EV Charging Infrastructure

April | 2020 BULLETIN



WHAT'S INSIDE!

- Companies are more focusing and investing on self plug-in charger or mobile EV charger
- High Voltage EV charging & Solar charging stations are gaining spotlight in the market
- FreeWire Technologies raises funding
- Impact of Covid-19 on Electric Vehicle charging infrastructure



Aiways granted patents for an autonomous charging robot



Blink introduces mobile charging station for roadside EV assistance



ABB supplies highvoltage chargers for Volvo



Envision Solar Launches Next Gen EV ARC Off-Grid Charging Station



FreeWire raises \$25 Million for ultra-fast electric car charging stations



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EV charging companies are investing more time and money on the concept of self plugin charger and mobile charging solution (robots). The charging solution is fitted with cameras, laser scanners and ultrasonic sensors which allows the robot to carry out the charging process completely autonomously

19 April 2020

Aiways granted patents for an autonomous charging robot





- The Chinese startup company Aiways has been granted seven patents across Europe and China for the development of its autonomous mobile charging robot named CARL
- The robot CARL is smart enough to find an electric car independently and plug-in to replenish energy without a driver present by using its own mobile energy storage of 30 or 60 kWh

The device is compatible with any electric vehicle and should be able to provide quick charge with a recognized charging standard. As per the company, it takes less than 50 minutes to charge an electric car up to 80 per cent

Company wants to make EV ownership as simple, easy and enjoyable as possible and provide a blueprint for how EVs can be charged in future

Read this story

06 April 2020

Blink introduces mobile charging station for roadside EV assistance





- Blink has developed a portable charging solution, this new mobile charger is a free-standing EV charging station that supports 40-amp, 240-volt AC charging, and provides up to 9.6kW of charge to the vehicle
- The charger is compatible with all electric vehicles, including all Tesla models

Blink will sell the charger in two versions: one networked for Blink subscribers and one without a network connection so roadside-assistance companies can add the charger to their list of services

The mobile charger doesn't require installation and can charge at up to one mile per minute







United States based startup company EDF Renewables has signed an agreement with Cubic Corporation to design, build, own and operate an integrated energy system consisting of solar, storage and electric vehicle charging stations at no upfront costs to Cubic

16 April 2020

ABB supplies high-voltage chargers for Volvo





- The Volvo LIGHTS project is a partnership among the Volvo Group, Volvo Trucks, and Greenlots along with several more industry leaders and stakeholders in transportation & electrical charging infrastructure
- The cost of total project is ~\$90 million, with a funding award of \$44.8 million with the investors

The project aims to demonstrate the ability of battery electric vehicles to optimize freight & warehouse efficiencies, reduce emissions and improve air quality.

ABB will be supplying chargers capable of charging batteries at up to 920 VDC for Volvo's Low Impact Green Heavy Transport Solutions (LIGHTS) project

16 April 2020

Envision Solar Launches Next Gen EV ARC Off-Grid Charging Station





- Envision Solar has launched a new generation of EV
 ARC solar-powered charging stations which is
 equipped with a 4.3 kW solar array
- The EV ARC[™] 2020 is an off-grid solar-powered EV charging infrastructure solution that requires no trenching, no construction, no permitting, no utility bill, and can be deployed in minutes

Envision's zero-touch deployment capability means that customers can receive this vital fueling and emergency power infrastructure without any human interaction.

The Company mission is to reduce costs while improving quality and continuing to combat climate change that has also driven core engineering innovations –**Desmond Wheatley** (CEO)









"Despite the economic uncertainty brought on by the Covid-19 pandemic, much of the company's business pipeline is with public-sector customers and expects more commercial vehicles to electrify because of government mandates requiring cleaner fuels"

> Vic Shao CEO, Amply Power

24 Aril 2020

FreeWire raises \$25 Million for Ultra-Fast **Electric Car Charging Stations**



- FreeWire Technologies has raised \$25 Million funding to accelerate development and rollout of its "infrastructure-light" EV charging technology
- The financing will support the commercialization of FreeWire's ultrafast electric vehicle charging technologies to launch a new battery-integrated charging product called 'Boost Charger'

