Federal Aviation Administration

REDAC Aircraft Safety Subcommittee

R&D Budget Status

Mike Gallivan

August 19, 2019

FAA FY 19 Budget

- Full Appropriation signed, Feb 15, 2019

Appropriation	FY 19 Request	FY 19 House Mark	Difference	FY 19 Senate Mark	Difference	FY 19 Conference	Difference
Operations	$ 9,931,312,000	$ 10,410,758,000	$ 479,446,000	$ 10,410,758,000	$ 479,446,000	$ 10,410,758,000	$ 479,446,000
Facilities & Equipment	$ 2,766,572,000	$ 3,250,000,000	$ 483,428,000	$ 3,000,000,000	$ 233,428,000	$ 3,000,000,000	$ 233,428,000
Research Engineering & Development	$ 74,406,000	$ 180,000,000	$ 105,594,000	$ 191,000,000	$ 116,594,000	$ 191,100,000	$ 116,694,000
Grants-in-aid for Airports	$ 3,350,000,000	$ 3,850,000,000	$ 500,000,000	$ 4,100,000,000	$ 750,000,000	$ 3,850,000,000	$ 500,000,000
Total	$ 16,122,290,000	$ 17,690,758,000	$ 1,568,468,000	$ 17,701,758,000	$ 1,579,468,000	$ 17,451,858,000	$ 1,329,568,000

R,E&D FY 2020 Budget

- **Budget Deal Completed and Debt Ceiling suspended for two years**
- **For FY 2020 total funding level $1.370 trillion**
  - Defense Spending Total $738 B
  - Nondefense Spending Total $632 B
- **Does this mean appropriation bills are passed?**
  - No
- **Can we still have a shutdown**
  - Yes (but probably not)

R,E&D FY 2020 Budget

- **FY 20 R,E&D Request $120M**
  - House funded R,E&D at $191M
    - Adjustments due to Budget Deal will have to made in Conference Committee
      - House non defense total will have to be reducded by $15B
  - Senate Appropriation Committee R,E&D funded at TBD

FAA FY 20 Budget

Appropriation	FY 20 Request	FY 20 House Mark	Difference	FY 20 Senate Mark	Difference
Operations	$ 10,340,000,000	$ 10,677,758,000	$ 337,758,000	$ -	$ (10,340,000,000)
Facilities & Equipment	$ 3,295,000,000	$ 3,002,000,000	$ (293,000,000)	$ -	$ (3,295,000,000)
Research Engineering & Development	$ 120,000,000	$ 191,100,000	$ 71,100,000	$ -	$ (120,000,000)
Grants-in-aid for Airports	$ 3,350,000,000	$ 3,850,000,000	$ 500,000,000	$ -	$ (3,350,000,000)
Total	$ 17,105,000,000	$ 17,720,858,000	$ 615,858,000	$ -	$ (17,105,000,000)

