Energy Savings Information

The FAA Acquisition Management System (AMS), section 3.6.3 states that environmentally-friendly products/technologies are to be procured to the maximum extent practicable. To be recognized as "environmentally-friendly" products/technologies, each must:

a. meet minimum requirements for recycled-content products designated by Environmental Protection Agency's (EPA) Comprehensive Procurement Guidelines (CPG);
b. be ENERGY STAR®-qualified or Federal Energy Management Program (FEMP) Designated as identified by EPA and Department of Energy (DOE);
c. be designated BioPreferred and biobased as designated by the U.S. Department of Agriculture (USDA);
d. use acceptable substitutes for ozone-depleting substances (ODS) that are identified under EPA's Significant New Alternatives Policy (SNAP) program;
e. be identified by other EPA programs, including WaterSense®, Safer Choice®, and SmartWay®;
f. meet non-federal specifications, standards or labels that meet or exceed those recommended by EPA or meet criteria developed or adopted by consensus standards bodies as presented in OMB Circular A-119 and EPA guidelines; and/or otherwise
g. meet FAA-specific standards, policies, programs, and incentives for sustainable acquisition, that meet or exceed the statutory requirements.

FAA requires the Contractor to provide information on products that reduce energy and water consumption at FAA staffed and unstaffed facilities. For replacement projects, the FAA needs to capture information on both the existing products that were replaced, as well as the new replacement products at each site-specific project location. This will allow the Agency to compute the amount of savings that result from the replacement project. For new solar photovoltaic (PV) system installations, only the new product information is required. FAA is required to report this information to the Department of Energy (DOE) through the Compliance Tracking System (CTS).

Summary Energy Savings Information (Entered on the Status Report)

Please provide the site-specific location of the project (city, state, congressional district) in the form of the FAA Job Control Number (JCN). The JCN will be the identifier for all cost and work components deployed to a particular FAA project location.

Please provide a general description of the energy-related work that was completed at the site/JCN location in narrative form. Provide the total installation cost for only the energy-related work. Work to be included falls under the following categories:

- Heating, Ventilation, and Air-Conditioning Replacement
- Lighting Upgrade
- Appliance Replacement
- Building Envelope Improvement (exterior doors/windows, roof/wall insulation)
- Plumbing Fixture Replacement
- New Solar PV System Installation

For Example:

- JCN Number (FAA 8 digit identifier)
- Description (Replace Chiller with AHUs and VFDs and Lighting Upgrades in the base building at the Albuquerque Air Traffic Control Tower (ATCT))
- Installation Cost (Total project cost less any non-energy related scope)

This summary information is required upon completion of the physical work and prior to the Contractor Acceptance Inspection (CAI).

Detailed Energy Savings Information (Entered on the Energy Savings Information Template)

Please provide the JCN and Installation Cost as entered on the summary status report. For each energy product identified in the summary status report, please include the required information for both the product that was replaced as well as the new installed product. The FAA recognizes that in some instances, the equipment efficiency specifications for existing products may not be obtainable. Where the preferred specification information is not available, alternative product descriptions are noted below as alternatives.

Heating, Ventilation, and Air-Conditioning Replacement

Existing Equipment Replaced and *New Equipment Installed* will be described as one of the products below:

a. Air-Conditioning (AC) Unit
b. Air-Handling Unit (AHU)
c. Boiler
d. Chiller
e. Computer Room AC Unit (CRAC)
f. Furnace
g. Heat Pump
h. Rooftop Unit (RTU)
i. Unit Heater
j. Water Heater
k. Water Pump

1. Preferred Specification Information for Heating, Ventilation, and Air-Conditioning
    - Size/Capacity of the *Existing Equipment Replaced* and *New Equipment Installed* expressed in the following units:
        a. BTU – British Thermal Unit
        b. HP – Horsepower
        c. kW- Kilowatts
        d. MBH – Thousand BTUs
        e. Gallons
        f. Tons

