



DESIGNING THE RESPONSIBLE AIR CONNECTIVITY OF TOMORROW - ATR

News / Manufacturer



Regional aviation plays vital role in global economic and social connectivity. Turboprop aircraft ensure accessibility to remote areas, facilitating the development of territories and enabling crucial services like healthcare and education to reach even the most isolated regions. However, as the world grapples with the pressing challenge of climate change, there is a need to rethink how we travel. Regional aviation is more than just a means of transportation. It is a crucial pillar of local economies, offering direct and indirect jobs and promoting the development of related industries such as tourism and commerce. Studies have shown that a 10% increase in regional flights can lead to a 6% increase in local GDP, a 5% increase in tourism, and an 8% increase in foreign direct investment.

ATR has built almost 1,700 turboprops with 48 to 78 seats since its inception in 1981. Our aircraft are designed to be robust, capable of landing on all kinds of terrain, and cost-effective to operate for airlines, while providing comfort, safety, and cutting-edge technologies to passengers. Our aircraft operate in some of the most remote corners of the world, from the Bahamas to the Baltics, offering a lifeline to many remote communities.

ATR is fully committed to contributing to the decarbonisation of aviation, along with all industry players. In January 2024, the [Science-Based Targets initiative \(SBTi\)](#) validated our short-term emissions reduction targets, which include reducing absolute GHG emissions from operational processes and energy consumption by 50.4% by 2030 and reducing absolute GHG emissions generated by our aircraft fleet in service by 30% within the same timeframe, compared to 2018 levels.

To achieve these ambitious goals, the company is investing in a more energy-efficient infrastructure, renewable energy, optimised manufacturing processes, and sustainable practices throughout our value chain. ATR current decarbonisation initiatives are based on four pillars: continuous development of our aircraft family, sustainable aviation fuels, hybridisation with the [ATR EVO](#), and the aircraft life cycle.

With new engines, the [PW127XT](#), an [ATR 72-600](#) burns well over 3% less fuel than with the previous engine series and emits 45% less CO₂ per trip than a similar-size regional jet, saving 4,400 tonnes of CO₂ per aircraft per year. Moreover, ATRs produce virtually no contrails. With 69g of CO₂ emitted per seat per km, ATRs even offer a more responsible solution than single-occupancy cars. They also meet the most stringent standards for external noise.

There is a consensus within the aviation industry that SAF is one of the quickest ways to significantly reduce CO₂ emissions. A renewable energy source derived from organic matter, waste, or non-fossil raw materials, drop-in SAF can be seamlessly integrated into existing aircraft and infrastructure, generating about 80% fewer GHG emissions over its lifecycle compared to conventional fuel. ATR aircraft are certified to fly with 50% SAF. Back in June 2022 ATR completed the [first-ever flight](#) with 100% SAF in both engines of a commercial aircraft.

As the availability and production capacity of SAF remain limited today, ATR supports the development of a “book and claim” mechanism, which is an effective way to scale up SAF deployment and accelerate the sector’s decarbonisation. This system allows airlines to purchase SAF from competitive sources worldwide, regardless of geographical proximity. It decouples environmental credits from physical SAF, reducing the need for global transportation and complexity. Airlines receive credits for CO₂ emission reductions even if the physical fuel is used by other operators at local airports near the production site.

ATR EVO is mid-term solution to significantly reduce emissions without compromising accessibility and versatility, which are key assets of the ATR family. This hybrid electric aircraft concept combines a new high-performance thermal engine with an electric motor and batteries, aiming for a 20% reduction in CO₂ emissions compared to current aircraft and improved performance. The company aims an entry into service by 2030+.

Aircraft decarbonisation extends beyond flight phases, and must consider the entire aircraft life cycle, from design to dismantling. ATR is exploring new designs and materials to improve the recyclability of aircraft. Three ATR aircraft have been recycled by our partner TARMAC Aerosave in 2023, and four ATR aircraft will be dismantled this year. Currently, 85.5% of ATR parts are recyclable or reusable, and we are actively exploring new recycling processes to increase the number of recyclable parts in the future and therefore contribute to the circular economy.

ARTICLE LINK:

<https://50skyshades.com/index.php/news/manufacturer/designing-the-responsible-air-connectivity-of-tomorrow-atr>