

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

AIR FORCE INSTRUCTION 65-503

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FINANCIAL MANAGEMENT

**US AIR FORCE COST AND PLANNING
FACTORS**

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This instruction implements AFD 65-5, *Cost and Economics* and contains United States Air Force (AF) operating and support cost definitions and planning factors for the Regular Air Force, Guard, and Reserve forces. This instruction addresses cost categories, definitions, and cost factors as they relate to general Air Force cost estimating and estimates for acquisition weapon systems. These factors are estimates that reflect actual or projected operations costs and are intended for general estimates and for developing the AF Flying Hour Program budget. Refer recommended changes and questions about this publication to the office of primary responsibility using the AF IMT 847, *Recommendation for Change of Publication*; route AF IMT 847s from the field through the appropriate functional chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestors commander for non-tiered compliance items. This publication may be supplemented at any level, but all Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW AF Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW the AF Records Disposition Schedule (RDS) in the AF Records Information Management System (AFRIMS).

SUMMARY OF CHANGES

AF Instruction 65-503 has been updated to reflect how the cost and planning factors are currently being used in Air Force cost estimating. The treatment of inflation has also been restructured to reflect the difference between inflation and real price changes (escalation). The updated instruction now describes the development of Cost per Flying Hour factors for the AF budget. In addition, the tables listed in this document have been updated to reflect current cost and planning factors. Specific table points of contact are documented with the cost factor tables located on the AF Portal. In addition, several dozen tables have been discontinued to reduce reporting burden. Discontinued tables are A2-1, A3-1, A6-1, A7-1, A9-1, A10-1, A11-1, A12-1, A14-1, A17-1, A19-1, A20-1, A21-1, A30-1, A33-1, A39-1, A41-1, A42-1, A44-1, A44-2, A45-1 to A45-10, A46-1, A47-1 to A47-10, A48-1 to A48-6, A49-1, A51-1, A52-1, A53-1, A54-1, A55-1, A57-1, A58-1. More detailed descriptions of the discontinued tables as well as the actual factor and planning tables can be found on the AF Portal under the Financial Management functional area.

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Chapter 1

APPLICABILITY

1.1. Overview. This instruction contains cost and planning factors used to estimate required resources for AF structures, missions, and activities. The instruction discusses two major sets of factors. The first set captures Logistics, Personnel, Programming, and Inflation factors, which can be used in a variety of studies or analyses. The second, Cost per Flying Hour, is a subset of the Logistics factors and is used to forecast the AF Flying Hour Program budget requirement. Each set of factors has a specific context which needs to be understood prior to application.

1.1.1. The Logistics, Personnel, Programming, and Inflation factors are used to support life-cycle cost estimates, manpower cost comparisons, and other general cost studies. They are further detailed in [Chapter 3](#).

1.1.2. The AF Cost per Flying Hour factors are used to develop the Flying Hour program portion of the President's Budget. The process for developing these factors is outlined in [Chapter 4](#). Note that these Cost per Flying Hour factors associated with operating and sustaining aircraft include four commodities: fuel, Government Purchase Card purchases, depot level reparable parts, and consumable parts associated with operating and sustaining aircraft. Manpower, depot, contractor logistics support, program office, modifications, and indirect costs are budgeted separately and not included in the Cost per Flying Hour factors.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. The Deputy Assistant Secretary of the Air Force for Cost and Economics (SAF/FMC): oversees the Cost and Planning Factor Program for the AF, including Logistics, Personnel, Programming, Inflation, and Cost per Flying Hour factors. In support of the Cost per Flying Hour factor development, SAF/FMC co-chairs the Flying Hour Program Cost Review Board (formally known as the Flying Hour Program Air Force Cost Analysis Improvement Group) with AF/A4P, The Director of Resource Integration, Deputy Chief of Staff of Logistics, Engineering & Force Protection.

2.2. Logistics, Personnel, Programming, and Inflation Factor (not including Flying Hours) Development

2.2.1. The Economics and Business Management Directorate (SAF/FMCE): Issues guidance and policy on economic analysis and publishes Air Force inflation indices, escalation indices, and discount rates. SAF/FMCE also serves as a repository for any unique factors developed by other organizations as described in section 2.2.4.

