

FAA REDAC Subcommittee on Environment and Energy
Meeting Report and Recommendations
August 2013

The Environment and Energy Subcommittee of the FAA Research, Engineering and Development Advisory Committee (REDAC) met in Washington, D.C., on August 6-7, 2013. Following is the report on the outcome of this meeting:

Introduction – After a review of the Office of Environment and Energy (AEE) portfolio, the subcommittee concluded that the priorities of the Office remain basically the same, with an emphasis on support of ICAO Committee on Aviation Environmental Protection (CAEP) and NextGen activities. The only difference from recent priorities is a renewed emphasis on aircraft noise issues (see below) and an emerging concern with the effects of Particulate Matter. The subcommittee also recognized that the current budget situation has not improved and that specific program priorities must be continually assessed and adjusted to account for available funding. In this regard, the subcommittee again urged that any program cuts **not** be made across-the-board, but rather that the most funding be targeted to the most important projects (see April 2013 Recommendations).

As requested, the subcommittee received detailed briefings on the status of current noise initiatives (including presentations by subcommittee members representing the airport community), the work on Agency environmental goals and targets, reports from the Departments of Agriculture and Energy on the ongoing work on alternative fuels, and a report from NASA on recent activity.

The subcommittee requested that, at the March 2014 meeting, reports be given on the emerging importance of Particulate Matter research as well as a briefing on the Agency's specific plans and thought processes in determining how to prioritize the various projects in view of the current budget challenges. The subcommittee also requested that AEE attempt to quantify and brief the subcommittee on the environmental benefits of NextGen activities. All of these requested briefings are designed to assist the subcommittee in its ongoing attempts to make future recommendations with respect to necessary prioritization of projects.

Recommendations – After consideration of the material presented, the subcommittee submits the following recommendations to the Agency. We request that the first recommendation be included in the transmittal letter to the Administrator and that the other recommendations be included in the REDAC Report to the Agency

Recommendations to be Included in the Letter to the Administrator

- (1) **Finding:** Environmental research provides the data necessary for agency decision-making in a variety of different areas. This information enables the Agency to make policy decisions that are data-driven and have a sound

scientific base. Put somewhat differently, the environmental research currently underway is not “research for the sake of research”, but rather is being developed to aid the FAA in reaching subsequent policy decisions. The subcommittee is concerned that, in certain instances (e.g., helicopter noise), the Agency has strayed from the use of data developed by research to inform policy decisions.

Recommendation: The Agency should commit to using the information developed by environmental research activities as a basis for the development of agency policy and decision-making. Such a commitment is essential to ensure the integrity of agency decisions.

Recommendations to be Included in the REDAC Report

(2) Finding: The Noise Research Roadmap presented to the subcommittee at the August meeting represents an impressive first step in expanding the Agency’s knowledge of the current state of aviation noise impacts on the general public. The subcommittee commends the FAA for this initiative and appreciates the opportunity for input.

Recommendation: The maturation of the Noise Research Roadmap should continue as expeditiously as possible and sufficient funding should be made available to ensure that this program is not unreasonably delayed. Results of the findings made in the course of this research should be used to update and implement Agency policy in the noise area.

(3) Finding: Section 912 of the FAA Modernization and Reform Act of 2012 required an independent assessment of the work of the Office of Environment and Energy. This Report was sent to Congress in July and was supportive of the work that is being done. The only area of minor concern involves the transition of research to implementable policies and products. The independent panel found that “. . .some additional attention could be paid to the specifics of research transitions and some ideas can be borrowed from best practices at other agencies.” The subcommittee agrees with this finding.

Recommendation: The subcommittee recommends that the Agency review the research transition programs of other agencies to determine whether there are ways to further expedite the transition from research to implementation. A good starting point would be a study of the existing NASA-FAA Research Transition Team concept.

(4) Finding: An area of AEE activity that demands continued prioritization is the ongoing CLEEN/Alternative Fuels program. These activities have shown great promise in accelerating the transition of research into products that can be

incorporated into aircraft and engine design and in developing fuels that can be used as a substitute for traditional petroleum-based jet fuels. Congress has recognized the importance of these projects by continually providing funds in excess of those requested in the President's Budget.

Recommendation: The subcommittee strongly recommends that funding necessary to support the CLEEN/Alternative Fuels programs continue. Indeed, the subcommittee continues to endorse the AEE above-target funding request for the continuation of these programs at the highest possible level.

- (5) Finding: United States leadership in the ICAO CAEP process continues to be an important priority.

Recommendation: Sufficient funding should be available to AEE to permit continued U.S. leadership in the ICAO arena. For example, the current ICAO initiative to develop a worldwide CO₂ standard is moving forward, with specific deadlines that must be met. It is important that the United States remain engaged in a leadership position to focus the CAEP work on the most important efforts and to ensure that resources are not strained by less productive projects. In addition, it is important that other CAEP members provide resources for the various projects so that the United States does not carry the entire burden.

- (6) Finding: The cooperation between the FAA and other domestic agencies in the area of environmental research has been effective and has permitted the leveraging of continually diminishing resources. The subcommittee was extremely impressed by the presentations of the Departments of Energy and Agriculture in the area of alternative fuels research. These presentations clearly demonstrated that interagency communication and cooperation can go a long way in overcoming resource shortages.

Recommendation: In order to ensure the most efficient use of resources in all areas of environment and energy research, the subcommittee recommends that existing partnerships between AEE and other agencies in the United States continue. In addition to ongoing work with a variety of agencies in the alternative fuels area, and with NASA on a variety of issues, the subcommittee recommends that partners be identified to continue research efforts with respect to particulate matter measurements and modeling non-CO₂ atmospheric pollution.

- (7) Finding: The briefing given on AEE Goals and Targets revealed that some existing targets, and the metrics used to measure success in reaching these goals, may be unrealistic and should be revisited.

Recommendation: The subcommittee recommends that the Agency undertake a comprehensive review of its environmental goals, targets and metrics to determine whether existing goals and measurements are realistic or need to be revised. One specific target and metric that the subcommittee feels needs revision is the fuel efficiency goal and metric.

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