A Guide to Exporting for U.S. Solar Companies

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the International Division

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INTRODUCTION

There are two simple reasons why U.S. manufacturers should export—more profits and more jobs for Americans. More than this, exporting provides a broader marketing base and results in greater company growth. Until recently only a few medium-sized and smaller U.S. firms have entered the foreign marketplace. That tide has changed. Some 10,000 small firms, those with fewer than 100 employees, now export. Export markets have become major growth areas for these firms.

Besides the fundamental profit motive, other reasons for entering the export market are:

- Overseas markets may be receptive to solar systems sooner than in the United States;
- Increased markets will justify growth in plant capacity;
- Recent currency fluctuations provide a competitive advantage to American-made products;
- American technology is favored in many foreign markets;
- Export markets offer an expanded sales base to protect against regional or national business cycles;
- Exports allow a seasonal business to operate at higher capacity by extending production schedules;
- Exports can extend the useful life of a product or technology.

A firm that has been successful in the domestic market has every likelihood of success in international markets. Selling abroad will require the same energy, determination, advance planning, market research, and attention to detail. Preliminary considerations to entering international markets include:

- A commitment to export must be made by the Chief Executive and be communicated to the entire company;
- Responsibility for export planning and exporting must be assigned to one person;
- An export marketing plan must be developed (see Business Counseling Service of the Department of Commerce and the Small Business Administration). This plan should include an export operations budget, an assessment and selection of export products, an identification of two or three initial foreign markets, and a foreign marketing strategy.
- The fundamental marketing strategies of direct sales, indirect sales, licenses, and joint ventures must take into consideration that overseas marketing costs will be significantly higher.

Once the commitment to export has been made, decisions on "how" to export and "where" to export are primary goals. This manual was assembled to provide some basic information to answer the "how" and "where." It provides:

- Information concerning the services which are currently available to facilitate entry into foreign markets, and
- The basic social, economic and radiation data on over 70 foreign markets.
SECTION 1.0
EXPORT SERVICES

HOW TO EXPORT?

As indicated earlier, thousands of small companies are beginning to enjoy expanded mar­kets for their products. The U.S. government has a number of services to assist a com­pany which has made the decision to export. This section provides a listing of some of the agencies with services designed to render assistance.

1.1 U.S. DEPARTMENT OF COMMERCE

The U.S. Department of Commerce (DOC) has a primary mission to assist American busi­nesses currently exporting or wishing to do so. The 43 district offices of the Department of Commerce located throughout the United States are all qualified to assist an American firm in: (1) entering the export field; (2) expanding overseas sales; (3) locating an overseas agent or distributor; (4) licensing a product for foreign manufacture or; (5) negotiating a joint venture. The addresses of all 43 offices are listed in the Appendices.

Department of Commerce offices provide the following services.

1.1.1 Business Counseling Services

For a small solar company or a large sophisticated conglomerate, the first step to exporting is an understanding of the required commercial commitment and the develop­ment of a commensurate marketing strategy. District officers of the DOC will provide guidance and counseling in these determinations; identify foreign markets, suggest possible agents or distributors; provide information on sources of credit and insurance; and review a wide range of current foreign projects under consideration by the World Bank, the Inter-American Development Bank, the Asian Development Bank, and the United Nations Development Programme. This service is designed to give a businessman the maximum amount of guidance in developing an export strategy.

1.1.2 Foreign Traders Index/Export Mailing List Service

The Foreign Traders Index is a master computer file containing information on more than 150,000 types of firms, agents, representatives, distributors, manufacturers, service organizations, retailers, and end users of American products and/or services in 130 coun­tries. Data from this Index are available to U.S. businessmen in three forms:

- Exporting Mailing Lists are specially targeted retrievals for individual requestors wishing to obtain lists of foreign companies in selected countries by commodity classification. Lists are available as gummed mailing labels or printouts, and include the name and address of the firm, the name and title of the executive officer, the type of organization, the year established, the relative size, the number of employees and sales personnel, and the product or service codes by Standard Industrial Classification (SIC) number.
Data Tape Service is designed to allow U.S. firms having their own computer facilities to purchase magnetic tapes containing the information on firms included in the Foreign Traders Index. Information may be requested for all or selected countries.

Trade Lists are: (1) lists of controlled trading companies in those countries where state-owned organizations conduct foreign trade; or (2) lists of businesses in selected development countries.

1.1.3 **World Traders Data Reports (WTDR)**

World Traders Data Reports offer a more detailed description of selected foreign firms. When a particularly interesting firm is identified from the Foreign Traders Index or the Export Mailing List, a WTDR can provide expanded information on the company's organization, year established, relative size, number of employees, general reputation, territory covered, languages preferred, products handled, financial references, trade references, and a general narrative on the firm's reliability. If a firm is not on file, the DOC will prepare the information.

1.1.4 **Agent/Distributor Service**

This service is used to directly identify agents and/or distributors for U.S. products and services. U.S. Commercial Officers overseas will supply up to six foreign firms interested in a company's proposal. Commercial District Officers will then guide and assist in the evaluation of any business relationship under consideration.*

1.1.5 **The Trade Opportunities Program (TOP)**

This program furnishes U.S. businesses with specific solicitations from overseas buyers (private and government) as well as notices of foreign companies offering to represent U.S. firms. American businesses subscribe to this service and indicate the product categories, type of opportunities, and countries for which they wish to receive leads. Leads reported from overseas are automatically matched, separated, printed, and mailed to appropriate subscribers. These leads are generated by more than two hundred American embassies and consulates.

1.1.6 **New-Product Information Service (NPIS)**

This service is designed to help "new-to-export" companies publicize the availability of their U.S. products in foreign markets. Product information selected for this service is published in the "Commercial News, USA," which is distributed to 240 U.S. embassies and consulates. The information is then translated and printed in eighty-five commercial newsletters distributed to over 100,000 foreign business and government officials.

