



The View from Washington

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Budgets and Business

The bookshelves of my local library are full of guides on developing, using and sticking to a budget. And whether you're considering your personal budget, household budget or the budget of your business, the principles are the same: start with your income, subtract your bills, put a little away for a rainy day and live off of the rest.

Then what happens when the economy takes a hit? Your income drops and you have to revise your budget. And since you have fixed costs, like housing, utilities, transportation and in business, labor costs, you revise your budget by putting less away and living off of a much smaller remainder.

In a parallel way, that's what is happening throughout Washington these days. The income of most of the government agencies is being reduced. There is quite a bit of debate on what is causing the reduction; is it pure politics, the war, fiscal responsibility? The debates can be heard until the wee hours of the morning at any number of "watering holes" around the District and the answer is seldom found. Maybe they all are to blame, maybe none of them, but when you need the services of a government agency and those services are no longer available, the cause isn't really all that important.

A Federal Agency's income is only slightly different than that of a business. Where the customers provides the revenue, and the business' efficiency dictates the final income, a federal agency's income comes as part of an annual budget provided by Congress.

So whether you're talking about income or budget, for federal agencies it means the same. And while a business can increase its revenue through advertising and increase its income through efficiencies, a federal agency can only improve its efficiencies to stretch their budget. There are ways for the public to petition Congress for better support of a specific agency, but that is for another article.

Flight Standards Service

In talking to Jim Ballough, director of the Flight Standards Service at FAA Headquarters, about the budget and the impact to the Flight Standards Service in general and specifically, where the "rubber meets the road" for the avionics community at the local FSDO level, he provided some very enlightening information.

Flight Standards is an organization of people. With some 4,700 employees, approximately 86 percent of their budget goes to people costs, office leases and the infrastructure to support these people. That only leaves about 14 percent of their total budget that they can restructure because of their reduced income.

The challenge, though, is the remaining 14 percent is what pays for inspector training, travel to conduct their work program, and travel to public venues such as the annual AEA Convention and other necessary events. The impact of reducing the remaining 14 percent was not a desirable choice for Flight Standards so they are looking at the efficiency of their processes in order

to stretch their budget to cover their expenses.

Their solution is to reduce their workforce by a little over 5 percent. Of the approximate 4,700 employees that are currently in the Flight Standards Service, they are looking to reduce that number by 257 this year. Their goal is to let the Flight Standards normal annual attrition rate of 250 people per year provide this reduction and not hire their replacements, as they would have in past years.

The reduced budget is relatively new, as such, AFS has not been focused on reducing positions as much as reducing people, so they have not yet worked out the details and realignment of positions that will come from a 5 percent smaller workforce. The details of position realignment should be available later this year.

What does matter is the effect of a 5 percent smaller Flight Standards Service. The existing avionics shops should see minimal change. Individual FSDOs may be impacted more than others due to retirements, illnesses, training and vacations, but the workload within a region, according to Ballough, should be shared between FSDOs so that the impact to the public is minimized.

For the long term, look for efficiency improvements; expanded delegation authority and a realignment of the Flight Standards workforce to better represent their responsibilities.

Aircraft Certification Service

During the AEA Annual Convention in Dallas this year, Nancy Lane, the

acting assistant manager of the Small Aircraft Directorate, gave an excellent presentation on the effect of the reduced budget on the aircraft certification community and what the impact will be to the public they serve.

In her presentation, Nancy began by addressing the \$30 million shortfall that the FAA's Aviation Safety organization (AVS) is facing in 2005. (Note: The FAA's Aviation Safety organization (AVS) is the parent organization for both Aircraft Certification Service and the Flight Standards Service.)

The FAA is addressing this challenge by reducing payroll through attrition, a hiring freeze, and reducing travel significantly. Fewer people mean that the Aircraft Certification Service (AIR) must absolutely focus on aircraft certification priorities. Lane was clear that "prioritization is the name of the game" and that the top priority is Continued Operational Safety.

Lane's presentation was refreshing since she took a very hard line and didn't "sugar coat" the budget situation with false promises. "Smaller budgets mean difficult decisions," she said, "AVS management has developed a strategy to ensure we don't make commitments to new projects that we cannot support as our staffing levels decrease and this plan is applied nationally so as not to burden any one office."

Based on her presentation, this is what the public can expect.

Committed projects will continue to be processed until completed. New projects that require less than 40 hours of FAA AIR support will be worked as usual. New certification projects that exceed 40 hours of FAA AIR support will be managed and scheduled to ensure that they do not commit themselves beyond their resources. As projects are completed, they will take on new ones. According to Lane, their approach is safety-based, and will be implemented fairly and consistently nationwide.

