Future of more energy efficient planes

Energy Efficient Planes Air transportation today is seen as a sunshine industry. This is mainly due to the favorable market demand for air transport, even after the 9/11 terrorist attack in the United States and the recent global financial recession. According to the ACI Global Traffic Forecast 2006-2025, there would be a worldwide doubling of current passenger numbers within the next 20 years and that passengers are predicted to grow by an average of 4% annually over the 20-year period, leading passenger volumes to top 9 billion passengers a year by 2025, up from 4. 2 billion in 2005. (Coogan 41)

The robust demand for commercial and air transport drives the current intensive research and development of energy efficient planes. As a matter of fact, the modern aircraft today has decreased in energy consumption significantly compared to old planes. According to Ngo and Natowtiz, with occupancy rates on the order of 70-80% the fuel consumption of recently built planes is on the order of 5L/100 km per passenger and that this means flying over a given distance as about the same in terms of energy consumption and CO2 emissions per passenger as driving the same distance with a car. (333)

Future Planes

It must be underscored that technological innovations in the history of mankind, especially in the area of transportations, has been less energy efficient than the technology it replaced. In this regard, the use of supersonic air transport could reverse the trend for air transport. The engine of these supersonic jets are expected to beat all other current aircrafts in the area of energy efficiency because its technological designs optimize such items as fuel/air mixture, engine temperature and airflow velocities. (Siuru 155) A

future supersonic transport could travel at speeds of Mach 2. 7, making a trip from Los Angeles to Tokyo in a little over three hours. (Siuru 155) Some market projections anticipate a fleet of some 300 to 1, 200 commercial supersonic jets in service in the next 10-30 years.

Another interesting area in the supersonic jet technology, which makes it the most energy efficient aircraft of the future, is the so-called oblique-wing airliner concept. It supposedly eliminates the conventional fuselage by having passengers ride inside the wing. Siuru pointed to the computations that show how an oblique-wing airliner could fly at Mach 1. 6, twice the speed of the Boeing 747, while consuming no more than a subsonic jumbo jet. Here, the level of fuel efficiency is achieved through the oblique wing’s very high lift-to-drag ratio and, subsequently, relatively low thrust requirements, even during takeoff and acceleration. (Siuru 156)

The drive for energy efficiency has much to do with profitability and adding value for air transport services. This is a little different in case of the research and development of future energy efficient cars. The current motivation for reducing future vehicular fuel consumptions is driven by the need to address the threat of constant energy crisis. Hence, unlike the aircrafts, which emphasizes innovation in design, car manufacturers focus on what kind of fuel to use. Hybrid cars are a case in point.

All in all, the future of air travel, especially the research and development of air planes focuses on energy efficiency. It achieves two major benefits for an airline company: first, it would cut cost and secondly, it is also good for the environment, a major concern today throughout the world.

Works Cited

Coogan, Matthew. Ground access to major airports by public transportation.

Transportation Research Board, 2008.

Ngo, Christian and Natowitz, Joseph. Our Energy Future: Resources, Alternatives and the Environment. New Jersey: John Wiley and Sons, 2009.

Siuru, William. Future Flight: The Next Generation of Aircraft Technology. McGraw-Hill Professional, 1993.