The above services are only a few of those provided by the DOC. Other services and publications which the District officers can provide include:

*See Appendices for correct mailing procedures.*
1.2 EXPORT-IMPORT BANK OF THE UNITED STATES

The Export-Import Bank of the United States (EXIMBANK) has a primary function to facilitate the export trade of the United States through a variety of financial support programs. EXIMBANK extends and guarantees credits to overseas buyers of American goods and services; it guarantees medium-term exporter credit; it insures short- and medium-term exporter credit; and it discounts export debt obligations held by commercial banks. These basic services are designed to complement, not compete with, the services of private commercial banks.

EXIMBANK's charter states these basic operating principles: loans should generally be for specific purposes and should offer reasonable assurance of repayment; fees and premiums charged for guarantees and insurance should be commensurate with the risks covered; assistance is limited to transactions supporting exports only from the United States; and terms-of-credit support is limited to the normal for specific goods in international trade.

1.2.1 Direct Loans for Foreign Buyers

If a foreign buyer plans to procure equipment of sufficient cost from a U.S. supplier, a direct credit from EXIMBANK, coupled with commercial bank participation, may be the most appropriate method of financing. In general, an EXIMBANK credit will only finance the dollar cost of the capital goods and related services. This program is designed to provide long-term financing for multimillion dollar product sales. Small suppliers often benefit from subcontracts, but they seldom are involved as primary suppliers.

1.2.2 Guarantees and Insurance

More than 50% of the guarantee and insurance authorizations of the EXIMBANK support export sales of $200,000 or less and can directly benefit small exporters. All of these programs involve active credit participation by U.S. commercial banks.
Basically, the EXIMBANK provides guarantees and the Federal Credit Insurance Association provides insurance to overcome the risks involved in extending credit to unknown foreign buyers in developing markets. The risks covered are: (1) commercial risks (i.e. insolvency of foreign buyer or protracted default) up to 90% of the financed portion; and (2) political risks beyond the control of the buyer or seller (i.e. war, revolution, revocation of import licenses, expropriation, etc.) up to 95% for short-term sales and 90% for medium-term sales.

Under the Small Business Program, foreign buyers must make a cash payment of at least 15% of the invoice value, and exporters must carry, at their own risk, at least 10% of the financed portion throughout the credit period. EXIMBANK will cover 100% of the political risk and 95% of the commercial risk.

1.2.3 Cooperative Financing Facility

After a cash payment of at least 15%, EXIMBANK will lend to a cooperating financial institution outside of the United States, one-half of the funds required for a purchase from the U.S. supplier. The cooperating institution, in turn, is required to lend the full amount to its customer.

1.2.4 Small Business Advisory Service

To assist smaller firms, EXIMBANK also provides information on the availability and use of export credit insurance, guarantees, discount loans, and foreign bank credits supporting the sale of U.S. goods and services abroad. Direct telephone inquiries are welcome: (202) 5667-8990.

1.3 U.S. SMALL BUSINESS ADMINISTRATION

The U.S. Small Business Administration (SBA) offers prospective small exporters assistance in entering the field of international trade through management and technical assistance programs. Financial assistance for current or prospective exporters may also be available.

SBA Export Counseling Services are available at no cost to eligible recipients and may include any or all of the following sources.

1.3.1 Service Corps of Retired Executives (SCORE) and Active Corps of Executives (ACE)

These programs are available to help the small business entrepreneur make the important preliminary assessment of export potential. Since a basic requirement for successful overseas sales is a strong domestic operation, these executive volunteers can help a small business client identify managerial, financial, or technical problems which must be initially solved, and can then assist in developing a basic Export Marketing Plan. This plan includes identifying products most appropriate for export; the best market locations; the best market penetration methods; and information on licenses, transportation, advertising, promotion, pricing, financing, and relevant government policies.
1.3.2 The Small Business Institute

The Small Business Institute (SBI) program provides senior and graduate level international business students who can develop export marketing feasibility studies for "client" firms. Programs can be identified based on the Export Marketing Plan, specific country location, potential overseas demand, channels of distribution, marketing techniques, and financing procedures.

1.3.3 Call Contract Program

The Call Contract Program enables small or minority businesses requiring highly sophisticated marketing information or production technology to obtain counseling to identify and service overseas markets. This specialized export assistance is provided at no cost to eligible clients.

1.3.4 Financial Assistance to Exports

All aspects of the SBA's financial assistance programs are delegated to local field offices. While the SBA does not have a specific program for export lending, it is eager to promote small business participation in international trade. During FY 1979, for example, the SBA restructured its lending priorities to provide up to $100 million of its loan guaranty authority for the use of small businesses in export-oriented activities. Since SBA's financial assistance programs are restricted to providing loans and loan guarantees for firms located in the United States, its possession, and territories, the Agency is unable to provide financial assistance for the establishment of overseas joint ventures.

By law, the SBA cannot make a loan if a business is able to obtain funds from a bank or other private financial institution; therefore, each prospective applicant must examine his or her own resources prior to applying for SBA financial assistance. The SBA, like all lending institutions, has certain credit requirements all applicants must meet. Under the Agency's Business Loan Program, all loans must be of such sound value or so secured as to reasonably ensure repayment. In effect, this means that each applicant must have a reasonable equity investment, adequate collateral, and be able to furnish evidence of the firm's ability to repay the loan and other outstanding debts from the firm's earnings.

The supply of direct SBA loan funds, however, is very limited. For many years, the SBA has emphasized bank participation with SBA guaranty authority. In fact, over 90% of the Agency's regular business loans are made under the guaranty plan. This plan provides for an SBA guarantee of up to 90% of the loan amount or $500,000, whichever is less.

