

Subcommittee on Environment and Energy | MINUTES

Meeting date & time *August 6-7, 2013*

Meeting location *Airlines for America, Washington D.C.*

Purpose	E&E Subcommittee Guidance & Review for FY 2015 R&D Budget
Facilitator	Jim Hileman, DFO
Note taker	Jim Hileman
Timekeeper	Jim Hileman

Minutes from Day 1 – August 6, 2013

Presentation *What's New in AEE* | **Presenter** *Lourdes Maurice*

Discussion: FAA has a new Deputy Administrator who has the role of overseeing NextGen. The FAA Administrator is in the process of setting a new 5 year strategic plan for the agency. Jim Skalecky is now the Acting Program Manager for CLEEN.

Noise, while always an area of concern, is growing in importance. Helicopter noise has become a topic of considerable activity, especially in NYC and LA. Of note, voluntary helicopter routing for noise mitigation on the North Shore of Long Island has recently been changed to being mandatory even though the noise exposure is below 65 dB DNL. There has been continued interest in noise in national parks. Aircraft noise in Southern California is also a topic of interest.

Action items	Person responsible	Deadline
Send CLEEN Program Manager opening to REDAC E&E Subcommittee	Gonca Birkan	today

Presentation *COE, Section 912, ACRP - Updates* | **Presenter** *Jim Hileman*

Discussion – Jim presented key updates for the office.

He gave the latest schedule for the new Center of Excellence (COE) for Alternative Jet Fuel & Environment and he noted that the review package for new COE is with the Administrator and a decision is forthcoming.

The report that was required by Section 912 of FAA Reauthorization to summarize the environment and energy (E&E) activities went to Congress on July 17. The report was largely favorable to the E&E efforts of FAA.

There were over \$5M of new environment ACRP projects and over \$2M of new projects dedicated to NextGen.

Action items	Person responsible	Deadline
Share the Section 912 report with the REDAC E&E Subcommittee	Jim Hileman	today

Presentation ICAO Update | Presenter Lourdes Maurice

Discussion The work on a CO2 standard in CAEP is progressing well. FAA is using the data and tools we are developing to inform this decision. Efforts on all elements of a basket of measures, including exploring a global market based measures are ongoing as we head into the ICAO Assembly. We expect that the Environment and Energy R&D program will support any efforts to develop a Global Market Based Measure (GMBM).

Presentation Previous REDAC Recommendations / Actions | Presenter Jim Hileman

Discussion - Jim presented the Spring 2013 Findings / Recommendations and what FAA has been doing in regards to these. All of the recommendations were left open. He also walked through the Action Items from the previous meetings. Those that are still open are listed below here.

Action items (from Previous Meetings)	Person responsible	Deadline
Examine membership list and remove those who have not been in attendance over an extended period of time	Jim Hileman	March 2014
Update the CLEEN one page fact sheet to include latest successes and industry implementation (if possible). Determine additional means of conducting outreach on CLEEN and its successes	Jim Hileman	March 2014
For future meetings, develop budget pie charts that give skeleton for coming years in addition to historical break-outs	Jim Hileman	March 2014

Presentation Budget Update | Presenter Mike Gallivan

Discussion - Mike presented the FY14 president's request, the FY15 process, and the impacts of the continuing resolution and sequestration. The big issue is that the House and Senate have a \$91B difference in their base levels and if they cannot agree on the base levels, then they are unlikely to agree on appropriations. Debt ceiling and sequestration are still issues. There is considerable uncertainty on the budget. We could be operating under a continuing resolution after October 1.

Presentation AEE High Level Research Overview | Presenter Jim Hileman

Discussion – Jim presented highlights from the Section 912 Review that presented the vision, strategy and objectives that guide the Environment and Energy research program. The briefing

included updates on efforts relating to aircraft technology maturation and alternative fuels development in CLEEN and CAAFI. This was a request from the last REDAC E&E Subcommittee meeting.

