Permanent Magnet Generator:
The “Permanent Magnet Generator” would make it possible to generate power from the alternator effectively without the need to charge the coils on the rotor. The traditional rotor coils would be replaced with a permanent magnetic rotor that would hypothetically behave the same as the “Optimized Generator”.

Optimized Alternator:
The “Optimized Alternator” is a solution that would utilize a renewable power source, such as a solar panel that can supply 12 volts, to either charge the rotor coils of the alternator or pre-charge the battery. The alternator could then become a reliable power source when rotating at approximately 1000 RPM.