

**INSTRUCTIONS FOR
FORM EIA-63A, ANNUAL SOLAR THERMAL COLLECTOR MANUFACTURERS SURVEY
GENERAL INFORMATION AND INSTRUCTIONS**

I. Purpose

Form EIA-63A is designed to provide the data necessary for the Energy Information Administration (EIA), U.S. Department of Energy (DOE), to carry out its responsibilities for tracking collector shipments in the solar collector manufacturing industry and for providing information concerning the size and status of the industry. The results of this survey will be published in aggregate form in the report, "Renewable Energy Annual 2003" and will be available on EIA's Home Page at <http://www.eia.doe.gov>.

II. Who Should Respond to This Survey

Form EIA-63A is to be submitted by companies (1) that manufactured and shipped (including exporting) solar thermal collectors and/or (2) that imported solar thermal collectors during the survey year (2003). If you are completing this survey form for the first time but were active in the industry during the previous survey year (2002), please photocopy the entire form and provide us with data for the previous year also.

III. Where to Submit Completed Forms

Completed and signed EIA-63A forms should be returned to:

*U.S. Department of Energy
Energy Information Administration, BG-094
1000 Independence Ave., SW
Washington, D.C. 20277-7091*

Request for further information and/or additional forms may be mailed to the above address or telephoned to the Survey Manager, Kathy Gibbard at (202) 287-1724 and Susan Henry at (202) 287-1792.

IV. When to Submit Completed Forms

Completed EIA-63A forms are due on the date specified in the cover letter. The survey year is from January 1 through December 31 each year.

V. Sanctions

The timely submission of Form EIA-63A by those required to report is mandatory under Section 13(b) of the Federal Energy Administration Act of 1974 (FEAA) (Public Law 93-275), as amended. Failure to respond may result in a civil penalty of not more than \$2,500 for each violation, or a fine of not more than \$5,000 for each willful violation. The government may bring a civil action to prohibit reporting violations which may result in a temporary restraining order or a preliminary or permanent injunction without bond. In such civil action, the court may also issue mandatory injunctions commanding any person to comply with these reporting requirements.

VI. Provisions Regarding Confidentiality Of Information

The Office of Legal Counsel of the Department of Justice concluded on March 20, 1991, that the Federal Energy Administration Act requires the Energy Information Administration to provide company-specific data to the Department of Justice, or to any other Federal agency when requested for official use, which may include enforcement of Federal law. The information contained on this form may also be made available, upon request, to another component of the Department of Energy (DOE), to any Committee of Congress, the General Accounting Office, or other Congressional agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order.

The information contained on this form will be kept confidential and not disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the DOE regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905.

Upon receipt of a request for this information under the FOIA, the DOE shall make a final determination whether the information is exempt from disclosure in accordance with the procedures and criteria provided in the regulations. To assist us in this determination, respondents should demonstrate to the DOE that, for example, their information contains trade secrets or commercial or financial information whose release would be likely to cause substantial harm to their company's competitive position. A letter accompanying the submission that explains (on an element-by-element basis) the reasons why the information would be likely to cause the respondent substantial competitive harm if released to the public would aid in this determination. A new justification does not need to be provided each time information is submitted on the form, if the company has previously submitted a justification for that information and the justification has not changed.

