Freedom Motors Potential Market Dominance

There are two multi-trillion-dollar world markets where the extraordinary power to weight ratio of the **Rotapower® rotary engine is uniquely viable.**

Air Taxi Market: Morgan Stanley predicts that the Advanced Air Mobility (AAM) market will total $1.5 trillion by 2040 and $9 trillion by 2050. The AAM market will be dominated by air taxis. Existing piston engines have a very low power to weight ratio and cannot be used as a primary power source in this application [Morgan Stanley Study].

Portable engine market. Over 165 million non-automotive engines are produced annually worldwide. Most original equipment manufacturers (OEM's) consider **power to weight ratio** and its **life** as the most important engine requirements.

The Air Taxi Challenge:

All air taxis utilize distributed propulsion patented by Dr Moller in 1971 (3614030). Distributed propulsion uses a number of smaller power plants in place of a single power plant to safely tolerate a power plant failure; It requires the power plant to have a high power to weight and power to volume ratio. During vertical takeoff and landing (VTOL) even a one passenger air taxi weighing 1000 pounds requires over 450 horsepower. Batteries and electric motors working together have the necessary high power to weight ratio needed for VTOL, but batteries possess a very low energy per pound. Consequently, a battery powered air taxi has a range of Approximately 50 miles [Review of Selected Advanced Air Mobility Aircraft]. Engines as a power and energy source present an entirely different problem. **Fuel has fifty times more energy per pound than a battery, however the lightest piston engine produces less than one horsepower per pound which eliminates its use during VTOL**.

The Opportunity: In 2024 over $ 4 billion was spent on the development of five to seven passenger air taxis and this is expected to double in 2025. Five to seven passenger air taxis must be FAA certified under Part 21. This can be expected to take many years and billions of dollars per model while this size air taxi is only useful in a ridesharing role on dedicated routes such as hotel to airport. At $7.5 to $ 10 million per air taxi, each trip will cost at least $5 per passenger mile. Ridesharing air taxis will not be a significant contributor to the multi-trillion dollar air taxi market [The Future of Advanced Air Mobility Aircraft]. **76.4% of automotive trips carry one person and 7.5% carry two persons while ridesharing carries a declining 9%. It is therefore reasonable to assume that one and two passenger autonomous air taxis will dominate this future market. The FAA provides a much shorter and less costly path to approval for one or two passenger air taxis. MI has completed a one passenger airframe Skycar® 100X [Specifications] and is in preparation for installing compound 5-stroke Rotapower® engines that are in development by FM.**

Experience the Power of Freedom!
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The Low Hanging Fruit: Although there is a significant emerging demand for the Air Taxis in a hybrid configuration, the majority of current world focus is on the unmanned versions of the AAM. The Morgan-Stanley study indicates that the adaptation of the AAM starts with its unmanned configurations for a variety of use cases such as;

1. Drone warfare
2. Surveillance and Intelligence gathering
3. Policing and population control (traffic controls)
4. Freight transportation
5. Firefighting during wildfires

The current requirement of engines based, and hybrid versions are being developed around the world and demand is growing significantly.

Other Use Cases: Worldwide production of engines totals over 250 million per year. For over 60% of this engine market, power to weight ratio is the top priority This includes **EV range extenders**, **portable power equipment, gensets, drones, motor scooters/motorcycles and recreational vehicles such as boats, snowmobiles, and all-terrain vehicles**.

Rotapower® engines are a perfect candidate for all the use cases described:

The Rotapower® engine has the following attributes.

- Power to weight ratio over three times higher than the lightest 4-stroke piston engine currently available in the market.
- Power to volume ratio that is nine times higher than the lightest 4-stroke piston engine currently available in the market.
- Freedom from vibration.
- Meets California ultra-low emission standard.
- Only two moving parts versus twenty-four in a 4-stroke piston engine.
- Carbon neutral when consuming numerous fuels like methanol and ethanol and carbon free with hydrogen and ammonia.
- With numerous patents issued and many others in process its technical expertise is well protected. Seals and wear surface life documented at over 20,000 hours.

FM has completed a beta production run of its 530cc and 150cc Rotapower® engines and demonstrated their performance in numerous applications including airplanes, jet boats, all-terrain vehicles, hybrid car, motor scooter, two and four passenger air taxis, gensets and various drones for US Army, Navy, and Airforce. FM has also licensed production of its 650cc Rotapower® engine for use in mud boats [The Toledo Blade Article].

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Customer Engagement Process: Following initial discussions, engine/product Interface development should take about 2 months. This may include CAD design, interface castings between engine and the application based on customer requirements. Freedom Motors has engaged with several customers to undertake this interface development.

Online Demand: In addition to demand from OEM customers, Freedom Motors receives numerous engine requests from online customers who want Rotapower® engines to develop their products around. Freedom Motors receives an average of 1,000-1,200 Rotapower® engine requests every month. The most popular engine is the 530cc displacement model and its multi-rotor derivatives.

Current Status: Freedom Motors has leased 17,000 square feet of production and support space while acquiring the most important equipment for manufacturing. It plans to manufacture 50-100 engines (530cc) per day in these facilities, but plans are underway to significantly increase manufacturing space over the next two years. Some customers have contracted Freedom Motors to integrate the Rotapower engine into their product in preparation for the purchase of engines.

Current Customer Commitments (next 4 years):

1. Alife Air – 3.4 million engines (manufactured by a licensee)
2. Alturdyne International – 50,000 engines
3. GreenEdgeARC – 5,000 engines (potential to increase to 40,000 engines)
4. Innotec Power – 5,000 engines
5. Pawnee Mobility -7,500 engines
6. Swedish Snowmobiles (Danes Mekanuiska AB) – 2,800 engines
7. Veolectra Inc. – 30,000 engines

Based on our very conservative manufacturing plan, Freedom Motor's goal is to manufacture 110,000 engines in USA, over the next 6 years. An initial investment of $12 million is projected to an EBITDA of $274 million.

The Alife Air demand will be addressed by a pending offshore manufacturing partner. The royalties from this manufacturing partner's sales to Alife Air would be $153 million.

Additionally, Freedom Motors has received a Letter of Support from a significantly connected Singapore based company, RadicalTruth Consulting that works with ASEAN and is tracking a demand of over 1 million engines annually (in Asia).

Company Valuation: With an investment of $12 million, the concluded range (DCF method) with a mid-point of $108 million (higher end of $130 million), by SVG Group.

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On July 22, 2025, Stout Risius Ross LLC provided a final report to determine the fair value of company assets and internal rate of return. The fair value is at $120 million with an implied internal rate of return (IRR) of 41.9% and a WACC (Weighted Average Cost of Capital) at 17.5% (rounded).

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