Funds may be used to purchase machinery, equipment, facilities, supplies, or materials needed to manufacture or sell products overseas, as well as for working capital. Working capital loans may be used to defray the costs of developing foreign markets. Specifically, this can include costs for professional foreign marketing advice and services, foreign business travel, shipping sample merchandise abroad, shopping foreign markets, participation in overseas trade shows and international fairs, foreign advertising, preparation of promotional materials, and other related purposes.
Through its Guaranty Loan Program, SBA can assist a commercial bank in providing short-term working capital to a manufacturer for the additional labor or materials required to secure an export sales contract. This contract should be covered by a Foreign Credit Insurance Association Policy held by the exporter or the commercial bank.

Since private lending institutions analyze loan requests under the Guaranty Program according to their own credit policies, a well-developed business proposal should be completed. Such proposals should at least include:

- current and historical financial statements,
- descriptions of the use of the proceeds of the loan,
- projected earnings statements, including the increased debt service,
- supporting documentation on which expanded revenues are based.

It would be helpful to also provide information on the amount and types of collateral, financial statements of the business principals, and past experience in the field. Since the information needs of private financial institutions vary, each applicant should be aware that additional data may be required.

1.4 OVERSEAS PRIVATE INVESTMENT CORPORATION

The Overseas Private Investment Corporation (OPIC) offers qualified U.S. businesses appropriate guidance, counseling, and financial support in determining how and where to invest in undeveloped countries. Insurance protection and financial services are available during project development and operation. Through OPIC, the federal government encourages and assists U.S. private overseas investments, including investments in distributorships owned by U.S. manufacturers, as long as these investments are consistent with both the United States' and the developing nation's economic interests. The agency places special emphasis on projects sponsored by small- and medium-sized American business investors.

All applications for OPIC financial insurance are reviewed to assure consistency with host country aims and U.S. foreign economic policy. Approved projects must offer potential benefit to the host country in such areas as job creation, skills training, import savings, export earnings, and tax revenues. They also are reviewed to ensure that the United States gains net benefits in expanded trade, employment, access to needed materials, and investor earnings.

1.4.1 Target Missions

Target missions are conducted with on-the-spot studies by OPIC officials in selected countries. These are followed by investor identification and project brokering in the United States designed to match potential projects with qualified investors. OPIC then organizes group visits by U.S. business executives to selected countries, where they meet host country officials, local businesspersons, and U.S. embassy personnel and review areas of investment opportunity. These missions have been received enthusiastically by medium and small companies.
1.4.2 Feasibility Studies

On a selective basis, OPIC will enter into cost-sharing arrangements with a U.S. firm to investigate and study the feasibility of an opportunity identified through the firm's resources. To encourage investment in poor countries, feasibility study funds are available to companies of specific size in host countries having a specific per capita income. However, smaller U.S. firms are eligible for feasibility survey assistance in all countries in which OPIC operates. To receive such assistance, the U.S. firm must have a sound operating record and demonstrate managerial, technical, and financial competence to implement the project if it proves feasible.

The maximum OPIC participation is $50,000 or up to 75% of the total eligible costs of the study as formally budgeted and agreed upon by the firm and OPIC, whichever is less. If a project results from the study, the costs of the study are expected to be capitalized as part of the overall project costs. If a decision not to invest is reached, OPIC will reimburse the sponsor for the agreed portion.

1.4.3 Insurance Protection

OPIC's political risk insurance is often an important factor in an investor's decision to commit funds to projects in developing nations and to a financial institution's participation in project financing.

OPIC provides insurance against three types of risk: (1) currency inconvertibility, (2) expropriation, and (3) loss or damage caused by war, revolution, or insurrection.

Coverage extends to 90% of an investor's equity, debt, or other form of exposure. Typical insurance contracts last up to 20 years at a combined annual premium of 1.5% for all three coverages, although in most cases any one or a combination of the three coverages may be taken. OPIC insures new investments or the significant expansion or modernization of an existing enterprise. In all cases, foreign government approval is a prerequisite to OPIC insurance.

1.4.4 Project Financing

As a source of medium- and long-term funds for project financing in countries where conventional financial institutions are often reluctant to lend, OPIC can provide a portion of a project's debt requirements. OPIC's financing commitment in a new venture is usually 35%-45% of total project costs, not to exceed 50%.

OPIC participates in project financing through:

- Loans from its Direct Investment Fund, generally ranging from $200,000 to $3 million, repayable over a term from 5-12 years following a suitable grace period, with interest rates depending on OPIC's assessment of the financial and political risks involved;
- Guarantees of loans made by private U.S. financial institutions from $2-$25 million;
- A combination of these financing instruments.
In all cases the project must be commercially and financially sound; must be approved by the host country; and must be within the demonstrated competence of the proposed management and the U.S. investor, who have a proven record of success in the particular business and a significant financial risk in the enterprise.

OPIC encourages joint ventures between foreign citizens and U.S. firms. However, in projects involving OPIC financing, U.S. investors must own at least 25% of the voting shares or equivalent risk-taking interest, and the U.S. sponsor is expected to have a continuing management role. (There is no minimum U.S. equity participation required in connection with OPIC insurance protection.)

1.4.5 Special Assistance for Small Business

The 1978 amendments to OPIC's charter call for preferential measures to encourage investment by U.S. small- and medium-sized companies interested in the growing markets of developing nations.

Consistent with this mandate, OPIC provides several specific services to smaller U.S. companies, defined as those not ranked in the "Fortune 1000," not available to larger companies. These services include a reduced insurance registration fee, OPIC payment for the services of licensed insurance brokers to smaller companies in obtaining OPIC insurance, grants for certain project reconnaissance travel, expanded funding of up to 75% of agreed costs of feasibility studies, assumption by OPIC of certain legal or consultant's fees incurred in establishing or operating a project, assistance in setting up financial controls, and support of private U.S. voluntary organizations and cooperatives in developing small-scale private enterprises.
SECTION 2.0
WHERE TO EXPORT?

