CHARGESCAN by BV

Reliability to electric vehicle charging solutions (EVCS) networks

Bureau Veritas launched ChargeScan by BV, an end-to-end solution to ensure electric vehicle charging solutions (EVCS) network reliability thanks to information collected and verified by Bureau Veritas inspectors and hence promotes the further acceleration of deployment of E-Mobility infrastructure.

Starting date of the project	December 2020
Project Localisation Places of implementation of the project at this stage and targeted geography if replicable.	Phase 1: North America, Europe & China Phase 2: Global
Project objectives Type of climate innovation of the project with a description of the problem/issue addressed	Whilst the decarbonization of power generation is now very well advanced, the transport sector, which represents almost 25% of total energy demand (IEA -World Energy Outlook 2020), is still largely fossil fuel based. The global ambition of carbon-neutrality by 2050 can therefore clearly only be achieved through carbon-free alternatives to fossil-fuelled cars. The means to do that is the use of renewables via sector coupling, i.e. through E-Mobility and/or Power-to-X technologies (e.g. Hydrogen). And whilst hydrogen is still at conceptual and pilot stage, E-mobility will be growing with a CAGR of 30% during this decade. CHARGESCAN is an end-to-end solution to ensure network reliability thanks to information collected and verified by Bureau Veritas inspectors and hence promotes the further acceleration of deployment of E-Mobility infrastructure.
Detailed project description	The end-to end solution covers: **Project management assistance for charging stations under construction:** o Consulting services for preliminary studies o Technical support and document management for design and permitting phases o Management assistance for construction, permitting and commissioning o Training for product and installation **Inspection services for charging stations in operations:** o Regulatory compliance (regulatory and maintenance inspections, grid code compliance…) o Safety and security reviews o Network availability (condition monitoring and assessment, repairs & component replacement management) o Performance monitoring (commissioning, data management, performance testing etc.) o Wireless connectivity testing
Main project's drivers for reducing the greenhouse gas emissions	
Emission scope(s) on which the project has a significant impact and quantification of GHG emission reductions per emission scope	

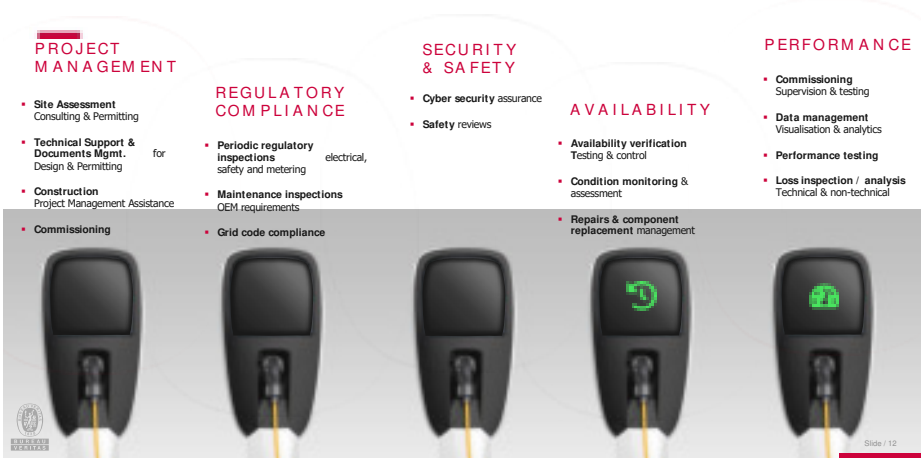
Reduction levers	Details on the aspects of the project
☐ Energy and resource efficiency (including behaviour)	
☒ Energy Decarbonisation	Replacement of carbon fuel by electricity
☐ Energy efficiency improvements	
☐ Improving efficiency in non-energy resources	
☐ Emissions absorption: creation of carbon sinks, negative emissions (BECCS, CCU/S, ...)	
☐ Financing low-carbon producers or disinvestment from carbon assets	
☐ Reduction of other greenhouse gases emission	

Aspects of the project contributing to the reduction of emissions by emission category	Quantification of associated GHG emissions by emission category

			Please follow the quantification methodology used in the Afep guidelines.
	Reduction of the company's carbon dependency		
	Scope 1 *Direct emissions generated by the company's activity.*		
	Scope 2 *Indirect emissions associated with the company's electricity and heat consumption.*		
	Scope 3 *Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.*		
	Increase of carbon sinks		
	Emissions Absorption *Carbon sinks creation, (BECCS, CCU/S, …)*		
	GHG emissions avoided by the company at third parties		
	Avoided Emissions *Emissions avoided by the activities, products and/or services in charge of the project, or by the financing of emission reduction projects.*	Avoided CO2 emissions by replacement of fossil fuels with electricity	For the period running from 2019 to 2030 the amount of avoided tons of CO2 equivalent is: • 2,0 Million tons according to IEA STEPS (Stated Policies) scenario • 6,0 Million tons according to IEA SDS (Sustainable Development) scenario

Clarification on the calculation or other remarks:
According to the IEA, the emissions avoided by E-Mobility will grow from -52.7 Mt CO2-eq in 2019 to between -189.1 Mt CO2-eq (stated policies scenario) and -451.0 Mt CO2-eq (sustainable development scenario) by 2030.
20% of this growth will be enabled through public charging infrastructure.
Bureau Veritas aims to support 7,5% of this market (between 5 and 10%).

Modality of verification of the quantification.	**Calculation standard used (ADEME base, GHG protocol, etc.):** GHG protocol **Verification of the calculation (internal or external):** Internal
Other environmental and social benefits of the project	ChargeScan contributes to achieve the following SGD: • SDG 09 – Industry, innovation & infrastructure by upgrading infrastructure and retrofitting industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes. • SDG 11 – Sustainable cities & communities by reducing the adverse environmental impact of cities, including by paying special attention to air quality. • SDG 13 – Climate action by decarbonizing operations through continuously improving energy efficiency, reducing the carbon footprint of their processes.
Project maturity level	☐ Prototype laboratory test (TRL 7) ☐ Real life testing (TRL 7-8) ☐ Pre-commercial prototype (TRL 9) ☐ Small-scale implementation ☒ Medium to large scale implementation **Remarks**: in full industrial deployment
Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential	Global potential for replication
Amount of investment made (in €)	200k€
Economic profitability of the project (ROI)	☒ ST (0-3 years) ☐ MT (4-10 years) ☐ LT (> 10 years) **Remarks:** click here to enter the information

Engaged partnerships	With several EVCS operators
Open comments from the project owner	/
More about the project	
Contact the company carrying the project	Bureau Veritas S.A. joerg.gmeinbauer@bureauveritas.com
Project URL links	https://group.bureauveritas.com/newsroom/bureau-veritas-launches-end-end-solution-electric-vehicle-charging-stations
Illustrations of the project	 

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