EU level as the combination of technologies and methods of the kit for electrifying by add-on retrofitting the traction of standard vehicles, creating a solar-aided hybrid electric vehicle, reducing fuel consumption and saving of daily battery recharge needs in their proposed form are considered innovative.

#### **5. AWARD CRITERION 5 - EU added value: multipurpose, synergies, and integration**

- The proposal aims at integrating specific environmental objectives into other policy areas and Union policies and contributing to them. The project would introduce sustainable energy production by photovoltaic panels into vehicle construction and propulsion system development issues. The proposal clearly explains how relevant policy-makers are engaged in the project. At the end of the proposed experimental tests, a draft decree or regulation will be presented to the Italian Minister of Transport in order to define the related norms for this type of kits, which is expected to be the first in EU, in order to ensure increased replicability to the project.
- A starting Political, Societal, Economic and Technological (PEST) analysis has been included in section B and will be completed with contacts, interviews and direct techno-economic data elaboration. Its final results will be translated into socio-economic impact briefs for the decision makers.
- In terms of weaknesses, the project does not include a specific multi-purpose delivery mechanism and/or concrete actions to create synergies with other EU policies beyond those already addressed by the LIFE programme.

#### **6. AWARD CRITERION 6 - EU added value: replicability and transferability**

- The proposal includes a strategy and concrete actions for replication and transferability of project results to other contexts during and/or after its implementation. These include an estimation of the available market, applying the results of the price survey, defining impact scenarios depending on the price and user payback, time simulation, a preliminary economic analysis addressing kit costs, technical feasibility, a preliminary profit and loss analysis, an operating cost analysis and optimization concept for up-scaled production as well as a market replicability analysis.
- The approach is ambitious since it is estimated that the proposed technology could be transferred to more than 200 Million vehicles on the road thus decreasing emissions by 25%. The environmental problem of air pollution occurs in many European areas and the approach is realistic, since the technique described could be easily transferred due to the establishment of a joint venture structure created during the project.

#### **7. AWARD CRITERION 7 - EU added value: transnational, green procurement, uptake**

- The project will adequately apply green procurement. This would be achieved through the choice of suppliers considering their geographical position to limit transport carbon footprint. Moreover, attention to the declared consumption and CO<sub>2</sub> release of different transport vectors will also be paid.
- The proposal foresees taking up results of environmental and climate-related research and innovation projects

financed by Horizon 2020 or by preceding Framework Programmes. These include the HySolarKit project (Grant Number: 674502), which comprises of a feasibility study for a kit able to electrify cars and vehicles by using solar power thus allowing to reach a reduction of up to 25% in CO2 emission and fuel consumption.

- Although the proposal includes only Italian beneficiaries, the involvement of a consultancy company located in Malta in the field of regulatory assistance, permitting, tests surveillance and end-user engagement through a framework agreement, and the fact the test ground for the prototype vehicles will be also in Malta, would offer a sufficient transnational added value.