



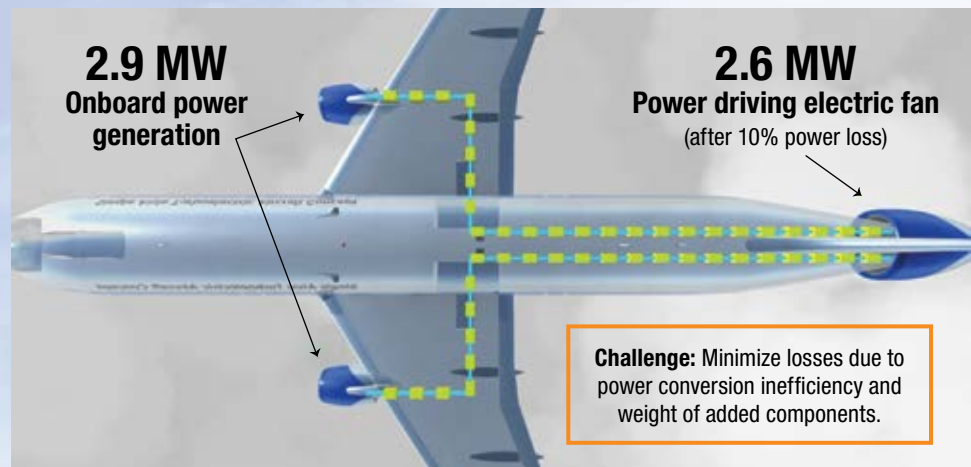

## ELECTRIFIED AIRCRAFT PROPULSION (EAP)

# The Power to Reduce Energy Usage

Electrical machines that convert fuel to electricity, drive fans, and power propulsors can open up new design possibilities for reducing fuel and energy usage in aviation.

## How much power does electrification require?

**COMPARE:**  
1 megawatt (MW)  
can power  
**760**  
U.S. households!\*



NASA's Single-Aisle Turboelectric Aircraft With Aft Boundary-Layer (STARC-ABL) 150-passenger plane with an electric motor driving a fan at the tail of the aircraft.

## In other words...



**2.9 MW is enough power to supply a small township, all in one airplane!**

\*Based on 2019 U.S. Energy Information Administration average annual electricity consumption for a residential customer.

## What are the benefits?

EAP research can improve fuel efficiency, reduce emissions, and decrease operational costs for passenger aircraft. NASA is developing technology, aircraft concepts, test aircraft, and ground test facilities to turn this idea from science fiction to reality.

To learn more, visit [www1.grc.nasa.gov/aeronautics/eap/](http://www1.grc.nasa.gov/aeronautics/eap/).