This Series B funding is backed by its existing investor BP Ventures and attracted many new investors like ABB Technology Ventures, Energy Innovation Capital, and other financial & strategic investors, including Silicon Valley Bank

The company claims to support ultrafast EV charging without the need for new grid infrastructure investments, thereby saving up to 40% on installation costs

28 Aril 2020

AMPLY Power secures \$13.2 Million in Series A funding

SOROS FLEET CHARGING SIMPLIFIED Soros Fund Management

- AMPLY Power, the leader in charging solutions for fleets, has secured \$13.2 million in Series A funding from investors, including Soros Fund Management and Siemens Financial Services and existing seed-round investors such as Congruent Ventures, PeopleFund, and Obvious Ventures
- The investment will be used to scale up the Amply Power's charging-as-a-service model

The new investment will smooth the cash flow and guarantee future product developments

Amply Power's charging-as-a-service model offers fleet managers hardware-agnostic charging infrastructure support, and a turnkey operating system to reliably and cost-effectively charge commercial electric vehicles



TECHNOLOGY



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"The installation of new lantern charging points in London would be suspended as the work was not considered "essential". However, the existing charging points will continue to be maintained"

> Daniel Bentham Managing Director, Ubitricity

17 April 2020

Tucson Electric rolls out business rebates for electric-car chargers



 The electric utility company Tucson is providing an incentives of up to 85% of the cost of installing electric vehicle charging stations, under a new Tucson Electric Power Co. program due to lowering in the demand caused by Covid-19 pandemic

The TEP Smart EV Charging program offers rebates of \$4,500 per charger plug-in, or port, for so-called Level 2 chargers installed at workplaces, including retail shops, restaurants and other businesses

Similarly the program offers incentives of \$6,000 per port for Level 2 chargers installed by apartment and condominium complexes or by nonprofit organizations

1 April 2020

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Ubitricity and Pod Point postponed charging point



- Ubitricity and Pod Point postponed charging point installations in the UK that are currently not necessary due to major impact of Covid-19 pandemic in the country
- Both the production of charging points and the maintenance are facing a challenge due to the pandemic

Due to the Covid 19 pandemic, not only the production lines in most electric car plants at a standstill but also the charging infrastructure are facing a lower demand

The same applies to Pod Point, but in some "critical" cases the company announced exceptions such as home chargers ordered will continue to be installed at homes of peoplewho were classified as "key workers" in the coronavirus crisis











- **Hitachi Capital UK and Gridserve Sustainable Energy have** announced a partnership that aims to revolutionize the UK's approach to solar energy and create the infrastructure to accelerate the adoption of electric vehicles
- Gridserve will generate zero carbon solar energy to supply the **Electric Forecourt network. in** combination with large battery storage systems to meet the growing demand for sustainable energy

Solar Powered Supercharging Station

Japanese conglomerate Hitachi is scaling up the financial support for a solar-backed EV charging stations in the U.K. in partnership with Gridserve

The partnership will facilitate to develop the UK's most technically

advanced hybrid solar farms, in conjunction with a new network of solar

powered Electric Forecourts to provide ultra-fast, dependable charging for



- Hitachi Capital will invest around £5.6 Million (~\$7 Million) in the Gridserve's solar and charging projects
- The company is targeting to make 100 charging sites across the country by 2025

British company Gridserve attracted Hitachi Capital to its charging infrastructure vision

- Hitachi will use its motor industry expertise to work in partnership with GRIDSERVE which has great experience of technology in the renewable energy sector
- > Apart from the loan facility by Hitachi Capital, both the companies in conjunction with Hitachi Europe SIB, are working together on various green energy focused projects such as electrification of the UK bus network and the supply of electric vehicles with charging included at GRIDSERVE Electric Forecourts®
- Company is delighted to form a pioneering partnership with an innovative and market leading sustainable energy business, which will revolutionize the UK's motoring landscape and accelerate the transition to vehicle electrification - By Robert Gordon, CEO of Hitachi Capital (UK) PLC



all types of electric vehicles

- Both the companies will facilitate the project including hybrid solar farms in Gloucestershire and Lincolnshire
- Soon the project will be launched close to Braintree, Essex, with space for 24 vehicles to charge simultaneously in 20-30 minutes at a rate of up to 350 kW from its superchargers

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