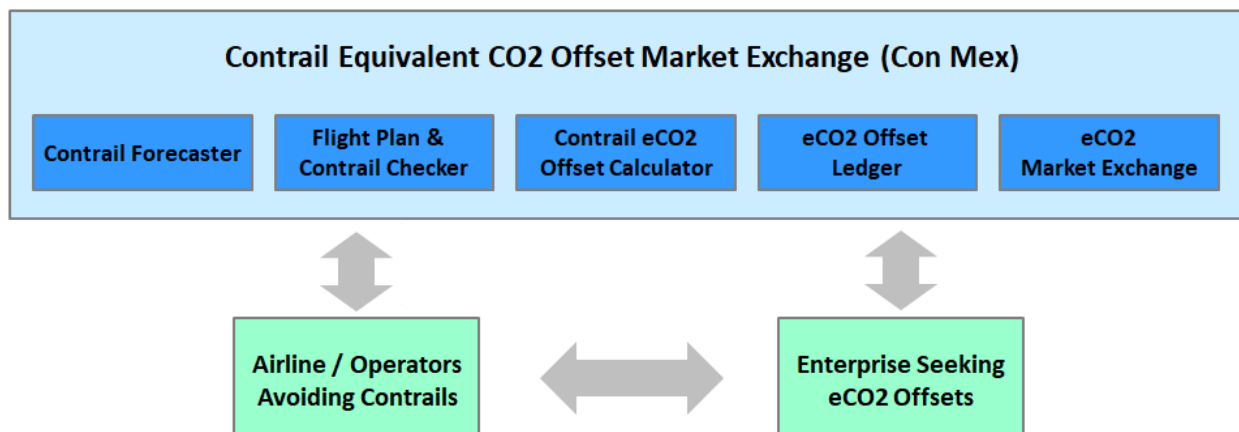


## **CO2-Equivalent Offset Market Exchange for Aircraft-Contrails**

This market exchange aims to reduce global heating by providing tax incentives for reducing the formation of aircraft contrails (also known as Aircraft Induced Clouds). The system may eliminate up to 67% of contrails which would result in about a 1.5% reduction of Earth’s anthropogenic global heating. This market exchange provides infrastructure for implementing the “Mason Aircraft Induced Clouds Abatement Program”. Airlines are provided with CO2-equivalent tax credits to make slight modifications to their cruise flight level so as to avoid the formation of aircraft contrails. The Market-Exchange enables airlines and other companies to sell and buy CO2-equivalent tax credits (which may come as CO2-offsets).

Contrails absorb and reflect 33% of outgoing thermal radiation back to the earth, causing human made global warming. According to the United Nations International Panel on Climate Change, contrails or Aircraft Induced Clouds, contribute 2% of Earth’s anthropogenic global heating. Contrails are generated by the soot and water vapor emissions of jet engines under specific atmospheric conditions appearing at certain altitudes. This happens only under specific temperature, relative humidity and pressure atmospheric conditions known as “Ice Super Saturated” conditions. It has been established that only about 15% of the flights generate contrails. For these flights, increasing an aircraft flight level by as little as 2000 feet can eliminate an estimated 67% of contrails. The additional fuel costs of the 2000 feet climb is negligible.

The CO2-Equivalent Offset Market Exchange allows airlines implementing contrails abatement procedures to receive and trade a substantial amount of CO2 equivalent offsets. Airlines and other enterprises can purchase and trade CO2-equivalent offsets to achieve net-zero goals. The economic incentives provided by the “Mason Aircraft Induced Clouds Abatement Program” implemented on this infrastructure will result in significant global heating reduction - about 1.5% of the total global heating.



**For More Information contact:**  
**George Mason University, Office of Technology Transfer**  
 703-993-8933    ott@gmu.edu    <https://ott.gmu.edu/>