SPECIFIC INSTRUCTIONS

- | <u>Item</u> | <u>Instruction</u> |
|-------------|--|
| 1.1 (a-d) | Make corrections to the company name or address in the spaces provided. |
| 1.2 (a-c) | Enter the name, title, and telephone number of a company contact person who may be contacted for additional information regarding this submission. |
| 2.1 (a-d) | Mark as appropriate the manufacturing activity conducted by your company during the current reporting period. If you answer "Yes" to any one of (a) through (d) please begin with Item 3.0 and complete the remainder of this form. If you answer "No" to all of (a) through (d) please complete only Items 2.2 and 8.0. |
| 2.2 | If you answered "No" to all of Item 2.1, please mark whether your company plans to begin or continue any manufacturing activity and, if so, in what year. |
| 3.1 (a-h) | Report only on activities that are solar related. |
| 3.2 (a-e) | A new solar-related product is differentiated from a modified existing product if the "new" product is different enough to warrant a new model number and requires retesting or recertification under existing industry standards. |
| 3.3 | Enter the total number of person-years expended on solar-related activities during the survey year. (See definition of "Person Year" on page 4.) |
| 3.4 | "Solar-related activities" includes all activities listed in Item 3.1. |
| 4.1 | Enter the square footage (not the number of collectors), in whole numbers (i.e., no decimals), of solar collectors by type shipped for final consumption or to another organization for resale (including exports and imports) in the appropriate collector type column. Total (column I) should be the total square footage of all collector types in that row. |
| 4.2 | Enter the total value received for the total collector shipments in Item 4.1 by type. The value reported should be the total value received for collectors only at your company's net billing price, freight-on-board factory, including charges for cooperative advertising and warranties. Do not include excise taxes, freight, or transportation. Report values to the nearest dollar. Total (column I) should be the total value of all collector types in that row. |
| 4.3 | For each appropriate sector, enter the square footage of collector shipments in Item 4.1 by collector type as precisely as possible. The market-sector categories in Item 4.3 are:

Part (1) <i>Residential</i> - Solar applications related to any building used for residential occupancy that has a system for heating or cooling, or both.
Part (2) <i>Commercial</i> - Solar applications for use in businesses where services (rather than products) are provided, such as wholesale and retail trade or health and educational services.
Part (3) <i>Industrial</i> - Solar applications for use in businesses where products (rather than services) are provided, such as the manufacture and processing of goods and basic materials.
Part (4) <i>Utility</i> - Shipments of solar thermal collectors to utilities for use in power generation or for experimental applications (includes gas and electric utilities). Includes central stations, decentralized systems or experimental applications.
Part (5) <i>Other</i> - Shipments of solar thermal collectors to other sectors such as "Government" (including the military).

<i>Total market sector</i> - Sum market sector quantities and enter a total for each row [4.3(1)-(5)] in column I. Next, sum columns a through I and enter a total in row 4.3(6) for each column. These column totals should equal shipment totals entered under Item 4.1 by column. The total entered for 4.3(6) in column I should equal the total entered for Item 4.1 in column I. |
| 4.4 | For each end use, enter the square footage of collector shipments in Item 4.1 by collector type as precisely as possible. The end-use categories in Item 4.4 are:

Part (1) <i>Pool Heating</i> - Self-explanatory.
Part (2) <i>Hot Water</i> - Shipments of solar thermal collectors used only for water heating.
Part (3) <i>Space Heating</i> - Shipments of solar thermal collectors used only for space heating.
Part (4) <i>Combined space and water heating</i> - Shipments of solar thermal collectors are used in combination for space and water heating.
Part (5) <i>Space cooling</i> - Shipments of solar thermal collectors used for space cooling (air conditioning) or for space cooling in combination with water and/or space heating.
Part (6) <i>Process heating</i> - Shipments of solar thermal collectors used for industrial process heating.
Part (7) <i>Electricity Generation</i> - Shipments of solar thermal collectors such as concentrators, linear fresnel lens, heliostats, parabolic dishes, and parabolic troughs used as steam generators to power electric generators.
Part (8) <i>Other</i> - Shipments of solar thermal collectors for other uses such as cooking food, water pumping, water purification, desalinization, distilling, etc. |