Presentation Noise Survey | **Presenter** *Becky Cointin*

Discussion - Becky provided a research update on the national airport noise survey. She worked through the airport selection process and let the subcommittee know that FICAN has approved the method. There was some discussion about whether or not the FAA should conduct a second survey to understand the impacts of aircraft noise on communities near airports with less than 100 jet operations.

Presentation Noise Research Roadmap | **Presenter** *Rebecca Cointin*

Discussion - Becky presented the draft FAA Noise Research Roadmap. The Subcommittee agreed in principal with the key aspects of the roadmap and they noted that this is a complex endeavor. They appreciated seeing an early version. They thought that the Roadmap is a framing that is very much needed for the future. The subcommittee provided positive overall feedback on the roadmap and provided a number of useful comments (captured below). These comments will be considered as FAA updates the Noise Research Roadmap. The Subcommittee expressed concern that the Roadmap was too large for the relatively small number of staff in the Noise Division and historical noise research funding levels. The Subcommittee recommended that AEE present the Roadmap to FICAN to get their feedback.

- Here are specific comments on the roadmap:
 - o Add overall noise-related goals from E&E R&D overview briefing and the key information that is going to be delivered by each roadmap.
 - o Add key decision points to the individual bars of the noise roadmap
 - o Add budget to the items within the roadmap to understand if funds are available.
 - o Shorten literature searches to be reasonable duration
 - o Add tools aspect of supersonic roadmap
 - o Show how roadmap aligns with DOD, NASA, etc. efforts such that all agencies are recognized on it.
 - o As possible, show how information is being passed from various steps.
 - o Ensure that the aircraft noise impacts are placed in context of other noise sources.
 - o Look at VAATE roadmaps as they do a great job of creating roadmaps like this and adding cost profiles.
 - o Ensure that key transition points are captured

Action items	Person responsible	Deadline
Revise Roadmap based on input from meeting.	Rebecca C.	Sept 2014

Presentation Stakeholder Discussion on Noise Issues | Presenter REDAC Members

Discussion – Katherine Preston presented the key noise issues that were identified by the Noise Committee of ACI-NA. This committee consists of airport personnel and consultants.

Sandy Lancaster presented on a proposed development to build houses on the airport perimeter of DFW and where the complaints are being generated near DFW.

The key issues and other items from these briefings are largely aligned with those identified in the Noise Research Roadmap given by Rebecca Cointin.

Presentation ACCRI Program | Presenter Mohan Gupta

Discussion – Mohan presented a preliminary summary from the ACCRI research program that is in the process of concluding its efforts. The group had a long discussion thereafter that is summarized below.

In the long-run, there is going to be more pressure on aviation to respond to climate change and the international community continues to have an interest in aviation and climate. In the past, we had a NASA program that looked at this subject and this may be more appropriate place for this research in the future. Efforts to understand the climate impacts of alternative jet fuels are needed - they could provide additional benefit from alternative fuel use. Research to examine air quality is important and the science for considering en-route emissions impacts on surface air quality is also important.

The amount spent on ACCRI led to a gain in knowledge and this is a good thing. However, FAA needs to do further work to get to an actionable place on how to mitigate non-CO2 impacts. For example, we have a NOx standard, but we do not have the science to know what actions could be taken on contrails.

As AEE does not have the resources to do a full-blown ACCRI-II, FAA should prioritize climate research based on what is actionable and have a directed, actionable research program. For example, the FAA could focus on areas such as alternative fuels, contrail-cirrus clouds, and particular matter (with an emphasis on black carbon)

It would be good to have a renewed collaboration between NASA (science mission directorate), other organizations and FAA. The FAA could also collaborate with Canada and Europe. Even without additional resources or partners, FAA should continue to maintain cognizance of other related work (foreign and domestic)

Presentation Goals and Targets Analysis - an Update | Presenter Chris Dorbian

Discussion – Chris presented progress in estimating future CO2 emissions, energy efficiency, and noise and how these compare to FAA aspirational goals. There was discussion about how the FAA sets its goals and whether or not FAA needs a goal for fuel efficiency when there is a goal for CO2 emissions. To the degree possible, the Subcommittee thought it good to establish goals and metrics that can measure progress made by various investments. The subcommittee noted that assumptions play a key role in this analysis and they asked FAA to make sure these are as clear and consistent as possible. The subcommittee asked the FAA to evaluate the viability of the E&E goals and they would like to continue discussing E&E goals with FAA.