An area's incident solar radiation will indicate the technical or economic practicality of a solar system. Several hundred stations in over 70 countries have been referenced to provide solar radiation values.

If the population, GNP per capita, or energy consumption per capita are small, marketing strategies should correspond. For example, small populations may be targets for a marketing effort but not a distribution point. Small GNP per capita may indicate the best market is via government or subsidized programs, while small energy consumption per capita may dictate the sale of simple versus high technology systems. This handbook contains a set of economic and social statistics that orient marketing strategies toward the appropriate marketing of appropriate technology.

Information available on foreign solar and related trade associations indicates that many countries lack a solar industry. This fact can be interpreted either as a write-off or an opportunity. Wherever possible, commercial and solar associations that can provide more detailed trade and solar information have been included.
SERIO
## STATISTICAL PROFILE: NORTH AMERICA

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (million)</th>
<th>Per Capita Income (US$)</th>
<th>Primary Language</th>
<th>Urban/Rural (%)</th>
<th>Literacy Rate (%)</th>
<th>Monetary Unit</th>
<th>Population Density (sq m) (sq k)</th>
<th>GNP (US$ million)</th>
<th>GNP Per Capita (US$)</th>
<th>Production (quad Btu)</th>
<th>Gross Energy Consumption (quad Btu)</th>
<th>Energy Use Per Capita (MBtu)</th>
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## Insolation: North America

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*Insolation: langleys per day (1 langley = 1 cal/cm² = 3.69 Btu/ft²).*
### Statistical Profile: Canada

<table>
<thead>
<tr>
<th>Population (millions):</th>
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<td>Primary language:</td>
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<td>Energy production (quad Btu)^a:</td>
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#### Insulation and Temperature

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</table>

^a Based on U.N. conversation of 7000 cal/gram.

^cQuads.
Embassies:
Canada: 1746 Massachusetts Ave., NW
         Washington, D.C. 20036
U.S.: 100 Wellington St.
       Ottawa,
       Canada K1P 5T1
       Tel: (613) 238-5335
       Telex: 0533582

Chambers of Commerce:
The Canadian Chamber of Commerce, Inc.
1080 Beaver Hall Hill
Montreal, Quebec H2Z 1T2
Canada

Trade and Solar Interest Organizations:
Solar Energy Society of Canada, Inc.
608-870 Cambridge Street
Winnipeg, Manitoba R3N 3H5
Canada

British Columbia Energy Commission
2010-1177 West Hastings Street
Vancouver, British Columbia V6E 2L7
Canada
L6047 89-1839

Trade Organizations (Contd.):
Other (government):
Energy and Natural Resources
9915-108 Street
Edmonton, Alberta T5K 2C9
Canada
(403) 427-7727

Ministere des Richesses Naturelles
Direction generale de l'energie
200 Chemin Ste-Foy
Quebec, P.Q. G1R 4X7
Canada
(418) 643-3724

The Canadian Construction Association
Construction House
85 Albert Street
Ottawa, Ontario K1P 6A4
Canada
STATISTICAL PROFILE: MEXICO

Population (millions): 64.6
Per capita income (US$): 1,010
Primary language: Spanish
Urban/rural: 64/36
Literacy rate: 82
Monetary unit: Peso
Population density
per sq. mile: 80
per sq. kilometer: 31

<table>
<thead>
<tr>
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<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
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<th>May</th>
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quad = quadrillion ($10^{15}$).
Insolation: langley (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

a Based on U.N. conversation of 7000 cal/gram.
b F.A.S. transaction values.
c Quads.

Embassies:
Mexico: 2829 16th St., NW
Washington, D.C. 20009
U.S.: Paseo de la Reforma 305
Mexico 5 City, Mexico
Tel: (905) 553-3333
Telex: 017-73-091
017-75-685

Chambers of Commerce:
Confederacion de Camaras Nacionales de Comercio (CONCANACO)
Balderas 144, 2° 43° Pisos
Apdo. 113
Mexico I. D.F.
STATISTICAL PROFILE: MEXICO (Concluded)

Trade and Solar Interest Organizations:
Grupo del Sol, S.C.
Costa 209
Col. Las Aguilas
Mexico 20, D.F.
(solar energy group)

Asociacion Nacional de Importadores y Exportadores de la Republica Mexicana (ANIERM)
Paseo de la Reforma 122, 8°
Mexico 6, D.F.
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<th>STATISTICAL PROFILE: UNITED STATES OF AMERICA</th>
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<td>Population (millions): 216.8</td>
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<tr>
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<tr>
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<td>Urban/rural (%): 74/26</td>
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<td>Literacy rate (%): 99</td>
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<td>GNP (US$ billions): 1,698.0</td>
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<td>GNP per capita (US$): 7,686</td>
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<td>Energy production (quad Btu)(a): 56.599</td>
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<td>(quad Btu): 65.29</td>
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<td>Consumption per capita (MBtu)(b): 305.77</td>
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<td>Oil(c): 15.3</td>
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<td>Gas(c): 191</td>
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<td>Trade with U.S.:</td>
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<tr>
<td>From U.S. Imports: —</td>
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<tr>
<td>To U.S. Exports: —</td>
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Long-term monthly averages of incident solar radiation, temperature, degree-days, and global K_t for 248 U.S. locations are available in the Insolation Data Manual, SERI/SP-755-789. This manual can be purchased from:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402
**STATISTICAL PROFILE: CENTRAL AMERICA**