The FAA's Budget and You. Questions asked in a follow-on interview with Nancy Lane, Small Aircraft Directorate

AEA: Ms. Lane, you indicated that the sequencing process has been in place since January. Was this an ISO-9000 initiative that happened to fit nicely with the new budget realities or was it strictly in response to the budget?

Lane: Our response was directly in response to our budget allocation in FY2005. You're correct that we are in the middle of ISO certification, but it is not related to our workload prioritization and sequencing activities.

AEA: Can you elaborate on the "safety" criteria used for sequencing? Generally speaking, I would think that all navigation, communication or surveillance equipment would have a direct benefit to safety.

Lane: You are correct that we consider the installation of CNS equipment as having a safety benefit. These kinds of projects have not experienced significant delays, although when we began the prioritization effort, we did take several weeks to develop a system that we could fairly and consistently apply. Now that we're "geared up," these kinds of projects are proceeding with little or no delay. Also, we consider projects that propose an updated certification basis to have a long-term safety benefit. These kinds of projects should also experience minimal delay—although they would not be as high priority as the CNS enhancements.

AEA: I believe you stated that any project that is expected to take longer than 40 hours will go into the queue. But how are the projects that take less than 40 hours handled?

Lane: Projects that we expect will take less than 40 hours are handled "business as usual" with no delay letters prepared/sent.

AEA: How are you (ACOs) handling FSDO support and Flight Manual Supplement approvals?

Lane: At this time the prioritization process applies only to TCs, amended TCs, STCs, amended STCs, and PMA by test and computation. We believe we can address our workload issues by focusing on these projects. Support to FSDOs and AFM supplement approvals are not affected.

The approach that AIR is taking is data-driven based upon defined criteria. And while the program is implemented at the ACO level, the results are maintained at the national Directorate level to monitor the progress of the program.

The approach the AIR is taking also allows for ACO resources to be logically reallocated as necessary to meet the needs of the public and support other ACOs to maintain the highest service

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level possible. The AIR is looking at the entire service as a national resource rather than a regional resource.

The application process for certification projects has not changed. The application is accepted as usual. Then the projects are evaluated nationally for sequencing based on a number of factors with safety focused projects receiving the highest priority. Along with safety focus, consideration is being given to company's contribution to the project (i.e. level of delegation, use of the PSP process, etc) and date of application.

Anyone who has submitted a certification project in the last few months is well aware of the "Delay Letters." These letters inform the applicant that

their project will commence within 90 days of application. And then, when resources become available, the applicant is notified their project is now being worked and work then will proceed on the project as usual.

The Agency's budget constraints are real, as such, it is important for every AEA member to not waste their time. Alterations that are minor alterations should be done without field approval. Major alterations that do not require an STC should be done through either the field approval process or through a DER. Installation shops should market the installation (or ease of installation) as well as the product to the prospective customers. Products with Approved Model Lists (AMLs) are STCd and do not require subsequent field approval.

A large complex aircraft can generate

hundreds of dollars a day in interest payments while it's sitting on your ramp waiting for the ACO or FSDO to approve a data package. Would your customer rather pay you a little more for the installation with the use of a DER and a faster turn around, or the less expensive FSDO/ACO approval, but the additional down time waiting for the FAA's limited resources to get around to your needed approval? They will either pay you or the bank. They can pay you a little more and get the aircraft back sooner or pay the competition a little less for a FSDO approved alteration and make interest payments on an aircraft they can't use while waiting for the approval: the cost to the customer is the same—their choice!

Regulatory Update

United States

Proposed Federal Aviation Administration Notice 8150.NTF, Non-Technical Standard Order (TSO) Functions(s) Integrated in a TSO Article

The Federal Aviation Administration (FAA) has announced the availability of and requests for public comment on proposed Federal Aviation Administration (FAA) Notice 8150.NTF, Non-TSO Functions(s) Integrated in a TSO Article.

The proposed notice will replace FAA Order 8150.1B, Technical Standard Order Program, Paragraph 17d(3), dated May 12, 2002. The proposed notice provides guidance to Aircraft Certification Field Offices personnel on the appropriate means to evaluate a non-TSO function a manufacturer might integrate into a TSO article.

FAA Order 8150.1B, Paragraph 17d(3), as currently written, allows for the incorporation of a non-TSO function in a TSO article, but stipulates the non-TSO safety and performance functions be evaluated under the appropriate airworthiness certification procedures during the installation process. However, that process permits the design data package granting the "host" TSO authorization to contain the non-TSO function design data package, without assuring the required performance of the hosting TSO article is unaffected by the added non-TSO function.