FY 20 R,E&D Request

Program	FY 2018 Enacted ($000)	FY 2019 Enacted ($000)	FY 2020 Request ($000)	FY 20 House Mark ($000)	FY 20 Request/FY20 House +/-	FY 2020 Senate Mark ($000)	FY 20 Request/FY20 Senate +/-
Fire Research and Safety	7,200	7,200	7,562	7,562	-		(7,562)
Propulsion and Fuel Systems	2,100	2,100	3,708	-	(3,708)		(3,708)
Advanced Materials/Structural Safety	10,500	14,720	1,799	15,000	13,201		(1,799)
Aircraft Icing /Digital System Safety	9,253	9,253	7,450	9,300	1,850		(7,450)
Continued Airworthiness	11,269	11,269	10,006	11,300	1,294		(10,006)
Aircraft Catastrophic Failure Prevention Research	1,570	1,570	-	1,565	1,565		-
Flightdeck/Maintenance/System Integration Human Factors	7,205	7,305	5,973	7,300	1,327		(5,973)
System Safety Management	5,600	5,500	4,309	5,500	1,191		(4,309)
Air Traffic Control/Technical Operations Human Factors	5,800	5,800	5,474	5,474	-		(5,474)
Aeromedical Research	9,080	9,080	9,575	-	(9,575)		(9,575)
Weather Program	15,476	15,476	6,391	-	(6,391)		(6,391)
Unmanned Aircraft Systems Research	24,035	24,035	7,546	25,000	17,454		(7,546)
Alternative Fuels for General Aviation	7,000	1,900	-	1,900	1,900		-
NextGen - Wake Turbulence	6,831	6,831	3,697	-	(3,697)		(3,697)
NextGen - Air Ground Integration Human Factors	6,757	6,757	1,717	5,800	4,083		(1,717)
NextGen - Weather Technology in the Cockpit	3,644	3,644	1,963	-	(1,963)		(1,963)
NextGen - Information Security	1,000	1,232	2,675	2,675	-		(2,675)
NextGen - Flight Deck Data Exchange	-	1,035	1,005	-	(1,005)		(1,005)
Commercial Space	1,872	2,500	5,971	5,971	-		(5,971)
Other Safety				31,227	31,227		
Environment and Energy	18,013	18,013	15,103	18,500	3,397		(15,103)
NextGen - Environmental Research - Aircraft Technologies, Fuels, and Metrics	29,174	29,174	12,500	29,600	17,100		(12,500)
System Planning and Resource Management	2,135	2,135	2,717	2,426	(291)		(2,717)
William J. Hughes Technical Center Laboratory Facility	3,412	4,571	2,859	5,000	2,141		(2,859)
TOTAL	188,926	191,100	120,000	191,100	71,100	-	(120,000)

FY 2020 House Language

• *Counter-unmanned aircraft systems*.—In accordance with section 383 of the FAA Reauthorization Act (P.L. 115-254), the Committee supports the coordination among the FAA, Departments of Defense and Homeland Security, and other relevant Federal agencies to ensure that the detection and mitigation of potential risks posed by errant or hostile unmanned aircraft does not adversely impact or interfere with safe airport operations, navigation, air traffic services, or the safe and efficient operation of the national airspace system. The Committee directs the FAA to provide regular updates to the House and Senate Committees on Appropriations on their activities related to counter unmanned aircraft research, capabilities, and coordination.

• *Crew complements*.—The presence of two well-trained, qualified pilots in commercial aircraft is another example of safety through redundancy. Funds made available in this Act to study alternative crew complements for flight decks in commercial operations should prioritize the safety effects relative to two-person flights. This direction is not intended to limit FAA's research and development activities related to unmanned aerial vehicles.

FY 2020 House Language (cont.)

• *Wind Turbine-Radar Interference Mitigation Working Group*.—The FAA is a member of the Wind Turbine-Radar Interference Mitigation Working Group, which also includes the Departments of Defense and Energy and the National Oceanic and Atmospheric Administration. This collaborative work is expected to be completed in 2025. The Committee encourages the working group, including the FAA, to complete the work as expeditiously as possible and provide periodic updates to the Committee.

• *Low Altitude Authorization and Notification Capability*.—The Committee is pleased that cooperation between the FAA and industry partners towards the Low Altitude Authorization and Notification Capability (LAANC) program has safely and efficiently opened more airspace to UAS innovation. The LAANC program is making progress towards an unmanned traffic management system. The Committee supports the continuation and extension of the LAANC program.

• *NextGen, Environmental Research-Aircraft Technologies, Fuels, and Metrics*.—The recommendation includes $29,600,000 for NextGen, Environmental Research-Aircraft Technologies, Fuels, and Metrics to reduce aviation noise and exhaust emissions and to increase energy efficiency. This program utilizes the Center of Excellence to discover, analyze, and develop science-based solutions to the energy and environmental challenges facing the aviation industry.

FY 2020 Senate Language

- **TBD**

R,E&D FY 2021 Budget

- **FY 2021 target $120M**
- **Delivered to OST June 2019**
- **FY 2021 remaining schedule**
  - Submit to OMB mid September
  - Submit Presidents request to Congress Feb 3, 2020

Out Year Targets

- **Targets established March 2019**
  - FY 21 - $120M
  - FY 22 - $120M
  - FY 23 - $120M
  - FY 24 - $120M
  - FY 25 - $120M
- **Expect targets to be updated**

FAA Reauthorization

- **Current Authorization approved by Congress and signed by President Oct. 5, 2018 extends authorization thru the end of FY 2023**

Budget Future – CAT III Territory