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<th>Country</th>
<th>Population (million)</th>
<th>Per Capita Income (US$)</th>
<th>Primary Language</th>
<th>Urban Rate (%)</th>
<th>Monetary Unit</th>
<th>GNP (US$ million)</th>
<th>GNP Per Capita (US$)</th>
<th>Production (quad Btu)</th>
<th>Gross Energy Consumption (quad Btu)</th>
<th>Energy Use Per Capita (MBtu)</th>
<th>Reserves (quad)</th>
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# Insolation: Central America\(^a\)

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<td>372</td>
<td>448</td>
<td>388</td>
<td>380</td>
<td>420</td>
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\(^a\)Insolation = langleys per day (1 langley = 1 cal/cm\(^2\) = 3.69 Btu/ft\(^2\)).
STATISTICAL PROFILE: EL SALVADOR

Population (millions): 4.3  GNP (US$ billions): 2.0
Per capita income (US$): 503  GNP per capita (US$): 492
Primary language: Spanish  Energy production (quad Btu)a: 0.0019
Urban/rural (%): 39/61  Gross energy consumptiona
Literacy rate (%): 58  (quad Btu): 0.0275
Monetary unit: Colon  Consumption per capita (MBtu)b: 6.89
Population density  Energy Reserves:
per sq. mile: 508  Oilc: —
per sq. kilometer: 196  Gasc: —

GNP (US$ billions): 2.0  Trade with U.S.
GNP per capita (US$): 492  From U.S. Imports: 352
Energy production (quad Btu)a: 0.0019  To U.S. Exports: 444
Gross energy consumptiona
(quad Btu): 0.0275
Consumption per capita (MBtu)b: 6.89
Energy Reserves:
Oilc: —
Gasc: —

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
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San Salvador: | | | | | | | | | | | | |
Lat.: 13° 43’ N  | | | | | | | | | | | | |
Long.: 89° 12’ W | | | | | | | | | | | | |
Insolation | 498 | 544 | 561 | 549 | 528 | 449 | 530 | 597 | 454 | 506 | 510 | 504 |
Temperature | 22.1 | 22.4 | 23.5 | 24.2 | 23.7 | 23.1 | 22.9 | 23.0 | 22.5 | 22.4 | 22.0 | 22.0 |

quad = quadrillion (10^{15}).
Insolation: langley (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

Embassies:
El Salvador: 2308 California St., NW
Washington, D.C. 20008
U.S.: 1230, 25 Avenida Norte
San Salvador, El Salvador
Tel: 25-7100

Chambers of Commerce:
Camara de Commercio e Industria de El Salvador
9a Avda. Notre y 5a Calle Pte
San Salvador, El Salvador
STATISTICAL PROFILE: GUATEMALA

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<td>Gross energy consumption(^a):</td>
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<td>Consumption per capita (MBtu)(^b):</td>
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<td>Population density</td>
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<tr>
<td>per sq. mile:</td>
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<td>Energy Reserves:</td>
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<tr>
<td>per sq. kilometer:</td>
<td>57</td>
<td>Oil(^c):</td>
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Population density

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<th>Nov</th>
<th>Dec</th>
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</thead>
</table>

Guatemala City:
Lat.: 15° 29' N
Long.: 90° 16' W
Insolation
Temperature: daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

Embassies:
Guatemala: 2220 R St., NW
Washington, D.C. 20008
U.S.: 7-01 Avenida de la Reforma
Zone 10
Guatemala City, Guatemala
Tel: 31-15-41

Chambers of Commerce:
Camara de Comercio de Guatemala
10A Calle 3-80
Zona I, Guatemala City
Chamber of Commerce

Camara de Industria de Guatemala
Ruta 6, 9-21
Zona 4, Guatemala City

Camara Guatemalteca de la Construccion
13 Calle 9-31
Edif. Prensa Libre 70
Zona 1, Guatemala City
Apdo. 2083

quad = quadrillion (10\(^15\)).
Insolation: langleys (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.
STATISTICAL PROFILE: HONDURAS

Population (millions): 2.5
Per capita income (US$): 392
Primary language: Spanish/English
Urban/rural (%): 31/69
Literacy rate (%): 50
Monetary unit: Lempira
Population density per sq. mile: 65
per sq. kilometer: 25

GNP (US$ billions): 1.2
GNP per capita (US$): 410
Energy production (quad Btu)\textsuperscript{a}: 0.00136
Energy production (quad Btu): 0.0196
Consumption per capita (MBtu)\textsuperscript{a}: 7.17
Energy Reserves:
Oil\textsuperscript{c}: —
Gas\textsuperscript{c}: —

Trade with U.S.
From U.S. Imports: 324
To U.S. Exports: 415

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<td>20.7</td>
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quad = quadrillion ($10^{15}$).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.
\textsuperscript{a} Based on U.N. conversation of 7000 cal/gram.
\textsuperscript{b} F.A.S. transaction values.
\textsuperscript{c} Quads.

Embassies:
Honduras: 4301 Connecticut Ave., NW
Washington, D.C. 20008
U.S.: Avenida La Paz
Tegucigalpa, Honduras
Tel: 22-3121/22/23/24/27

Chambers of Commerce:
Camara de Comercio e Industrias de Tegucigalpa
Edif. Barjum, 3º
5A Calle, No. 408
Tegucigalpa, Honduras

Camara Hondurena de la Industria de Construccion
Edificio Williams-Torres, 2º
Apdo. 14
San Pedro Sula, Honduras

23
STATISTICAL PROFILE: NICARAGUA

Population (millions): 2.3
Per capita income (US$): 891
Primary language: Spanish/English
Urban/rural (%): 49/51
Literacy rate (%): 57
Monetary unit: Cordoba
Population density
per sq. mile: 44
per sq. kilometer: 17

GNP (US$ billions): 1.8
GNP per capita (US$): 788
Energy production (quad Btu)\(^a\): 0.00133
Gross energy consumption\(^a\) (quad Btu): 0.0287
Consumption per capita (MBtu)\(^b\): 13.31
Energy Reserves:
Oil\(^c\): —
Gas\(^c\): —