2.2.2. The Operating and Support Cost Estimating Division (AFCAA/FMCEY): serves as the publishing organization for Logistics, Personnel, Programming and Inflation factors on the AF Portal.

2.2.3. Organizations responsible for individual factor tables as listed on the AF Portal 65-503 webpage, and in **Chapter 3** of this instruction, are responsible for providing the tables to AFCAA/FMCEY for publication.

2.2.4. Headquarters AF, Major Commands, Forward Operating Agencies, and Direct Reporting Units: Implement cost and planning factor policy

2.3. Cost per Flying Hour Program Factor Development (see Chapter 4 for detailed schedule).

2.3.1. The Operating and Support Cost Estimating Division (AFCAA/FMCEY):

2.3.1.1. Builds the Cost per Flying Hour values for fuel, Government Purchase Card, and General Supply Division consumable parts in support of the Program Objective Memorandum.

2.3.1.2. Builds Flying Hour Program factors that are unique to each weapon system by mission design series at the element of expense investment code level for the four Flying Hour Program commodities.

2.3.1.2.1. These factors are unique for each funds holder: Air National Guard; AF Reserve Command; AF Special Operations Command; Air Mobility Command Transportation Working Capital Fund; and Centralized Asset Management.

2.3.1.2.2. Centralized Asset Management includes Air Combat Command, Air Education and Training Command, Air Force District of Washington, AF Global Strike Command, Air Force Materiel Command, Air Mobility Command, Pacific Air Forces, and United States Air Forces in Europe.

2.3.1.3. Generates Cost per Flying Hour factors based on life-cycle cost estimates for new programs without a historical baseline.

2.3.1.4. Jointly, with AF/A4PY, presents the factors for approval to the Flying Hour Program Cost Review Board for use in the AF Program Objective Memorandum development.

2.3.1.5. Provides updated factors based on latest part prices and economic assumptions to support the development of the President's Budget.

2.3.1.6. Maintains the AF Total Ownership Cost database.

2.3.2. The Director of Resource Integration, Deputy Chief of Staff for Logistics, Engineering, and Force Protection (AF/A4P):

2.3.2.1. Co-chairs the Flying Hour Program Cost Review Board with SAF/FMC.

2.3.2.2. Provides the Material Support Division factors developed through the Spares Requirements Review Board process to SAF/FMC (see AFI 23-120, *Air Force Spares Requirements Review Board* for more details).

2.3.2.3. Coordinates analysis of large factor variances between Program Objective Memorandum cycles with program fund holders.

2.3.3. The Director of Training and Readiness (AF/A3T):

2.3.3.1. Provides programmed and association flying hours to SAF/FMC to calculate the total Flying Hour Program operations and maintenance requirement, and other projected budget requirements.

2.3.4. The Deputy Assistant Secretary of the Air Force for Budget (SAF/FMB):

2.3.4.1. Provides fuel prices, inflation rates, and Air Force Working Capital Fund rates and surcharges to AFCAA/FMCY whenever a change must be incorporated into the Cost per Flying Hour factors.

Chapter 3

COST AND PLANNING FACTORS

3.1. Logistics Factors. Use variable logistics cost factors for programming and budgeting to increase and decrease baseline programs when the force structure changes. Use the detailed instructions in each table to build changes or estimates.

Table 3.1. Logistics Factors

Table	Descriptive Title	POC
A4-1	Logistics Cost Factors*	AFCAA/FMCY
A5-1	Logistics Cost Factors Commodity Specific Inflation	AFCAA/FMCY
A13-1	Aviation Fuel Consumption Factors	AFCAA/FMCY
A15-1	Aircraft Reimbursement Rates* (per flying hour)	AFCAA/FMCY
A16-1	Tuition Rate Factors*	AFCAA/FMCY

