EUROPEAN COMMISSION

HORIZON 2020 PROGRAMME
TOPIC H2020-LC-SC3-2019-RES-IA-CSA
Increase the competitiveness of the EU PV manufacturing industry

GA No. 857793

High-performance low-cost modules with excellent environmental profiles for a competitive EU PV manufacturing industry

HighLite- Deliverable report

D5.1- Selection of sub-contractor for VIPV integration.

Disclaimer/ Acknowledgment

Copyright ©, all rights reserved. This document or any part thereof may not be made public or disclosed, copied or otherwise reproduced or used in any form or by any means, without prior permission in writing from the HighLite Consortium. Neither the HighLite Consortium nor any of its members, their officers, employees or agents shall be liable or responsible, in negligence or otherwise, for any loss, damage or expense whatever sustained by any person as a result of the use, in any manner or form, of any knowledge, information or data contained in this document, or due to any inaccuracy, omission or error therein contained.

All Intellectual Property Rights, know-how and information provided by and/or arising from this document, such as designs, documentation, as well as preparatory material in that regard, is and shall remain the exclusive property of the HighLite Consortium and any of its members or its licensors. Nothing contained in this document shall give, or shall be construed as giving, any right, title, ownership, interest, license or any other right in or to any IP, know-how and information.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857793. The information and views set out in this publication does not necessarily reflect the official opinion of the European Commission. Neither the European Union institutions and bodies nor any person acting on their behalf, may be held responsible for the use which may be made of the information contained therein.

About HighLite

The HighLite project aims to substantially improve the competitiveness of the EU PV manufacturing industry by developing knowledge-based manufacturing solutions for high-performance low-cost modules with excellent environmental profiles (low CO_2 footprint, enhanced durability, improved recyclability). In HighLite, a unique consortium of experienced industrial actors and leading institutes will work collectively to develop, optimize, and bring to high technology readiness levels (TRL 6-7) innovative solutions at both cell and module levels.

HighLite consortium members

Document information

Deliverable No.	HighLite D5.1
Related WP	WP5
Deliverable Title	Selection of sub-contractor for VIPV integration.
Deliverable Date	01-10-2020
Deliverable Type[i]	Report
Lead Author	Daria Raine (Fraunhofer ISE)
Co-Author(s)	Martin Heinrich (Fraunhofer ISE)

Document history

Date	Revision	Prepared by	Approved by	Description
23/09/2020	1	Daria Raine	Daria Raine	First draft
29/09/2020	2	Daria Raine	Loic Tous	Final

Dissemination level[ii]

PU	**Public**	
CO	**Confidential, only for members of the consortium (including the Commission Services)**	X

Publishable summary

Within the HighLite Project Task 5.2 different types of photovoltaic modules will be developed for the integration in passenger vehicles. The target of this task is therefore to achieve lightweight 3D curved VIPV modules with improved efficiency, uniform appearance and which additionally pass a vibration test whilst adhering to the IEC (61215 & 61730) norms.

To effectively integrate a photovoltaic module into a body panel of a passengers car, the HighLite consortium relies on the expertise of a third party which was to be subcontracted for this project. To find a suitable subcontractor an open tender was published on the 20th April 2020 via the official website for the award of public contracts in Germany "eVergabe[1]" with the name "Consultation and integration of 3D curved lightweight photovoltaic modules for vehicle integration".

The task description of the tender was divided into three work-packages: WP1 Legal safety requirements on photovoltaic integration of vehicle body panels, WP2 Consultation and provision of information on the body panel properties and requirements for technology integration, and WP3 Provision of an electric vehicle and supply of body panels.

The selection of the subcontractor was carried out within the allocated time of the first year of the project. Flanders Make was selected as a subcontractor to support the Highlite project and the involved project partners for the development and testing of VIPV modules.

Flanders Make is the strategic research centre for the manufacturing industry contributing to the technological development of the vehicles, machines and factories of the future and offering an extensive range of testing and validation infrastructure for products or production. With Flanders Make as the subcontractor the HighLite and VIPV consortium are gaining an experienced company for car body panels testing and the associated norms and requirements. The training provided by Flanders Make to the consortium on "legal safety requirements on photovoltaic integration in vehicle body panels" will allow for VIPV modules to be designed according to the PV industry norms as well as according to the vehicle industry norms on body panels. The provision of car body panels and the relevant information will allow for the VIPV module design to be suitable for integration of the electric vehicle which Flanders Make will make available for dissemination purposes.

Additionally, Flanders Make's industry-relevant testing facilities will be used for the testing and monitoring of photovoltaic integrated car body panels produced in HighLite. The indoor simulated test based on real driving and environmental conditions will allow for a good comparison between the different technologies developed by the VIPV consortium.

Flanders Make are therefore a good fit to fulfil the tasks described in the tender and to advise on the development of photovoltaic integrated body panels for passenger vehicles relevant to the car industry.

[1] https://www.deutsche-evergabe.de/Dashboards/Dashboard_off