Deferring the evaluation of the non-TSO function until installation is not ideal, since the installer generally does not have the TSO manufacturer's equipment or expertise available to perform a thorough equipment performance evaluation, especially when the performance must be determined by laboratory simulation or under specific test conditions. In the proposed notice, we bring greater

scrutiny to integrated non-TSO functions into the host TSO by providing guidance to the Aircraft Certification Office (ACO) for the consistent performance evaluation of the non-TSO function at the time of TSO authorization issuance. Note also, as with the TSO article itself, the integrated non-TSO function must have separate FAA approval for installation in an aircraft. Thus, this proposed notice allows the ACO to acknowledge the software and hardware design assurance levels and environmental testing accomplished on the non-TSO function, precluding the need for repeated evaluations at each installation approval.

You can get a copy of proposed FAA Notice 8150.NTF and Order 8150.1B from the FAA's Regulatory and Guidance Library (RGL) at <http://www.airweb.faa.gov/rgl>. On the RGL website, click on "Orders/Notices."

Although the deadline for comments was June 30, 2005, late submissions should still be made to Richard Jennings, at richard.jennings@faa.gov.

Advisory Circular (AC) 23-17B, Systems and Equipment Guide for Certification of Part 23 Airplanes and Airships

The Federal Aviation Administration recently released a revision to Advisory Circular (AC) 23-17B, Systems and Equipment Guide for Certification of Part 23 Airplanes and Airships.

This advisory circular (AC) sets forth an acceptable means, but not the only means, of showing compliance with Title 14 Code of Federal Regulations (14 CFR), part 23, for the certification of systems and equipment in normal, utility, acrobatic, and commuter category airplanes and airships. The policy in this AC is considered applicable for airship projects; however, the certifying office should only use specific applicability and requirements if they are deter-

mined to be reasonable, applicable and relevant to the airship project. This AC applies to Subpart D from Sec. 23.671 and Subpart F. This AC both consolidates existing policy documents, and certain ACs that covers specific paragraphs of the regulations, into a single document and adds new guidance. This revision has added preamble material, in italics, under the applicable rule and amendment level.

The AC is available on the Internet at <http://www.airweb.faa.gov/AC>.

Canada

Transport Canada withdraws proposal for Fatigue Risk Management System

As a result of extreme pressure from AEA and other industry groups in Canada, TCCA has withdrawn the NPAs that would have required a formal Fatigue Risk Management System for all AMOs. The NPAs to CAR 573 and STD 573 requiring Safety Management Systems for AMOs have been revised to include procedures for the management of fatigue related risks through identification of management responsibilities, guidelines and employee self-reporting systems as part of the SMS procedures. AEA Canada will continue to monitor this regulatory action to ensure that regulations for fatigue management remain an integral part of an AMO's management and training programs, rather than a formal stand-alone system.

Transport Canada revises Airworthiness Notices for AME Licensing and Training

TCCA has published Airworthiness Notice AN C011 at Edition 3. This notice updates the general information with respect to AME licensing and/or training control systems, and reflects the latest requirements from CAR STD 566.

The AN may be viewed at:

<http://www.tc.gc.ca/civilaviation/maintenance/AARPC/ANs/C011.htm>

TCCA has published Airworthiness Notice AN C002 at Edition 9. This notice updates the information on Basic Training Courses for Aircraft Maintenance Engineers to reflect the latest requirements from CAR STD 566. The AN may be viewed at: <http://www.tc.gc.ca/civilaviation/maintenance/AARPC/ANs/C002.htm>

Undocumented Parts Issues

TCCA Airworthiness Manual 571.08 and 571.09 address the requirements for documentation of parts, and specifically identify that only life-limited parts shall have a technical history such that there is traceability of the part to the previous airframe, engine, appliance or component from which it was removed. It was brought to the attention of AEA Canada that there is inconsistency among TCCA regions in applying this standard, and in some cases AMOs are being required to provide full traceability for used parts that are not life-limited, and are being forced to re-document the parts. TCCA has indicated that there is a regional working group examining this issue. AEA Canada members are encouraged to contact Barry Aylward at AEA Canada if they are being asked by TCCA to create full documentation for "undocumented parts" that are not life-limited parts.

