



## Press Information

# Electric Truck Charging Options Broadened in North America Through Volvo LIGHTS Project

## Volvo LIGHTS project supplier REMA secures Underwriters Laboratories (UL) Certification of Combined Charging System CCS2 Connector.

Volvo Trucks North America has facilitated an important step toward the wide-scale electrification of medium- and heavy-duty trucks in North America through the expansion of charging options for fleet operators. In collaboration with key suppliers participating in the Volvo LIGHTS (Low Impact Green Heavy Transport Solutions) project, REMA EV Connections—a leading charging connector provider—has secured UL certification for its Combined Charging System CCS2 connector.

Volvo LIGHTS is a collaboration with the South Coast Air Quality Management District (South Coast AQMD) and 13 other organizations to develop a blueprint to successfully introduce battery-electric trucks and equipment into the market at scale. The project, taking place in Southern California, is demonstrating a range of strategies to provide flexible and cost-effective charging options to commercial fleet operators.

While the CCS2 connector is not new to the global transportation market, it is new to North America. To date, the Combined Charging System CCS1 connector has been prevalent in North America, while CCS2 has been prevalent throughout the rest of the world—including Europe, Australia, South America, Africa, and Asia. The UL certification indicates that a nationally recognized testing laboratory has verified that CCS2 connectors meet North American safety standards, which enables fleet operators to purchase these fast charging systems directly from suppliers—including Volvo LIGHTS vendor, ABB—and not have to go through a complex field certification process after the chargers are installed. Additionally, it paves the way for utilities and other agencies to expand their list of approved charging options for electric vehicle fleet infrastructure programs.

“The CCS2 UL-certification will give fleets more charging options and greater flexibility for integrating battery-electric vehicles into their fleets in a very nascent marketplace,” said Keith Brandis, Vice President, Partnerships and Strategic Solutions at Volvo Group. “As part of the innovative Volvo LIGHTS project, our team was happy to collaborate with ABB and REMA to accelerate the UL certification of the CCS2 connector, which will be used to charge Volvo’s pilot VNR Electric trucks.”

The Combined Charging System joins AC and DC charging into a single port on the vehicle. The CCS1 and CCS2 connectors primarily differ with the type of AC charging. The CCS1 is designed for single-phase AC charging, while the CCS2 enables 3-phase AC charging via the J3068 NA standard.

“Some medium- and heavy-duty fleet operators will benefit from AC charging, as it can greatly simplify infrastructure installation by making use of an on-board converter located on many electric vehicles,” Brandis noted.



REMA EV Connections manufactures charging connector systems for vehicle manufacturers and infrastructure operators. "REMA is proud to be the first cable manufacturer in North America to receive UL-certification for the CCS2 vehicle connector," said Tim Rose, General Manager of REMA

USA. "This certification will continue to advance vehicle electrification in North America, paving the way for all of the electric vehicle supply equipment (EVSE) providers to expand their charger portfolio to meet emerging EV demands."

ABB has been tapped as the preferred charging hardware provider for the Volvo LIGHTS project and is installing a mix of high voltage-capable public and private electric vehicle chargers that utilize REMA's CCS2 connectors, including the Terra 54HV (50 kW) and the HVC 150 Depot Box (150 kW).

"Flexibility is the key to success in a dynamic industry like fleet electrification," said Bob Stojanovic, Director of EV Infrastructure for ABB North America. "As the first charger manufacturer to offer multi-standard EV chargers, ABB was ready to support this initiative with safe, reliable charging solutions. We look forward to being able to deliver UL-certified CCS2 charging systems to fleet operators in North America."

Volvo LIGHTS project partner, Southern California Edison (SCE), is the utility for the region where Volvo's pilot VNR Electric trucks will be demonstrated by local fleet operators over the next several months. Following the CCS2 UL certification, SCE was able to officially add the ABB CCS2 chargers being used in the Volvo LIGHTS project—the Terra 54 HV and HVC-150—to the list of approved charging equipment for its [Charge Ready Transport](#) EV charging infrastructure program for medium- and heavy-duty fleets.

The Volvo LIGHTS project was made possible by an award to South Coast AQMD of \$44.8 million from CARB as part of California Climate Investments (CCI). CCI is a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy and improving public health and the environment – particularly in disadvantaged communities.

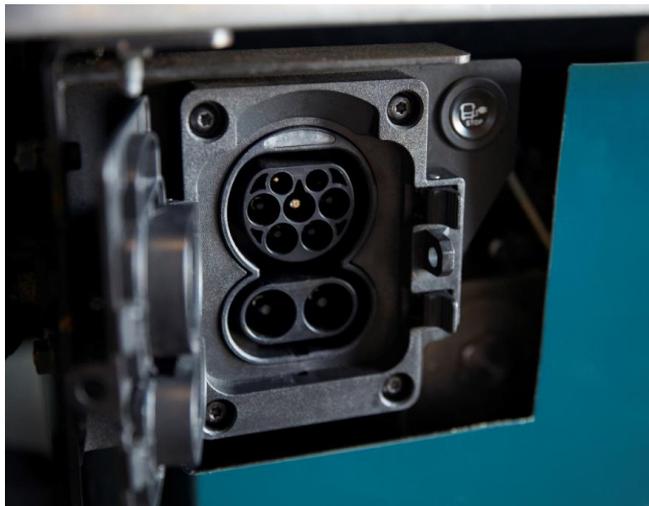
As a result, South Coast AQMD contributed \$4 million from the Clean Fuels Fund and awarded a \$45.6M contract to the Volvo Group to design and implement the project. Volvo and its partners have promised no less than \$45.7M matching contribution to increase the total project value to over \$91M for South Coast AQMD to administer.

To learn more about the Volvo LIGHTS project, visit [www.lightsproject.com](http://www.lightsproject.com).



Image Source: Charging Interface Initiative e. V. (CharIN e. V.)

**CAPTION:** The Combined Charging System (CCS) joins AC and DC charging into a single port on the vehicle. The CCS1 and CCS2 connectors primarily differ with the type of AC charging. The CCS1 is designed for single-phase AC charging, while the CCS2 enables 3-phase AC charging via the J3068 NA standard.





**CAPTION:** The CCS2 connector charging port location on the Volvo VNR Electric truck model.

**NOTE TO EDITORS:**

***High-resolution images associated with this press release and others are available at [www.volvomediabank.com](http://www.volvomediabank.com).***

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