Action items	Person responsible	Deadline
Capture optimistic, realistic, and pessimistic cases within the goals analysis as opposed to a single scenario for the future.	Chris Dorbian	March 2014

Presentation *USDA - Alt Jet Fuels Efforts* | **Presenter** *Harry Baumes*

Discussion – Harry presented on USDA efforts on alternative jet fuels. He discussed NIFA and the Washington State University CAP that is looking at alternative jet fuels. He discussed USDA programs that provide loans for biorefineries, including those making jet fuel, and investments on biomass production. He also presented USDA partnerships including the Defense Production Act, joint USDA / DOE initiatives, interagency groups, and public private partnerships.

Presentation *DoE Update* | **Presenter** *Zia Haq*

Discussion – Zia presented DOE efforts on alternative jet fuels. This includes their loan guarantee program that is supporting alternative jet fuel production. He also discussed the Defense Production Act. He also presented on the Innovative Pilot Awards that can make jet fuel. He also discussed the Aviation Biofuels Techno-Economic Analysis Workshop and the HEFA cost analysis that was conducted by PARTNER.

Presentation *NASA Update* | **Presenter** *John Cavolowsky*

Discussion John presented on the NASA Air Space Program (ASP) that is considering gate-to-gate concepts and technology. He presented the five technical challenges to improve operations on surface movement, departure, en-route, and arrivals. NASA works with FAA to transfer technology via Research Transfer Teams (RTT) - this includes technology risk reduction mechanisms. NASA are developing strategies that respond to the drivers that are affecting the future of the aviation industry (i.e., need for increased capacity, environment, and increased automation).

Discussion *Breakout Sessions and Recommendation Development* | **Lead** *Steve Alterman*

Discussion – Steve led a discussion that continued the process of developing the Subcommittee’s recommendations. The Subcommittee then broke into two separate groups that discussed prioritization of E&E research and budget, research outcome transition, and specific research topics. The Subcommittee also encouraged FAA to ensure that the research leads to decisions that are data based. This discussion led to the final Subcommittee recommendations. Highlights from the discussion are presented below

In terms of research prioritization, several items were discussed. These are listed in no particular order. The CAEP process (e.g., CO2 standard) is still a high priority and FAA should ensure that funding for supporting elements are also available. CLEEN technology development and alternative fuels maturation are a priority. The Subcommittee continues to support CLEEN and press for seamless continuation of the program. Vehicle technologies, operations, and alternative

fuels are needed to achieve E&E goals. Noise, while always a driver, is growing in importance. Particular matter and its impact on air quality and climate change is also a growing concern

In terms of budget, the discussion covered the following topics. Sequestration continues to be a driving factor. The Subcommittee continues to recommend that FAA prioritize items as opposed to using across the board cuts to reduce its budget. The Subcommittee was happy to see the FAA working with others to get E&E research done and the work of FAA with DoE and USDA on alternative jet fuel production is a good example. Instead of asking Subcommittee for items to cut, they would prefer to see de-scope and growth plans from the FAA. The Subcommittee could then provide more specific comments on thought process and decision making. Where possible, be specific on impacts of cuts. For future meetings, it would be helpful to see an explanation for significant funding shifts.

In terms of research transition, the Subcommittee wanted FAA to consider if all of its E&E research is “actionable” in terms of what it will deliver that could be acted on and used in some way. The Subcommittee noted that FAA is collaborating well with other agencies (alt fuels being a good example). Briefings from DOE and USDA were welcomed additions to the meeting. The Subcommittee acknowledged that CLEEN is very good in terms of its transition to industry and that these technologies are being used by the community. The research transition team concept of NASA Airspace is also a good example for transition. It may not be a model for everything, but it does emphasize importance of a good transition process.