Trade with U.S.
From U.S. Imports: 100
To U.S. Exports: 234

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quad = quadrillion \((10^{15})\).
Insolation: langley (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads

Embassies:
Nicaragua: 1627 New Hampshire Ave., NW
           Washington, D.C. 20009
U.S.: Km. 4-1/2 Carretera Sur.
       Managua, Nicaragua
       Tel: 23061-8, 23881-7

Chambers of Commerce:
Camara Nacional de Comercio de Managua
Apdo. 135
Managua, Nicaragua

Camara de Industrias de Nicaragua
(Cadin)
Apdo. 1436
Managua, Nicaragua

Camara Nicaraguense de la Construccion
Apdo. 3016
Managua, Nicaragua
STATISTICAL PROFILE: PANAMA

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**City** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** |
---|---|---|---|---|---|---|---|---|---|---|---|---|
Albrook Air Force Base: | | | | | | | | | | | | |
Lat.: 08° 39' N | | | | | | | | | | | | |
Long.: 79° 34' W | | | | | | | | | | | | |
Insolation | 392 | 476 | 525 | 496 | 404 | 336 | 370 | 372 | 448 | 388 | 380 | 420 |
Temperature | | | | | | | | | | | | |

\(a\) Based on U.N. conversation of 7000 cal/gram.

\(b\) F.A.S. transaction values.

\(c\) Quads.

**Embassies:**

Panama: 2862 McGill Terrace, NW Washington, D.C. 20008
U.S.: Avenida Balboa Y Calle 38 Apartado 6959, R.P. 5 Panama, Panama
Tel: 25-3600

**Chambers of Commerce:**

Camara de Comercio, Industrias y Agricultura de Panama
Apdo. 74
Panama 1

Camara Panamena de la Construccion
Apdo. 6793
Panama 5
# Statistical Profile: South America

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<th>Country</th>
<th>Population (million)</th>
<th>Per Capita Income (US$)</th>
<th>Primary Language</th>
<th>Urban Rural (%)</th>
<th>Literacy Rate (%)</th>
<th>Monetary Unit</th>
<th>GNP (US$ million)</th>
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Insolation: langley per day (1 langley = 1 cal/cm² = 3.69 Btu/ft²).
STATISTICAL PROFILE: ARGENTINA

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<td>GNP per capita (US$):</td>
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<td>Primary language:</td>
<td>Spanish</td>
<td>Energy production (quad Btu)(^a):</td>
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quad = quadrillion \((10^{15})\).
Insolation: langley's \((1 \text{ langley} = 1 \text{ cal/cm}^2)\).
Temperature: daily mean centigrade.
\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.
STATISTICAL PROFILE: ARGENTINA (Concluded)

Embassies:
Argentina: 1600 New Hampshire Ave. NW
           Washington, D.C. 20009
           Tel: (202) 387-0705
U.S.: 4300 Columbia, 1425
      Buenos Aires, Argentina
      Tel: 774-7611

Chambers of Commerce:
International Chamber of Commerce
  c/o Camara Argentina De Comercio
  Avda. Leandro N. Alem 36
  Buenos Aires, Argentina

Camara de Comercio Exterior de la
Federacion del Comercio Industria
Avda. Cordoba 1868
Rosario, Santa Fe, Argentina
(deals with export and import)

Trade and Solar Interest Organizations:
Asociacion Argentina de Energia Solar
  (ASADES)
  Casilla Correo N° 13
  1602 Puenta Saavedra
  Prov. de Buenos Aires, Argentina

Asociacion de Importadores y
Exportadores de la Republica
Argentina
Avda. de Mayo 981
Buenos Aires, Argentina
(importers and exporters)

Development Organizations (Contd.):
Universidad Nacional de Salta
Departamento de Ciencias
Buenos Aires 177, Salta

Universidad Nacional de San Luis
Departamento de Fisica y Chemica
Chabuco y Pedernera
San Luis

Universidad de la Pampa
Institutos de Estudios Regionales
Mansilla 178
Santa Rosam La Pampa

Universidad Nacional de Rosario
Faculdad de Ciencias exactas
Departamento de fisica
Grupo de Energia Solar
Avenida Pellegrini 250
2000 Rosario

CIFOBI
Faculdad de Bioquimica
Suipadia 570
2000 Rosario

Comision Nacional de Energia atomica
Departamento de fisica
Grupo de Energia Solar
Avenida del Libertador 8250
1429 Buenos Aires

Ingeniera Tomeco SRL
Fabrica
Avenida San Martin 5790
Lujan MZA
Anzorena 272
Godoy Cruz MZA
5501 Argentina

Termosol SMAR
Avenida Mitre 5354
1678 Caseros
Prov. Buenos Aires
## STATISTICAL PROFILE: BRAZIL

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- quad = quadrillion \((10^{15})\).
- Insolation: langleys \((1 \text{ langley} = 1 \text{ cal/cm}^2)\).
- Temperature: daily mean centigrade.
- \(^a\)Based on U.N. conversation of 7000 cal/gram.
- \(^b\)F.A.S. transaction values.
- \(^c\)Quads.
STATISTICAL PROFILE: BRAZIL (Concluded)

Embassies:
- Brazil: 3006 Massachusetts Ave., NW
  Washington, D.C. 20008
  Joao Baptista Pinheiro
- U.S.: Lote No. 3, Avenida das Nocoes
  Brasilia, Brazil
  Tel: (0612) 223-0120
  Telex: 061-1091

U.S. Trade Center: Avenida Paulista 2439
  Sao Paulo
  Tel: (11) 853-2011
  Telex: 391-1125274

Chambers of Commerce:
- Conferacao das Associacoes Comerciais do
  Brazil
  Brasilia, Brazil

Development Organizations:
- Conselho de Desenvolvimento Industrial
  (CDI)
  Proca Maua 7
  Rio de Janeiro, Brazil
  (Attached to the Ministry of Industry and
  Commerce, offers incentives for private
  investment and exemption from import
duties on machinery and equipment not
available in Brazil.)