Impact of FAA Resource Constraints on STC Applications from Canada

At the TCCA Western Canada Delegates Conference, held in May in Calgary, the FAA provided information on the potential impact of their current budget constraints. For STC and TSO applications to the FAA from TCCA under the bilateral agreement, given that most applications will require less than 40 hours FAA review time, the FAA does not see any negative impact

on their current review time for such applications. They cautioned that if an STC includes application of novel technology for which no current FAA standard or guidance material exists, this could drive the application into a more detailed review, and significant delays may occur.

Transport Canada Issues New GPS Policy

TCCA has published a new Policy Letter (PL) No. 551-003 Issue 01 titled Global Positioning System (GPS) Equipment and Installation Approval. This PL replaces the former Aircraft Certification Policy Letter 17 on the same topic. This new PL has been issued in response to Avionics Workshop Agenda Items, V0311-07-01 and -02 on IFR GPS Installation Certification and may be viewed at: <http://www.tc.gc.ca/CivilAviation/certification/guidance/551/551-003.htm>

Europe

EASA: Fees and Charges Regulation:

The European Aviation Safety Agency will apply fees for its certification activities from June 1, 2005. The fees are detailed in the 'Fees and Charges' Regulation (EC No 488/2005) which was adopted by the European Commission in the week of March 21, 2005 and published in the EU Official Journal on March 30, 2005. The Agency's charging system will be reviewed, and, if necessary, revised annually.

A few cost examples for certain approval and organization types can be seen on page 21 quoted in Euros:

Supplement Type Certificates:

CS-25/CS-29/CS-23 commuter Level 2 (avionics changes):

€ 2720 plus € 99/hour of work.

CS-23 between 2000 and 5670 kg

MTOW:

€ 1360 plus € 99/hour.

CS-22/Balloons/Airships/CS-23

below 2000kg:

€ 680 or less

CS-27: € 340 plus € 99/hour.

Annual fee for holders of ETSOs:

Value of equipment above € 20,000

Design of EU Member state: € 1000

Design of third country state: € 333

Value of equipment between € 2000 and € 20000:

Design of EU Member state: € 500

Design of third country state: € 167

Value of equipment below € 2000:

Design of EU Member state: € 250

Design of third country state: € 100

For subsequent ETSOs within the same category a reduction of the annual fee is applied.

Design Organization – Subpart J

The Application fee is depending on value of activities (sample for company of five or [10] engineers involved in the design):

€ 2400/[€12000] plus € 99/hour if more than one Level 1 or more than three Level 2 comments.

The surveillance fee is the same as the application fee except it is payable every three years in form of three equal annual installments.

Production Organization – Subpart G

The application fee is depending on value of activities (sample for company of five or [10] engineers involved in the design):

€ 3000/[€ 6000] plus € 99/hour if more than one Level 1 or more than three Level 2 comments.

The surveillance fee is the same as the application fee except it is payable every two years in form of two equal annual installments.

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Frequently Asked Questions

TOPIC:
Wire Marking

The following answered is from the FAA's AC 43.13-1b Chapter 11.

QUESTION: What is the FAA's current position on wire marking technology?

ANSWER: The FAA publishes their information about wire marking technologies in AC 43.13-1b Chapter 11. The following is what they have to say about each commonly used technology.

11-210 HOT STAMP MARKING. Due to widespread use of hot stamp wire marking, personnel should refer to SAE ARP5369, Guidelines for Wire Identification Marking using the Hot Stamp Process, for guidance on minimizing insulation damage. Hot stamp process uses a heated typeface to transfer pigment from a ribbon or foil to the surface of wires or cables. The traditional method imprints hot ink marks onto the wire. Exercise caution when using this method, as it has been shown to damage insulation when incorrectly applied. Typeset characters, similar to that used in printing presses but shaped to the contour of the wire, are heated to the desired temperature. Wire is pulled through a channel directly underneath the characters. The heat of the type set characters transfers the ink from the marking foil onto the wire.

a. Good marking is obtained only by the proper combination of temperature, pressure, and dwelling. Hot stamp will mark wire with an outside diameter of 0.038 to 0.25-inch.

b. Before producing hot stamp wire, it must be assured that the marking machine is properly adjusted to provide the best wire marking with the least wire insulation deterioration. The marking should never create an indent greater than 10 percent of the insulation wall.

CAUTION: The traditional Hot Stamp method is not recommended for use on wire with outside diameters of less than 0.035. (REF. SAE ARP5369). Stamping dies may cause fracture of the insulation wall and penetration to the conductor of these materials. Later in service, when various fluids have wet these openings, serious arcing and surface tracking will have damaged wire bundles.

