

Disruptive technology that brings large scale, green carbon-free power to isolated areas without utility access. Game changing rapid EV charging and complete operational power to a mobile base camp and event.

OCTOBER 2021

Green Quality Power in Extreme Conditions.



Rivian R1T

🔋 135 kWh



**Volkswagen ID.4
AWD Pro**

🔋 80 kWh



**Jeep Wrangler
4xe PHEV**

🔋 17 kWh



KIA Sorento PHEV

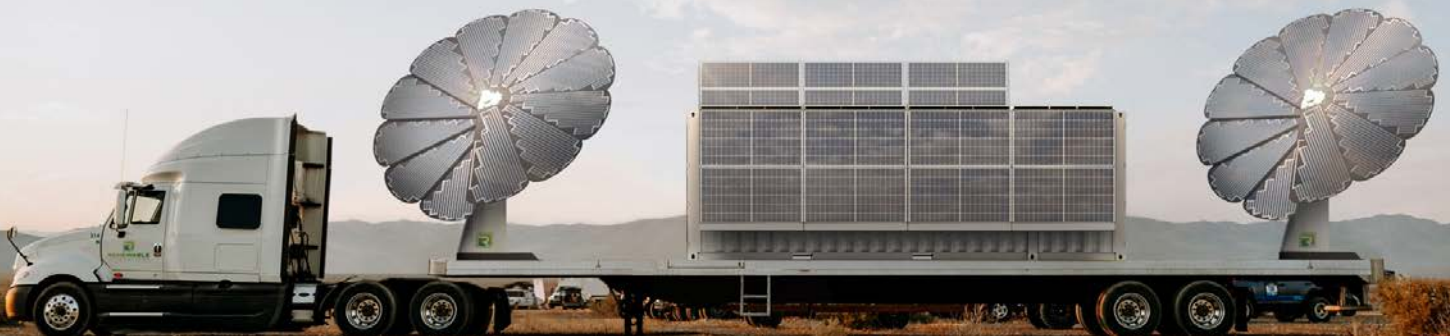
🔋 14 kWh

Delivering Clean Renewable Energy - Anytime, Anywhere.

Remarkable example of powering an off-road EV competition across 2,500 km of Nevada/California desert while also powering a small village as it moved daily across the desert.

💧 Clean 🌐 Scalable ⏻ Power

12 Days | 10,000+ kWh | Solar | Hydrogen | Battery | Fuel Cells



The Rebelle Rally 2021

The Rebelle Rally is the first women's off-road navigation rally in the United States. It takes hundreds of participants across the desert for 12 days.

Rebelle Rally added an electric designation and Renewable Innovations delivered the power for all participating auto manufacturer's EV and PHEVs.

The Challenge

- Rapid recharge of all EV vehicles multiple times daily
- Provide power for all the facilities at the base camp every day (200+ people)
- Perform in any type of weather and desert conditions
- All assets/systems need to be mobile as the operations move frequently in the desert
- All assets need to withstand harsh conditions including heat, cold, sand, and extreme winds
- Providing power in a small and reduced footprint (as determined by Bureau of Land Management) to limit disturbance/ destruction of environment

The Solutions

- Solar Mobile Energy Command trailer. 50 kW of adjustable solar panels storing energy in 220 kWh batteries. Customized inverters then deliver the needed power 24 X 7 to the camp.
- Hydrogen Mobile Energy Command Trailer (MEC-H2RC). Stored H2 feeds 8 fuel cells which in turn deliver 240 kW of DC power to manage close to 700 kWh of batteries which then power 0.5 MW of Inverter power. Dual 180 kW chargers are used to rapidly recharge vehicles with a 100 kW buffer for other operational needs.
- Rugged mobile design prepared for rapid deployment in 53 ft container

MEC-S : Mobile Energy Command - Solar



Supported by Nature

There are not many human activities that work so well with nature, but the use of EVs in the Rebelle Rally is one example of balance and harmony.

When the charging of the EVs and the power for the base camps are supported by the solar energy of the previous day, we were approaching an environmental equilibrium.

Open and Collect

The MEC-S, that was designed and manufactured by Renewable Innovations, includes the revolutionary SmartFlower solar panels that follow the sun from sunrise to sunset. This maximises the amount of solar energy stored in the large capacity on-board battery.

System benefits include: low to no signature, silent operation, no emitting fumes, compact footprint, primary or back-up power, scalable, and safety protection in strong winds.



Community Power

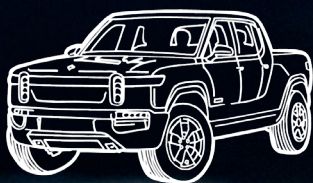
Across the 12 days of this rugged desert competition the support team and competitors all needed to be fed, showered, housed, etc.. This all takes electricity and there are not many power points in the desert rocks!

Renewable Innovations came to the rescue and provided all the power for this small roaming village while they made it possible for the rally racers to be out there doing it every day.

MEC-H2RC : Mobile Energy Command - Hydrogen

Unprecedented Performance

This is not your typical parking lot EV charging stand and there is no time to plug in the EV and wait all day (or all night) for it to be ready. The rally, the terrain and the vehicles make big demands on their environment and this includes the electrical power available.



Rapid Charging Every Time

The Renewable Innovations rapid EV charge system not only allowed the EV rally cars to be recharged in record time but the whole operation was designed to be to be powered by carbon free energy.

This combination of solar and green hydrogen makes these rally teams more at one with the environment as they compete.

This is a record breaking and history changing story about everyday EVs used in very extreme conditions and scenarios.

- 6 Different Base Camps
- Power for 200+ Competitors & Support Staff
- Solar, Battery & Hydrogen Power Solutions
- 10,000+ kWh Total Power
- EV Rapid Charge in 30 Minutes
- Every Day for 12 Days

EV Fast Charging



Rapid EV Charging

180 kW rapid EV chargers were available for all EV and PHEV competitors at any time.

These high power chargers made it possible to recharge in minutes rather than hours.

Carbon Free Power

One of the major considerations for the Rebelle Rally is the fuel required to drive for more than 8 days.

Renewable Innovations were not only able to provide plenty of energy to rapidly recharge all the EVs and run all the basecamp facilities, but they did it with no cost to the environment.

Hydrogen and Solar energy combined to make it carbon free all the way!

Key Players in our Ecosystem



12 Days | 10,000+ kWh | Solar | Hydrogen | Battery | Fuel Cells



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