- Universidad Federal de Paraiba
  Laboratorio de Energia solar
  Joao Pessoa
  58000 Paraiba

- Universidad Estatal de Campinas
  UNICAMP
  Grupo de Energia
  Instituto de Fisica
  Caixa postal 1170
  13100 Campinas SP

- Instituto Tecnologico de Aeronautica
  Div. de ingenieria mecanica
  12200 San Jose dos Campos

- Centro de Pesquisas del Cacao
  Div. de ingenieria agricola
  Caixa postal 7
  Italbana BA

Development Organizations (Contd.):
- CETEC Fundacion Centro Tecnologico de
  Minas gerais
  Avenida Jose Candido da Silveira 2000
  Caixa postal 2306
  CEP 3000
  Belo Horizonte, MG

- Universidad de Sao Paulo
  Instituto da Fisica
  CA Caixa postal 20516, 8219
  Sao Paulo

- Instituto de Pesquisas da Marinha
  Ministerio da Marinha
  Rio de Janeiro

- FINEP financieria de estudios y proyecotos
  Grupo de energia
  Ministerio do Planjamiento
  Avenida Rio Branco 124
  2º/12º Andar
  Rio de Janeiro

- Centro de Tecnologia Promon
  Praia de Flamengo 154
  20000 Rio de Janeiro

- Electrobras
  Centrais electricas brasileiras Sa.,
  R. Visconde de Inhauma 134
  15 andar
  Sep 20094
  Rio de Janeiro RJ

- FAT
  Fabrica de aparelhos electro-termicos SA
  rua Barao de Petropolis 347
  Rio de Janeiro

- SANOR Ind. e Com. Sao Norberto Ltda.
  rua Alagoas 746
  Sao Paulo

- Gea Term Ind. e Com. Ltda.
  rua Brigadeiro Galvao Peixoto 195
  Sao Paulo

- Luwa Climatecnic SA
  rua Verbo Divino 1207
  Sao Paulo
STATISTICAL PROFILE: CHILE

Population (millions): 10.7
Per capita income (US$): 681
Primary language: Spanish
Urban/rural (%): 79/21
Literacy rate (%): 90
Monetary unit: Peso
Population density
per sq. mile: 36
per sq. kilometer: 14

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</table>

quad = quadrillion \( \left(10^{15}\right) \).
Insolation: langley (1 langley = 1 cal/em\(^2\)).
Temperature: daily mean centigrade.

\( ^a \) Based on U.N. conversation of 7000 cal/gram.
\( ^b \) F.A.S. transaction values.
\( ^c \) Quads.

Embassies:
Chile: 1732 Massachusetts Ave., NW
Washington, D.C. 20036
U.S.: Codina Bldg.,
1343 Augustinas
Santiago, Chile
Tel: 710133/90
710326/75
Telex: 40062-ICA-CL

Chambers of Commerce:
Camara de Comercio de Santiago de Chile
Santa Lucia 302, 3º
Casilla 1297
Santiago, Chile

Development Organizations:
Comision Nacional de Energia
Santiago, Chile
(To determine Chile's energy policy and improve investment in energy related products.)
STATISTICAL PROFILE: COLOMBIA

Population (millions): 25.0
Per capita income (US$): 508
Primary language: Spanish
Urban/rural (%): 64/36
Literacy rate (%): 78
Monetary unit: Peso
Population density
   per sq. mile: 51
   per sq. kilometer: 20

GNP (US$ billions): 15.4
GNP per capita (US$): 683
Energy production (quad Btu)\(^a\): 0.531
Gross energy consumption\(^a\)
   (quad Btu): 0.439
Consumption per capita (MBtu)\(^b\): 19.93
Energy Reserves:
   Oil\(^c\): 4.64
   Gas\(^c\): 6.0
Trade with U.S.
   From U.S. Imports: 1,409
   To U.S. Exports: 1,209

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quad = quadrillion \((10^{15})\).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

Embassies:
Colombia: 2118 Leroy Place, NW Washington, D.C. 20008
U.S.: Calle 37, 8-40
   Bogota, Colombia
   Tel: 285-1300
   Telex: 44843

Chambers of Commerce (Cont.):
   Consejo Interamericano de Comercio y Produccion
   Apdo. Aero 3012
   Bogota, Colombia
   (Interamerican Council of Commerce and Production)

Chambers of Commerce:
   Confederacion Colombiana de Camarasde
   Carrera 9, No. 16-21, 10\(^o\)
   Apdo. Aero 19750
   Bogota, Colombia

Trade Organizations:
   Consejo Nacional de Energia
   Bogota, Colombia
STATISTICAL PROFILE: COLOMBIA (Concluded)

Trade Fairs:
Corporación de Ferias y Exposiciones S.A.
Carrera 40, No. 22-C-67
Apdo. Aero 6843
Bogota, Colombia
## STATISTICAL PROFILE: ECUADOR