*Identifies Flying Hour factors

3.2. Personnel Factors. Use these factors for cost studies, economic analyses, component cost analyses, military construction projects, Program Objective Memorandum inputs, as well as programming, budgeting, accounting, and recording payments from other government agencies. Detailed instructions on the use of these factors are included in the following tables:

Table 3.2. Personnel Factors

Table	Descriptive Title	POC
A18-1a	Variable Cost by Enlisted Air Force Specialty Initial Skill Training	HQ AETC/FMAT
A18-1b	Variable Cost by Officer Air Force Specialty Initial Skill Training	HQ AETC/FMAT
A19-2	Regular Air Force Standard Composite Rates by Grade	SAF/FMBOP
A19-3	Regular Air Force Military Turnover Rates	AFPC/DPAPA
A20-2	Military Pay Rates Per Unit of Time	SAF/FMBOP
A22-1	ANG/AGR Composite Pay Factors/Turnover Rates	NGB/FMAF
A23-1	USAF Reserve Composite Pay Factors	AF/RECB
A24-1	Permanent Change of Station Cost Per Move	SAF/FMBOP
A25-1	Permanent Change of Station Cost Per Work year	SAF/FMBOP
A26-1	Civilian Standard Composite Pay Rates	SAF/FMBOP
A27-1	Civilian Standard Composite Pay Rates, Major Categories	SAF/FMBOP
A28-1	Civilian Standard Composite Pay Rates, by Major Command/Field Operating Agency	SAF/FMBOP
A29-1	Dependents Per Military Sponsor	AF/A1
A31-1	Application of Civilian Base Pay Acceleration Factors	AFCAA/FMCY

Table	Descriptive Title	POC
A32-1	Application of Military Standard Composite Rate Acceleration Factors	AFCAA/FMCY
A34-1	Representative Officer Aircrew Training Costs Variable	HQ AETC/FMAF
A34-2	Representative Officer Aircrew Training Costs Variable and Fixed	HQ AETC/FMAF
A35-1	Representative Aircrew Enlisted Training Costs (Variable)	HQ AETC/FMAT

3.3. Programming Factors. Use Programming factors when manpower compositions of various aircraft are needed for costing purposes. Detailed instructions on the use of these factors are included in these tables:

Table 3.3. Programming Factors

Table	Descriptive Title	POC
A36-1	Authorized Aircrew Composition (Regular)	AF/A3
A37-1	Authorized Aircrew Composition (ANG)	NGB/A8Y
A38-1	Authorized Aircrew Composition (AFRC)	AF/REXP
A40-1	Aircraft Program Factors - (ANG)	NGB/A8Y
A43-1	Typical Aircraft Squadron Strengths - (ANG)	NGB/A8Y

3.4. Inflation/Escalation. Use the following tables to generate inflation/escalation rates. See AFI 65-502, *Inflation* for instructions on applying these rates.

Table 3.4. Inflation/Escalation

Table	Descriptive Title	POC
A50-1	Historical Aircraft Escalation Indices	SAF/FMCE
A50-2	Inflation/Escalation Indices	SAF/FMCE

3.5. Cost Models. The tables below provide costs to operate AF bases, composite rates for reserve and guard personnel, and Air Reserve man-day support costs. Reference the following tables for more detail:

Table 3.5. Cost Models

Table	Descriptive Title	POC
A56-1	Installation Support Non-Pay Cost Factors	AFCAA/FMCY
A60-1	Air Reserve and Guard Technician Standard Composite Rates by Grade Tool	HQ AFRC/A9
A61-1	Man-Day Support Cost Estimating Tool	SAF/FMCE

Chapter 4

FLYING HOUR PROGRAM FACTOR DEVELOPMENT

4.1. Schedule. The development of the Flying Hour Program cost factors will be executed according to the following timeline. Note that the timeline does not reflect the Spares Requirement Review Board process leading up to the Spares Requirement Review Board presenting the Material Support Division factors to SAF/FMC; that process is defined in AFI 23-120.

