

FAA REDAC Subcommittee on Environment and Energy

Findings and Recommendations
March 2021

E&E REDAC Subcommittee

- March 9 – 10, 2021 Third Virtual Meeting because of COVID-19
- Updates on major research areas of the AEE's R&D Portfolio
- Successes realized locally and on the international front, directly linked to research that was completed by AEE
- Overview: Despite the challenges associated with the pandemic, the AEE team produced outstanding updates/presentations. They are doing a very good job maintaining a balanced portfolio; FAA's global impact at ICAO CAEP; Public Private Partnerships; Sustainable Aviation Fuels; Noise threat;
 - Maintaining Global Leadership position at ICAO CAEP is vital given recent investment by other governments.
 - Public Private Partnership programs are very important to maintaining research efforts.
 - Noise still viewed as a threat; deployment of NextGen is required.
 - Collaboration between FAA, NASA, DOE and other federal agencies is critical for success.

E&E Findings & Recommendations (1)

- It is evident that the FAA AEE currently maintains a leadership role in ICAO CAEP and has been the driving force behind the push for data driven rule making. Maintaining the U.S. global leadership position at ICAO CAEP is not an option and is essential and advantageous to the U.S. aviation industry. Recent commitments by foreign governments to environmental research could challenge our position. Anything that jeopardizes the necessary research by AEE to solidify the FAA/U.S. global leadership position at ICAO CAEP is unacceptable.
- The Subcommittee recommends the continuing strong support of all research efforts/programs that will allow the FAA and the U.S. to maintain its current global leadership position at ICAO CAEP. It is our belief that if the FAA/U.S. does not maintain its leadership position at ICAO CAEP it will not be able to influence policy/rulemaking and this could have a significant negative impact on the U.S. aviation industry. The Subcommittee continues to endorse the robust funding of Public Private Partnerships like CLEEN, CAAFI and ASCENT that leverage scarce resources. The Subcommittee believes that the close collaboration between NASA and the FAA is invaluable.

E&E Findings & Recommendations (2)

- The leadership team at AEE has used their budgeted funds to conduct and coordinate the research necessary to produce informed, data driven policies, facilitate technological advances in the aviation industry and to produce models and data that have positioned the U.S. as both a State leader at ICAO CAEP and on the global aviation stage. The execution of this research portfolio has been accomplished by working collaboratively with private industry, major universities through the ASCENT Center of Excellence, other Federal Departments and some Foreign Governments. The benefits of these partnerships has clearly been proven and we have seen the maturation of technologies that have led to reductions in fuel burn/CO₂, NO_x emissions and noise reductions.
- The Subcommittee continues to endorse Public Private Partnerships like the CLEEN, CAAFI and ASCENT programs to leverage resources and recommends that FAA should continue to allocate robust funding for these programs. Now is the perfect time to expand our research efforts to even more substantially impact aviation environmental impacts.

E&E Findings and Recommendations (3)

- Significant gains have been realized in the Sustainable Aviation Fuel (SAF) Program (including efforts in the Commercial Aviation Alternative Fuels Initiative (CAAIFI), CLEEN and ASCENT). Sustainable Aviation fuels (SAFs) are a critical component of the industry's emissions reduction strategy and must be developed if industry is to get to their carbon neutral growth goals after 2020 and their emissions reduction goals in 2050. Despite the reduction in air traffic in 2020, 4.6M gallons of SAF was used by the aviation industry, a 190% increase over 2019. The continued collaboration with a number of agencies, including the DOE and Dept. of Ag will increase SAF production.
- The Subcommittee believes that the work on Sustainable Aviation Fuels is critical to the U.S. industry and the FAA should maintain a leadership role in the development of SAFs to ensure that the rules to be considered will be beneficial to the U.S. industry. The FAA must implement the necessary research programs required to defend its SAF position from global challenges. Since the maturation of the Alternative Jet Fuel program will be a major environmental benefit for the public, will create a new industry within the U.S. that benefits rural America, and will benefit the U.S. aviation industry, we strongly recommend that the FAA AEE continues to allocate funds for the continuation of research on SAFs.

E&E Findings and Recommendations (4)

- Despite significant improvements made by the FAA, Aviation noise continues to be one of the biggest environmental impacts related to the aviation community and requires ongoing and increased research to address the concerns of the citizens. There are a number of new research projects that have been added to address issues related to new entrants into the aviation system. There also have been significant upgrades and improvements made to the Aviation Environmental Design Tool (AEDT).
- The Subcommittee strongly supports the prioritization of the noise research. AEE needs a roadmap and programs that lead to the deployment of NextGen more quickly.