



Federal Aviation
Administration

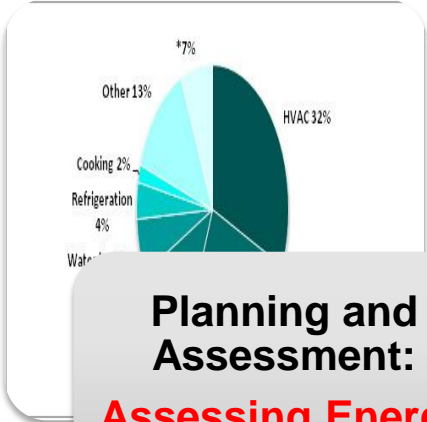


Funding Energy Programs at Your Airport

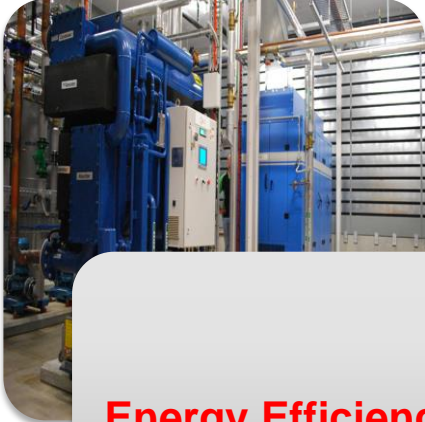
Patrick Magnotta
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Overview

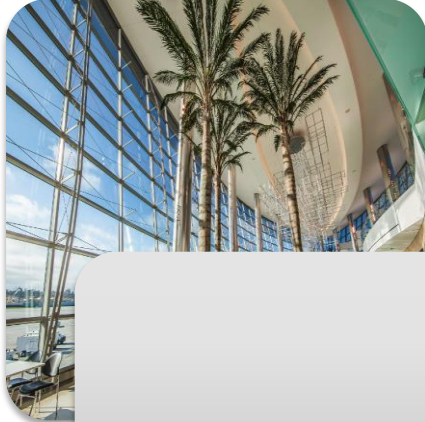
Airport Improvement Program Eligibility for:



Planning and Assessment:
Assessing Energy Use and Needs
Identifying Energy Efficiency Goals



Energy Efficiency of Airport Power Sources



Energy Efficiency Improvements

Energy Planning and Assessment

Energy assessments are eligible for Airport Improvement Program (AIP) grants-in-aid


- A comprehensive (airport-wide) assessment of how energy is sourced and consumed, in order to identify measures that improve energy efficiency
 - ✓ Energy requirements: Base load and peak load on airport-wide basis, and by major airport facility
 - ✓ Current power sources for facilities and vehicles
 - ✓ Performance and efficiency of power sources and airport systems
 - ✓ Future energy needs
 - ✓ **Comprehensive set of energy efficiency practices (no-cost/low cost and more substantial measures)**

Energy Planning and Assessment (continued)

AIP funding is available when sponsors assert:

- This assessment cannot be completed by airport staff
- This data is not available from energy management tools
- Local utility providers do not offer assessment services

For additional information, see Appendix S of the AIP Handbook

 U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ORDER
5100.38D

National Policy

Effective date:
September 30, 2014

SUBJ: Airport Improvement Program Handbook

1. PURPOSE.
This Handbook provides guidance and sets forth policy and procedures used in the administration of the Airport Improvement Program.


2. DISTRIBUTION.
This Handbook is located on the FAA Office of Airports website (see Appendix B for link) where it is available to all interested parties.

3. CANCELLATION.
This Handbook cancels the following two orders:

- FAA Order 5100.38C, Airport Improvement Program Handbook (dated June 28, 2005).
- FAA Order 5100.20C, Programming Control and Reporting Procedures Grant-In-Aid Program (dated December 7, 1999).

4. EXPLANATION OF CHANGES.
This Handbook replaces the above two orders with updated information that reflects current legislation and policy. The Office of Airports has streamlined this Handbook and replaced guidance with references where there is a more appropriate source of guidance (such as in other orders or advisory circulars). This included deleting guidance on airport planning, capital planning, labor rates, and civil rights. The references appear as the basic publication number without any suffix. The intent is for the reader to use the latest version of the referenced publication.

The Office of Airports reorganized and revised this Handbook to incorporate the Plain Language Act of 2010; to differentiate what is required by law and policy; to incorporate program guidance letters issued prior to July 30, 2012; and to incorporate legislation from the FAA Modernization and Reform Act of 2012 (Public Law 112-95).


Elliott Black
Director, Office of Airports Planning and Programming

Energy Planning and Assessment (continued)

Energy assessments can be completed in a number of AIP-funded documents:

- ✓ Stand-alone energy assessments or audits
- ✓ Sustainability Master Plans
- ✓ Airport Sustainability Plans/Sustainability Management Plans



Energy Efficiency of Airport Power Sources

Section 512 of the FAA Modernization and Reform Act (FMRA) encourages DOT to consider grants for projects that increase the efficiency of airport power sources



Eligible projects:

On-airport power generation for electricity and heating/cooling (i.e., solar, geothermal, hydrogen powered electrical energy generation)

Stand-alone energy efficiency upgrades in an AIP-eligible airport facility (i.e. HVAC, hot water heater, and energy efficient lighting)

Replacement of stationary GSE

Replacement of airport-owned vehicles



Energy Efficiency of Airport Power Sources (continued)

Some Prerequisites for these Projects:

- An energy assessment/audit that documents the airport's:
 - Heating and cooling requirements;
 - Base load;
 - Back-up power requirements;
 - Power for on-road airport vehicles and ground support equipment; and
 - Set of energy efficiency practices, initiatives, and measures
- FAA does not prescribe a particular method for gathering this information
- For solar, a glint/glare analysis
- All other traditional AIP rules apply

Energy Efficiency of Airport Power Sources (continued)

Funding Limitations (in addition to those for all AIP grants):

FAA will provide support up to airport *base load*

A robust set of energy efficiency practices is expected

No-cost/low-cost and planned energy efficiency practices should be factored into base load calculations

Projects are not eligible for set-aside funding

Energy Efficiency of Airport Power Sources (continued)

| Project Information | | | | Project Benefits | |
|-----------------------|---|-----------------------------------|-------------------|--------------------------------------|---------------------------------------|
| FY | Airport | Project Type | MHw over 20 Years | Avg # of Households Powered Per Year | # of Households Powered Over 20 Years |
| 2012 | Albuquerque International (ABQ) | Solar PV Array | 30,300 | 132 | 2,636 |
| | Chattanooga Metropolitan - Lovell Field (CHA) | Solar PV Array | 42,000 | 183 | 3,653 |
| | Tucson International (TUS) | Solar PV Array | 32,000 | 139 | 2,784 |
| 2014 | Nashville International (BNA) | Geothermal Heating/Cooling System | 69,257 | 301 | 6,024 |
| Program Totals | | | 173,557 | 755 | 15,097 |



Energy Efficiency Improvements

Other AIP eligible energy efficiency projects:

- **VALE:** Limited to projects with emissions reduction benefits within the airport boundary
- **Costs to improve the energy efficiency of an airport building are AIP-eligible:**
 - Measures must be part of an eligible and justified airport building project
 - Increase in project costs must be justified by expected savings over the life cycle of the project
 - ✓ For additional information, see Page 3-53 of the AIP Handbook



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