Table 4.1. Flying Hour Program Factor Development Schedule

Days to PB Lock	Action Due
-455	SAF/FMC and A4PY sends the Flying Hour Program Cost Review Board kickoff memo and holds a kickoff meeting for all Flying Hour Program stakeholders to discuss expectations, current status, and process changes.
-421	AF/A3T provides projected President's Budget flying hours to SAF/FMCY. SAF/FMBO provides fuel price and all Working Capital Fund rates, surcharges, and inflation factors to SAF/FMCY.
-419	Air Force Total Ownership Costs releases end-of-year historical data, to be used as basis of General Supply Division, Government Purchase Card, and Fuel Cost Per Flying Hours factors.
-415	AF/A4PY submits final Material Support Division base-year Cost Per Flying Hours factors to AFCAA/FMCY.
-400	SAF/FMCY calculates General Supply Division, Government Purchase Card, and Fuel Cost Per Flying Hours factors.
-393	Funds holders, AF/A4PY, and SAF/FMCY analyze large factor variances between last and current Program Objective Memorandum cycles.
-365	SAF/FMBO locks President's Budget position (based on last Program Objective Memorandum's factors). SAF/FMBO informs SAF/FMCY of any post- President's Budget -lock changes to fuel price, Working Capital Fund rates, surcharges, and inflation factors for inclusion in factors for current Program Objective Memorandum.
-358	SAF/FMCY recalculates current-POM Cost Per Flying Hours factors for future years (if needed) based on locked President's Budget rates.
-344	AF/A4PY and SAF/FMCY pre-brief Cost Per Flying Hours factors to senior leadership.
-337	Flying Hour Program Executive Cost Review Board Meeting approves Cost Per Flying Hours factors (these factors will be the basis of the next President's Budget).
-70	SAF/FMCY applies latest prices to Material Support Division and General Supply Division parts included in the last set of Flying Hour Program Executive Cost Review Board factors.

-56	AF/A3T provides projected President's Budget flying hours to SAF/FMCY. SAF/FMBO provides fuel price and all Working Capital Fund rates, surcharges, and inflation factors to SAF/FMCY.
-21	AF/A3T and SAF/FMBO provide updated hours, rates, and prices to SAF/FMCY as needed for inclusion in the factor set to be used for the President's Budget.
0	SAF/FMBO locks President's Budget position.

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Assistant Secretary (Financial Management &
Comptroller)

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 23-120, *Air Force Spares Requirement Review Board*

AFI 33-360, *Publications and Forms Management*

AFI 65-501, *Economic Analysis*

AFI 65-502, *Inflation*

AFI 65-504, *Commercial Activity Cost Comparisons*

AFI 65-508, *Cost Analysis Guidance and Procedures*

AFI 65-509, *Business Case Analysis*

AFI 65-601, *USAF Budget Policies and Procedures*

AFMAN 33-363, *Management of Records*

AFPD 65-5, *Cost and Economics*

Prescribed Forms

None

Adopted Forms

AF Form 847

Abbreviations and Acronyms

AF—Air Force

AFI—Air Force Instruction

AFCAA—Air Force Cost Analysis Agency

AFPD—Air Force Policy Directive

AFMAN—Air Force Manual

AFRIMS—Air Force Records Information Management System

AFTOC—Air Force Total Ownership Cost

AGR—Air Guard Reserve

ANG—Air National Guard

CLS—Contractor Logistics Support

ICS—Interim Contractor Support

IPS—Integrated Product Support

LCC—Life Cycle Cost

OSD CAPE—Office of the Secretary of Defense Cost Analysis and Program Evaluation

POL—Petroleum Oils and Lubricants

RDS—Records Disposition Schedule

Terms

Cost Analysis and Program Evaluation (CAPE) Operations and Support (O&S) Cost Structure—: A cost estimating structure that provides a standard set of cost categories associated with the operations and sustainment of Department of Defense weapon systems.

Component Cost Analysis: —An independent cost estimate or analysis conducted by the Air Force Cost Analysis Agency (AFCAA).

Contractor Logistics Support: —Contracted weapon system sustainment that occurs over the life of the weapon system. Can also be defined as the performance of maintenance and/or materiel management functions for a DoD weapon system by a commercial activity or contractor sustainment of a weapon system that is intended to cover the total life cycle of the weapon system. CLS generally includes multiple integrated product support (IPS) elements, but does not include interim contractor support (ICS), a temporary measure for a system's initial period of operation before a permanent form of support is in place.

