

## Energy Model

What do you think? Should you invest in this?

### Gravity powered aircraft flies with no fuel

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January 21, 2004 The concept of sustained flight without the use of fuel seems far reaching even by today's advanced aviation standards. Even more so when you consider that aircrafts should ideally be able to carry heavy loads of passengers and cargo. However one innovator's astounding new invention looks set to transform the air transport industry of the 21st Century.



Former nuclear designer, Robert D. Hunt of Hunt Aviation Corp has come up with an exciting and new "gravity powered aircraft technology" that accomplishes sustained fuel-less flight. Hunt has designed a new hybrid of aircraft: a "gravity-powered aircraft" which is a fixed wing, ridged skin airplane made of lightweight and modern composite materials. By October 2003, Hunt Aviation Corp had already begun the first phase of prototype construction, assembling a consortium of aviation manufacturers and suppliers that wish to support the revolutionary aircraft technology.

Interestingly, because this hybrid plane uses technology of gliding and aerostatic lift, the idea for sustained flight actually has more in common with the older technology of Leonardo Da Vinci's first primitive hang glider, than it does from the Wright Brother's engine powered airplane only a century ago.

The "Gravity-Plane", as Hunt Aviation likes to call it, uses gravity's dual properties - buoyancy which creates an upward motion in order to gain altitude, and gravity acceleration which creates a forward and downward gliding motion. The two motions combined form the heart of Hunt's new gravity powered technology, a technology that will most certainly make for a much healthier and cleaner environment. While everyone can understand the downward motion of the "pull of gravity", it is buoyancy that many people do not realise is a force of gravity. A force which when harnessed properly makes sustained flight possible.

Lighter-than-air (Aerostatic) lift may be explained by the principal of buoyancy, also known as the Archimedes Principal. Gravity exerts a greater pull on more dense materials than on less dense materials, which causes buoyancy. For example, a bubble rises in water and helium rises in air because they are less dense than the surrounding "lifting" fluid.

In the Hunt Aviation's "Gravity-Plane", buoyancy is created by gas bags filled with helium within two large rigid pontoon shaped lifting bodies. This buoyancy lifts the "Gravity-Plane" to high altitudes to create lighter-than-air lift.

Despite it being a better lifting gas than Helium, Hydrogen is generally not used as a lifting gas any more because it is explosive and combustible. Inert Helium, widely used in lighter-than-air airships, can now be used to attain altitudes of over 100,000 feet and may be built very large to carry heavy loads of passengers and cargo approaching 1,000 tons. By comparison, a U. S. military C-17 heavy lifter only carries near 70 tons.

Even better than Helium, is the idea to use a vacuum-lift system in the hybrid aircraft. During normal operation of the aircraft, lift is provided by the vacuum contained within rigid cells. As a precautionary measure, the new hybrid aircraft will use a Dual-Aerostatic-Lift system that will include the use of vacuum-lift and the use of a lifting gas. The lifting gas is expanded into collapsible gas bags, in the event of rupture of the vacuum-lift cell wall.

Obvious benefits of the technology are that the aircraft does not require fuel, which is aviation's main cost. This also makes the aircraft safer in terms of fuel burning or exploding. Furthermore, having no waste emissions or noise, the aircraft is extremely environmentally friendly. "Hunt's invention is the first practical use of gravity to provide a motive force by forming a continuous cycle out of two forces of gravity with the result being, for the first time ever, self-sustained fuel-less flight and this is a tremendous and historic accomplishment", stated Gene Cox, President of Hunt Aviation Corp.

The Wright Brothers are widely known as the pioneers of powered flight, by making a successful flight in the first engined airplane in 1903. However, one hundred years later in aviation's second century, it may well be that Robert D. Hunt is seen as modern aviation's next great pioneer of "unpowered" flight.