- Efficiency Rating expressed in the following units:
    a. CEER - Combined Energy Efficiency Ratio
    b. SEER – Seasonal Energy Efficiency Rating
    c. COP – Coefficient of Performance
    d. SCOP – Seasonal Coefficient of Performance
    e. EER – Energy Efficiency Rating
    f. EF – Energy Factor
    g. IEER - Integrated Energy Efficiency Ratio
    h. IPLV – Integrated Part Load Value
    i. NPLV – Nonstandard Part-Load Value
    j. % - Efficiency as a Percentage
- Quantity of Product
- HVAC Controls that are indicated by a YES or a NO answer
    a. BAS – Building Automation System
    b. DDC – Direct Digital Control
    c. VFD – Variable Frequency Drive
    d. VSD – Variable Speed Drive
- Installation Cost

Examples:

JCN: 01010101

Project Description: Replaced two (2) existing 150 Ton air-cooled chillers, 9.2 EER, with two (2) 150 Ton air-cooled chillers, 16.10 IPLV. Installed VSD to control one (1) existing 20 HP chilled water pump, and upgraded the existing BAS.

Installation Cost: $999,999,999

JCN #: 02020202

Project Description: Replaced three (3) 2000 MBH natural gas hot water boilers, thermal efficiency (TE) 82%, with two (2) 2600 MBH natural gas hot water boilers, TE 94%. Replaced four (4) 5 HP hot water pumps, efficiency 55%, with four (4) 7.5 HP hot water pumps, efficiency 73%. Replaced VSDs for two (2) hot water pumps and installed new DDC controls.

Installation Cost: $999,999,999

2. Other Alternative Specification for Heating, Ventilation, and Air-Conditioning in lieu of Preferred Specification (**existing products only**)
    - Where the Size/Capacity and Efficiency Rating are unavailable for the *Existing Equipment Replaced*, the following configurations are permitted as alternates:
        - Manufacturer, Model Number, Serial Number (or Installation Date)
        - Size/Capacity, Age or Installation Date

Examples:

JCN: 03030303

Project Description: Replaced two (2) Carrier chillers, model/serial 30RBA21066/S0998X1100, with two (2) 110 Ton chillers, 16.9 IPLV. Replaced two (2) Taco SKS4013 chilled water pumps, installed 1998, with two (2) 15 HP, 82% efficient chilled water pumps. Installed VSDs on the new pumps and upgraded the BAS.

Installation Cost: $999,999,999

JCN: 04040404

Project Description: Replaced three (3) 480,000 BTU AC Units, installed 2001, with two (2) 45 Ton RTUs, 11.6 IEER. Installed VFDs and DDC controls for both RTUs.

Installation Cost: $999,999,999

Lighting Upgrade

Existing Equipment Replaced and *New Equipment Installed* will be described as one of the products below:

a. Advanced/Automated Controls
b. Exterior Lighting
c. Interior Lighting

Required Specification Information for *Existing Equipment Replaced* and *New Equipment Installed,* where applicable, must include the following:

- Quantity of Fixtures/Bulbs
- Wattage (W) of Fixtures/Bulbs
- Existing Control Type
- Total Wattage controlled by new Controls
- EPA Energy Star Certified indicated by a YES or a NO/NA answer
- Installation Cost

Examples:

JCN #: 05050505

Project Description: Replaced forty-five (45) interior 40W T12s with forty-five (45) 18W LEDs. Removed eight (8) 60W incandescent bathroom vanity fixtures and installed ten (10) 13W LED vanity fixtures. Replaced manual wall switches with a combination of occupancy and vacancy sensors. 940 total watts controlled. All new products Energy Star certified.

Installation Cost: $999,999,999

JCN #: 06060606

Project Description: Replaced sixteen (16) exterior 95W HPS wall packs with sixteen (16) 21W LED Energy Star certified wall packs. Existing timers to remain. Replaced twenty-two (22) 400W HID parking pole light fixtures with twenty-two (22) 150W LED Energy Star certified fixtures with photocells.

Installation Cost: $999,999,999

Appliance Replacement

Existing Equipment Replaced and *New Equipment Installed* will be described as one of the products below:

a. Clothes Dryer
b. Clothes Washer
c. Cooktop/Range
d. Dishwasher
e. Disposal
f. Microwave
g. Refrigerator

Required Specification Information for *Existing Equipment Replaced* and *New Equipment Installed* must include the following:

- Manufacturer and Model Number
- Quantity of Product
- EPA Energy Star Certified indicated by a YES or a NO/NA answer
- Installation Cost

Examples:

JCN #: 07070707

Project Description: Replaced one (1) Frigidaire refrigerator in breakroom, model FFTR1814TW, with Samsung RT21M62A5WH, Energy Star certified.