11-211. DOT MATRIX MARKING. The dot matrix marking is imprinted onto the wire or cable very similar to that of a dot matrix computer printer. The wire must go through a cleaning process to make sure it is clean and dry for the ink to adhere. Wires marked with dot matrix equipment require a cure consisting of an UV curing process, which is normally applied by the marking equipment. This cure should normally be complete 16 to 24 hours after marking. Dot matrix makes a legible mark without damaging the insulation. Depending on equipment configuration, dot matrix can mark wire from 0.037 to 0.5-inch outside diameter. Multiconductor cable can also be marked.

11-212. INK JET MARKING. This is a "nonimpact" marking method wherein ink droplets are electrically charged and then directed onto the moving wire to form the characters. Two basic ink types are available: thermal cure and UV cure.

a. Thermal cure inks must generally be heated in an oven for a length of time after marking to obtain their durability. UV cure inks are cured in line much like dot matrix.

b. Ink jet marks the wire on the fly and makes a reasonably durable and legible mark without damaging the insulation. Ink jets normally mark wire from 0.030 to 0.25-inch outside diameter. Multiconductor cable can also be marked.

11-213. LASER MARKING. Of the variety of laser marking machines, UV lasers are proving to be the best. This method marks into the surface of the wire's insulation without degradation to its performance. One common type of UV laser is referred to as an excimer laser marker. UV laser produces the most durable marks because it marks into the insulation instead of on the surface. However, excimer laser will only mark insulation that contain appropriate percentages of titanium dioxide (TiO₂). The wire can be marked on the fly. UV can mark from 0.030 to 0.25-inch outside diameter. The UV laser makes only gray marks and they appear more legible on white or pastel-colored insulation.

Note: AEA offers these Frequently Asked Questions (FAQs) in order to foster greater understanding of the Federal Aviation Regulations and the rules that govern our industry. AEA strives to make them as accurate as possible at the time they are written, but rules change so you should verify any information you receive from an AEA FAQ before you rely on it. AEA DISCLAIMS ANY WARRANTY FOR THE ACCURACY OF THE INFORMATION PROVIDED. This information is NOT meant to serve as legal advice – if you have particular legal questions, then these should be directed to an attorney.

REGULATORY UPDATE

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Maintenance Organization – Part 145

The application fee is depending on value of activities (sample for company of five or [15] engineers involved in the design):

€ 3000/[€15000] plus € 99/hour if more then one Level 1 or more then three Level 2 comments.

The surveillance fee is the same as the application fee except it is payable every two years in form of two equal annual installments.

Fees for acceptance of approvals equivalent to Part 145:

New approvals: € 1500

Renewal fee (every two years):

€ 1200

Changes to the organization are included in the related surveillance fees if they don't exceed a level where further investigation is found necessary.

The definition for the "value of activities," "value of equipment" and "value of financial turnover" necessary to find the correct coefficient of the base fixed fee can be found in the explanatory note of the annex to the regulation.

NPAs:

EASA is planning to issue an NPA containing rules and guidance intended to set the standards for mitigating the risks of ageing electrical cables by appropriate design and maintenance measures. The draft NPA should be ready for consultation by second half of 2005.

RTCA:

Update DO-286A Minimum Aviation System Performance Standards (MASPS) for Traffic Information Service—Broadcast (TIS-B).

This update adds requirements to better conform to the ASA MASPS (DO-289), and adds the Rebroadcast Service to enable interoperability

among users equipped with different ADS-B data links.

DO-258A Interoperability Requirements for ATS Applications Using ARINC 622 Data Communications.

This update aligns the scope of interoperability for the FANS 1/A technology with the Continental SPR Standard (DO-290) to include interoperability for interface with HF Data Link (HFDL). The document, initially issued in September 2000, defines interoperability requirements for communication services and Air Traffic Services (ATS) applications and allocates these requirements to stakeholders. It covers: the ATS Facilities Notification (ATN) application, the Automatic Dependent Surveillance (ADS) application, the Controller Pilot Data Link Communication (CPDLC) application and the ARINC data communication.

DO-246C GNSS Based Precision Approach Local Area Augmentation System (LAAS)—Signal-in-Space Interface Control Document (ICD)

This update includes changes to harmonize the document with the LAAS MASPS - DO-245A. The three primary areas of change are:

Definition of additional data for supporting Cat. II/III precision approach operations. [Additional data blocks 3 and 4 for Message Type 2.]

Definition of LAAS uplinked Terminal Area Paths (TAP) data for supporting additional Terminal Area Procedures. [Provisions for TAP data to be included in Message Type 4.]

All references to pseudolites / Ground Based Ranging Sources have been removed. □