Action items	Person responsible	Deadline
Provide briefing on PM standard efforts and how FAA efforts fit into bigger picture of other similar research efforts	Jim Hileman	March 2014
Consider adding a subcommittee member that provides FAA ATO/ANG perspective (NAS-Ops REDAC member perhaps) as well as NATCA.	Jim Hileman	October 2014

Subcommittee Discussion of Open Recommendations (Discuss status of FAA response and decide to close or remain open)

All recommendations were left open and will be discussed at the March meeting.

Next Meeting – Date/Location/Agenda Items to be Included

March 25-26 in Washington DC at Airlines 4 America facility

Adjourned at 3:30 pm on Wednesday, August 7, 2013

Attendance and meeting agenda are captured in the attached documents

Attendance

Members:

Steve Alterman (Chair)	Nancy Young	Jay Dryer
Leslie Riegle	Michael Foust	Charles Etter
Don Wuebbles	Claudio Ternieden	Sue Presti
Ed Smith	Darcy Zarubiak	Juan Alonso
Mahendra Joshi	Dimitri Marvis	Ian Redhead
Sandy Lancaster	Katherine Preston	

Other Attendees:

James Hileman, FAA-DFO	Rebecca Cointin, FAA	Ralph Iovinelli, FAA
Julie Marks, FAA	Gregg Fleming, Volpe	Kenda Kostell ACI-NA
Lourdes Maurice, FAA	Gloria Dunderman, FAA	Mohan Gupta, FAA
Harry Baumes, USDA	Jim Skalecky, FAA	Chris Dorbian, FAA
Zia Haq, DOE		

Telcon:

Mike Samulski, EPA	Bryan Manning, EPA
--------------------	--------------------

**FAA REDAC Subcommittee on Environment & Energy
 Summer 2013 Meeting Agenda
 Airlines for America - 1301 Pennsylvania Avenue NW, Suite 1100 - Washington DC
 Dial-in Information (no webex will be available)**

Telephone number: 1-888-850-4523

Passcode: 566565#

Tuesday, August 6, 2013

Time	Duration Title	Presenter
8:00 0:30	Check-In / Continental Breakfast	
8:30 0:05	Welcome	N. Young
8:35 0:10	Chair opening statement & Introductions	S. Alterman
8:45 0:20	What's new in FAA & AEE	L. Maurice
9:05 0:20	ICAO Update	L. Maurice
9:25 0:20	COE, Section 912, ACRP - Updates	J. Hileman
9:45 0:15	Previous REDAC Recommendations / Actions	J. Hileman
10:00 0:15	Break	
10:15 0:45	Budget Update	M. Gallivan
11:00 0:45	AEE High Level Research Overview	J. Hileman
11:45 0:15	Discussion	S. Alterman
12:00 1:00	Lunch	
13:00 0:30	Noise Survey Update	R. Cointin
13:30 1:30	Noise Research Roadmap	R. Cointin
15:00 0:15	Break	
15:15 0:30	Stakeholder Discussion on Noise Issues (led by K. Preston, I. Redhead, S. Lancaster) -	
15:45 0:15	Discussion	S. Alterman
16:00 0:30	ACCRI Program	M. Gupta
16:30 0:30	Goals and Targets Analysis - an Update	C. Dorbian
17:00 0:15	Discussion	S. Alterman
17:15	End of Day-1	

Wednesday, August 7, 2013

8:00 0:30	Continental Breakfast	
8:30 0:15	USDA Alt Jet Fuels Efforts	H. Baumes
8:45 0:15	DOE Alt Jet Fuels Efforts Z. Haq	
9:00:15	Pose environmental goals/R&D priorities Questions under changing budget situation	J. Hileman
9:15 0:45	Priorities small group discussion	All
10:00 0:15	Break	
10:15 1:15	Continued....Priorities small group discussion	All
11:30 0:30	NASA Update (including ATM efforts)	J. Cavolowsky
12:00 1:00	Lunch	
13:00 1:00	Continued....Priorities small group discussion	All
14:00 1:00	Synthesize priorities from small groups	S. Alterman
15:00 0:30	Summarize Action Items	S. Alterman
15:30	End of Day-2	