Installation Cost: $999,999,999

JCN #: 08080808

Project Description: Replaced one (1) GE electric cooktop, model JP3422L1BG, with KitchenAid KECC604BSS. Energy Star not available for this product type.

Installation Cost: $999,999,999

Building Envelope Improvement

Existing Equipment Replaced and *New Equipment Installed* will be described as one of the products below:

a. Exterior Doors
b. Windows
c. Roof Insulation
d. Wall Insulation

1. Preferred Specification Information for Windows/Doors and Roof/Wall Insulation
    - Quantity of Product
    - Efficiency Rating: R-value (Insulation) or U-factor (Windows, Doors)
    - EPA Energy Star Certified indicated by a YES or a NO/NA answer
    - Installation Cost

Example:

JCN #: 09090909

Project Description: Replaced six (6) exterior doors, U-factor 0.35, with six (6) new doors, U-factor 0.25, Energy Star certified.

Installation Cost: $999,999,999

Example:

JCN #: 10101010

Project Description: Replaced 25,000 Sqft roof insulation as part of roof replacement. Increased R-value from R-20 to R-30. Energy Star gyp-fiber board insulation installed.

Installation Cost: $999,999,999

2. Alternative Specification for Windows/Doors and Roof/Wall Insulation in lieu of Preferred Specification (**existing products only**)
    a. Where the U-factor is unknown for Existing Windows/Doors, provide the approximate U-factor or the Product Description and Age/Installation Date
    b. Where the R-value is unknown for Existing Roof/Wall Insulation, provide the Insulation Type and Thickness

Examples:

JCN #: 20202020

Project Description: Removed four (4) exterior doors, approx. U-factor 0.33. Installed four (4) new exterior doors, U-factor 0.25, Energy Star certified.

Installation Cost: $999,999,999

JCN #: 30303030

Project Description: Removed eighteen (18) double-pane, aluminum casement windows, original to the building (1965). Installed eighteen (18) new windows, U-factor 0.19, Energy Star certified.

Installation Cost: $999,999,999

JCN #: 40404040

Project Description: Installed 10,000 Sqft continuous wall insulation over existing framing. R-5 foil-faced polyiso, Energy Star certified. Existing 6-inch fiberglass batt insulation in exterior walls to remain in place.

Installation Cost: $999,999,999

Plumbing Fixture Replacement

Existing Equipment Replaced and *New Equipment Installed* will be described as one of the products below:

a. Faucet
b. Showerhead
c. Toilet
d. Urinal

1. Preferred Specification Information for Plumbing Fixtures
    - Quantity of Product
    - Flow Rate (gpf, gpm) for both *Existing Equipment Replaced* and *New Equipment Installed*
    - EPA Water Sense Certified indicated by a YES or a NO answer
    - Installation Cost

Example:

JCN #: 5050505

Project Description: Replaced three (3) 1.5 gpf urinals with 0.5 gpf Water Sense certified urinals.

Installation Cost: $999,999,999

2. Other Alternative Specification for Plumbing Fixtures in lieu of Preferred Specification (**existing products only**)
    - Where the Flow Rate is not available for the *Existing Equipment Replaced,* indicate whether the product is rated low-flow/Water Sense by a YES or a NO answer.

Example:

JCN #: 6060606

Project Description: Replaced twelve (12) low-flow lavatory faucets with 1.0 gpm Water Sense certified faucets.

Installation Cost: $999,999,999

New Solar PV System Installation

Required Specification Information for the *New Equipment Installed* must include the following:

- System Size (kW-DC)
- Array Type described as one of the following:
    a. Carport
    b. Ground-mount Fixed
    c. Ground-mount Tracking
    d. Rooftop
- Array Tilt Angle (degrees)
- Array Azimuth Angle (degrees)
- Module Efficiency (%)
- Installation Cost

Example:

JCN #: 70707070

Project Description: Installed 75 kW-DC ground-mount fixed PV system. 20/180 deg tilt/azimuth. Module efficiency 19%.

Installation Cost: $999,999,999