FREEDOM MOTORS

Some identified use cases!

- Personal Air Vehicle (PAV) or an air taxi. The Rotapower engine is very light weight and incredibly efficient with very few critical moving parts. The weight to horsepower ratio for Rotapower engine is 1:3. (i.e., 1 pound of weight is attributed to 3 horsepower). Due to its fuel agnostic capability, one can use ethanol or methanol to make it environmentally friendly. Freedom Motors has developed a prototype and successfully flew it.
- Unmanned Aerial Vehicle (UAV) or drones. Just like a PAV, UAV is also a very attractive use case. Freedom Motors has developed a prototype and successfully flew it.
- Electric Vehicle (EV) range extender (RE). All EVs have one limitation and that is that they can only travel as much as the batteries allow them to do so. All EV manufacturers in this World are looking for a form factor smaller then micro-turbines or conventional engines. Rotapower engines have an incredibly small form factor and an ideal RE. The added advantage of Rotapower engine as a RE is its fuel agnostic characteristics and very few critical moving parts. Freedom Motors has developed a prototype and successfully operated the EV.
- Engine-Generator or Genset. Rotapower engines can be used in an engine generator due to their efficient performance and fuel agnostic characteristics. These gensets can use anywhere from a 27cc engine all the way to a 1300cc engine based on the requirements and usage. Freedom Motors has developed a prototype and it is operational.
- Scooter, Jet Skies, All Terrain Vehicle (ATV), Jet Boat. Rotapower engines were tested and successfully operated in these use cases.
- Biogas Generator. Freedom Motors have partnered with a Canadian company to develop a powerful but also lightweight biogas generator that can be portable. We intend to make it operational by spring of 2019.
- Microgrid use. With the advent of renewables many countries including the United States of America are looking for microgrids that can be used for remote loads and also for communities that like to share energy resources. The biggest issue of a solar microgrid is its dispatchability. Battery storage have become very popular to help these microgrids become dispatchable. But, battery storage is expensive, and its output heavily depends upon weather (i.e., hot and cold temperatures). Rotapower engines can replace these battery storages at a fraction of the cost and enhance the reliability of the microgrid.
- Just like a microgrid, the Rotapower engines can be used to make small, medium and large renewable energy farms dispatchable.
- Blackstart generator. Rotapower engines due to their light weight and efficient operating characteristics with any fuel makes them an ideal choice as a Blackstart generator.
- Rotapower engines can be used very efficiently and effectively in a low and high head pump storage projects.