SPECIFIC INSTRUCTIONS

<u>Item</u>	<u>Instruction</u>
4.4	Total end use - Sum end-use quantities and enter a total for each row [4.4(1)-(8)] in column I. Next, sum columns a through I and enter a total in row 4.4(9) for each column. These column totals should equal shipment totals entered under Item 4.1 by column. The total entered for 4.4(9) in column I should equal the total entered for Item 4.1 in column I.
4.5	Enter the square footage by collector type. This amount represents the portion of total collector shipments entered in Item 4.1 that were imported and shipped by your company.
4.6	Enter the square footage by collector type. This amount represents the portion of total collector shipments entered in Item 4.1 that were manufactured for export and shipped (sold) to another country.
4.7	List the country(ies) from which solar collectors reported in Item 4.5 were imported.
4.8	List the country(ies) to which solar collectors reported in Item 4.6 were exported, and percent of exports in Item 4.6 for each country listed.
4.9	Of the collectors reported in Item 4.1(I), report in square feet, the recipients of solar thermal collectors immediately following manufacturing or warehousing. If recipients overlap (for example, the recipient is both a wholesale distributor and an installer) report the recipients in the higher category (i.e., a is higher than b, b is higher than c, etc.).
5.1	Enter number of complete systems shipped from the total in Item 4.1(I).
5.2	Of the collectors reported in Item 4.1(I), enter the square footage that was sold as complete systems. (Complete system is defined as unit with all the necessary functional components, except for installation materials. These include thermosiphon systems, integral collector storage systems, packaged systems, or system kits.)
5.3	The value reported should be total value received for the complete systems at your company's net billing price, freight-on-board factory, including charges for cooperative advertising and warranties. (It should include the value of associated collectors.) Do not include excise taxes, freight or transportation charges, or installation charges. Report values to the nearest dollar.
6.1	Please identify only the State/U.S. territory of final assembly of the collector. Please be certain to provide total percentage calculations.
6.2	Refers to collector shipments only. Indicate the last State/U.S. territory of destination of which you are aware.
7.1	Mark as appropriate.
7.2	Mark as appropriate.
8.0	Self-explanatory.

DEFINITIONS

1. **Air Collector** - A medium-temperature solar thermal collector used predominantly in space-heating application and which utilizes pumped air as the heat-transfer medium.
2. **Concentrator** - A reflective or refractive device that focuses solar rays onto an area smaller than the reflective or refractive surface, resulting in higher intensity solar rays at the point of focus.
3. **Evacuated-Tube Collector** - A solar thermal collector in which the collector fluid flows through an absorber tube that is contained inside an evacuated glass cylinder.
4. **Export (solar)** - A shipment of solar thermal collectors and/or photovoltaic devices sent from the United States and any of its territories to a foreign country.
5. **Flat Plate (pumped)** - A medium-temperature solar thermal collector, typically made with a metal frame, glazing, absorbers (usually metal), and insulation, that uses pumped liquid as the heat-transfer medium; predominantly used in water-heating applications.
6. **High-Temperature Collectors** - A solar thermal collector that generally operates at temperatures above 180 degrees Fahrenheit.
7. **Import (solar)** - A shipment of solar thermal collectors and/or photovoltaic devices into the United States and any of its territories from foreign countries.
8. **Integral Collector Storage (ICS)** - A solar thermal collector in which incident solar radiation is absorbed directly by the storage medium.
9. **Liquid Collector** - A medium-temperature solar thermal collector used predominantly in water heating, utilizing pumped liquid as the heat-transfer medium.
10. **Low-Temperature Collectors** - A solar thermal collector that generally operates at temperatures below 100 degrees Fahrenheit.
11. **Medium-Temperature Collectors** - A solar thermal collector that generally operates in the temperature range of 140 degrees Fahrenheit to 180 degrees Fahrenheit but can also operate at a temperature as low as 100 degrees Fahrenheit.
12. **Parabolic Dish** - A high temperature (above 180 degrees Fahrenheit) solar thermal concentrator, generally bowl-shaped, with the capacity for tracking the sun using two axes of rotation.
13. **Parabolic Trough** - A high temperature (above 180 degrees Fahrenheit) solar thermal concentrator with the capacity for tracking the sun using one axis of rotation.
14. **Person Year** - One whole year, or fraction thereof, worked by an employee. It is expressed as a quotient (to two decimal places) of the time units worked during a year (hours, weeks, months) divided by the like total time units in a year. For example: 80 hours worked is 0.04 (rounded) of a person year; 3 weeks worked is 0.06 (rounded) of a person year; 12 months worked is 1.0 person year.
15. **Solar Thermal Collector** - A device designed to receive solar radiation and convert it into thermal energy. Normally, a solar thermal collector includes a frame, glazing, and an absorber, together with appropriate insulation. The heat collected by the solar thermal collector may be used immediately or stored for later use.
16. **Thermosiphon System** - A solar collector system for water heating in which circulation of the collection fluid through the storage loop is provided solely by the temperature and density difference between the hot and cold fluids.