Discount Rate: —The rate used to reduce a future dollar amount to a present value.

Economic Analysis: —A systematic approach to the allocation of scarce resources. It compares the present value of the monetary costs and benefits of the alternatives under consideration, and describes and analyzes relevant non-monetary costs and benefits.

Economic Life: —The period over which the benefits to be gained from a system may reasonably be expected.

Escalation: —Change in the price of a specific good to include the effects of real price change and inflation.

Fixed Costs: —Costs that do not vary with the volume of business, such as property taxes, insurance, depreciation, security, and minimum water and utility fees.

Flying Hour Program (FHP) Cost Review Board (CRB) Factors: —These Cost per Flying Hour factors are aviation specific and include repairable parts, consumable supplies, government purchase card, and aviation fuel (fly and non-fly). These costs are used as part of the budget process for fielded aircraft.

Indirect Costs: —Indirect support costs are those installation and personnel support costs that cannot be identified directly (in the budget or Future Years Defense Program) to the units and personnel that operate and support the system being analyzed, but nevertheless can be logically attributed to the system and its associated manpower.

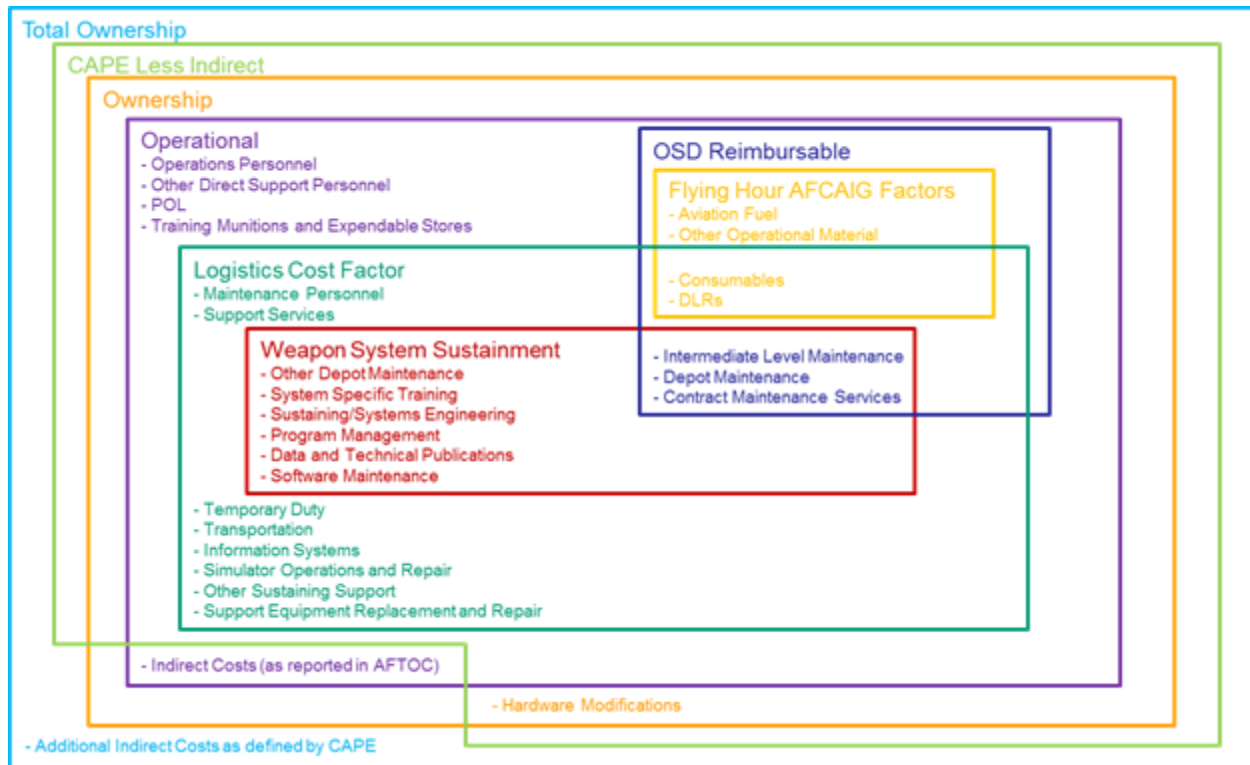
Operations and Support (O&S): —A Life Cycle Cost (LCC) category that includes all personnel, equipment, supplies, software, and services, including contract support, associated with operating, modifying, maintaining, supplying, training, and supporting a defense acquisition program in the Department of Defense inventory. This includes costs directly and indirectly attributable to the specific defense program; i.e., costs that would not occur if the program did not exist, such as mission personnel, unit level consumption, fuel and energy resources,

intermediate level maintenance, depot maintenance, contractor support, sustaining support, and indirect support. These activities are not bound to a life cycle phase or appropriation category

Operations and Support (O&S) Cost per Flying Hour and Cost per Aircraft metrics:

Operating and support cost per flying hour or cost per aircraft metrics often have different content, depending on the purpose for which they are being used. Several of these terms are defined in the terms section below. The figure below provides a pictorial representation of how the factors referred to this instruction relate to each other and to other commonly used metrics:

Figure A1.1. Operating and Support Cost per Flying Hour or Cost per Aircraft Metrics



1. **Ownership Cost:** The total cost of operating and maintaining a particular weapon system. This includes all the direct and most indirect support costs for the weapon system including civilian, military, and contractor manpower, and the cost of operations, maintenance, sustaining support activities, software maintenance, and hardware modifications. Ownership costs do not include indirect costs identified as Command Indirect in the Air Force Total Ownership Cost database because they cannot be specifically matched to a particular weapon system.
2. **Cost Analysis and Program Evaluation (CAPE) less Indirect costs:** This includes all the same cost elements as ownership cost except for the indirect cost element.
3. **Operational Cost:** A cost category that includes the same cost elements as ownership cost except for hardware modification costs. Includes manpower; fuel, petroleum, oil, and lubricants (POL); training munitions and expendable stores, support services,

temporary duty, transportation, consumables, government purchase card, depot level repairs, intermediate maintenance, depot maintenance, engine overhaul, contractor logistics support, system-specific training, support equipment, sustaining engineering, program management, information systems, data and technical publications, simulator operations, and software maintenance. Only weapon system specific indirect costs captured in Air Force Total Ownership Costs (AFTOC) are included.

4. Office of the Secretary of Defense (OSD) Reimbursement Rates: The reimbursement rates are aviation specific and include reparable parts, consumable supplies, government purchase card, aviation fuel, depot maintenance, engine overhaul and the variable part of contractor logistics support. The reimbursement rates are used when another platform or non-Department of Defense entity borrows an air force owned aircraft. These rates are developed in accordance with the DoD FMR 7000.14-R, Volume 11A.
5. Weapon Systems Sustainment (WSS): A subset of elements that includes intermediate maintenance, depot maintenance overhaul/rework, depot maintenance engine overhaul, system specific training, contractor logistics support (CLS), software maintenance, data and technical publications, and sustaining engineering. Note that the AF budgets weapon systems sustainment costs separately from the Cost per Flying Hour program costs through a separate process.
6. Flying Hour Program Cost Review Board Cost per Flying Hour factors: Operations and support costs corresponding with the costs covered in the cost per flying hour portion of the AF budget. Includes aviation fuel, consumables, certain government purchase card costs related to consumables, and depot level repairs. Excludes all other costs, such as manpower, petroleum oils and lubricants (POL), support services, depot maintenance, system-specific training, support equipment, sustaining engineering, program management, information systems, data and technical publications, simulator operations and repair, hardware modifications, software modifications, and indirect costs.

Variable Costs—A cost that changes with the production quantity or the performance of services. This contrasts with fixed costs that do not change with production quantity or services performed.

Weapon System—Items that can be used directly by the Armed Forces to carry out combat missions.