<table>
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<tr>
<th>Population (millions): 7.6</th>
<th>GNP (US$ billions): 4.7</th>
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<tr>
<td>Per capita income (US$): 741</td>
<td>GNP per capita (US$): 681</td>
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<tr>
<td>Primary language: Spanish</td>
<td>Energy production (quad Btu)^a: 0.336</td>
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<td>Urban/rural (%): 42/58</td>
<td>Gross energy consumption^,a (quad Btu): 0.0826</td>
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<td>Literacy rate (%): 75</td>
<td>Consumption per capita (MBtu)^a: 12.28</td>
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<td>Monetary unit: Sucre</td>
<td>Energy Reserves:</td>
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<tr>
<td>Population density</td>
<td>Oil^c: 6.38</td>
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<tr>
<td>per sq. mile: 63</td>
<td>Gas^c: 4.0</td>
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<tr>
<td>per sq. kilometer: 24</td>
<td>Trade with U.S.^b</td>
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<tr>
<td></td>
<td>From U.S. Imports: 696</td>
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<td>To U.S. Exports: 816</td>
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<td>\quad = \text{quadrillion} \left(10^{15}\right).</td>
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<tr>
<td></td>
<td>^a\text{Based on U.N. conversion of 7000 cal/gram.}</td>
</tr>
<tr>
<td></td>
<td>^b\text{F.A.S. transaction values.}</td>
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<tr>
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<td>^c\text{Quads.}</td>
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Embassies:
- Ecuador: 2535 15th St., NW
  Washington, D.C. 20009
- U.S.: 120 Avenida Patria
  Quito, Ecuador
  Tel: 548-000

Development Organizations:
- Instituto Ecuatoriano de Electrificacion (Inecel)
  (Oversees the generation, transmission, and development of electric power.)

Chambers of Commerce:
- Federacion Nacional de Camaras de Comercio del Ecuador
  Olmedo 414
  Casilla 1304
  Guayaquil, Ecuador
STATISTICAL PROFILE: GUYANA

Population (millions): 0.83
Per capita income (US$): 506
Primary language: English
Urban/rural (%): 40/60
Literacy rate (%): 85
Monetary unit: Dollar
Population density
   per sq. mile: 9.4
   per sq. kilometer: 3.6

GNP (US$ billions): 0.43
   GNP per capita (US$): 549
   Energy production (quad Btu)\(^a\): —
   Gross energy consumption\(^a\)
      (quad Btu): 0.0245
   Consumption per capita (MBtu)\(^b\): 31.88
   Energy Reserves:
      Oil\(^c\): NA
      Gas\(^c\): NA
   Trade with U.S.:
      From U.S. Imports: 74
      To U.S. Exports: 66

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quad = quadrillion \((10^{15})\).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversion of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

Embassies:
Guyana: 2490 Tracy Place, NW
        Washington, D.C. 20008
U.S.: 31 Main Street
       Georgetown, Guyana
       Tel: 62687 Ext. 26

Chambers of Commerce:
Georgetown Chamber of Commerce
     POB 10
     Georgetown, Guyana
STATISTICAL PROFILE: PERU

Population (millions): 16.4
Per capita income (US$): 542
Primary language: Spanish
Urban/rural (%): 63/37
Literacy rate (%): 72
Monetary unit: Sol
Population density
  per sq. mile: 32
  per sq. kilometer: 13

GNP (US$ billions): 12.6
GNP per capita (US$): 784
Energy production (quad Btu)\textsuperscript{a}: 0.188
Gross energy consumption\textsuperscript{a}
  (quad Btu): 0.296
Consumption per capita (M/Btu)\textsuperscript{b}: 18.65
Energy Reserves:
  Oil\textsuperscript{c}: 3.77
  Gas\textsuperscript{c}: 1.1
Trade with U.S.
  From U.S. Imports: 720
  To U.S. Exports: 1,181

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quad = quadrillion (10\textsuperscript{15}).
Insolation: langleys (1 langley = 1 cal/cm\textsuperscript{2}).
Temperature: daily mean centigrade.
\textsuperscript{a}Based on U.N. conversation of 7000 cal/gram.
\textsuperscript{b}F.A.S. transaction values.
\textsuperscript{c}Quads.

Embassies:
- Peru: 1700 Massachusetts Ave., NW
  Washington, D.C. 20036
- U.S.: Corner Avenidas Inca Garilaso de la Vega & Expana
  Lima, Peru
  Tel: 286000

Chambers of Commerce:
- Federacion Nacional de Camaras de Comercio del Peru (FEDECAM)
  Avda. Gregorio Escobedo 398
  Lima II
STATISTICAL PROFILE: URUGUAY

Population (millions): 2.8
Per capita income (US$): 1,237
Primary language: Spanish
Urban/rural (%): 83/17
Literacy rate (%): 91
Monetary unit: New Peso
Population density
per sq. mile: 41
per sq. kilometer: 16

GNP (US$ billions): 3.9
GNP per capita (US$): 1,393
Energy production (quad Btu)a: 1,393
Gross energy consumptiona (quad Btu): 0.08
Consumption per capita (M/Btu)b: 28.82

Energy Reserves:
Oilc: —
Gasc: —

Trade with U.S.
From U.S. Imports: 127
To U.S. Exports: 91

Embassies:
Uruguay: 1918 F St., NW
Washington, D.C. 20006
U.S.: Calle Lauro Muller 1776
Montevideo, Uruguay

Chambers of Commerce:
Camara Nacional de Comercio
Edificio de la Bolsa de Comercio
Misiones 1400, Uruguay

Trade and Solar Interest Organizations:
Consejo Interamericano de Comercio y Produccion
Edificio de la Bolsa Comercio
Misiones 1400, Uruguay
(Interamerican Council of Commerce and Production)

Montevideo:
Lat.: 34° 52' S
Long.: 56° 12' W

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quad = quadrillion \((10^{15})\).
Insolation: langley (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.
STATISTICAL PROFILE: VENEZUELA

Population (millions): 12.7
Per capita income (US$): 2,622
Primary language: Spanish
Urban/rural (%): 75/25
Literacy rate (%): 82
Monetary unit: Bolivar
Population density
per sq. mile: 35
per sq. kilometer: 14

GNP (US$ billions): 31.8
GNP per capita (US$): 2,569
Energy production (quad Btu)\(^a\): 5.588
Gross energy consumption\(^b\) (quad Btu): 0.879
Consumption per capita (M/Btu)\(^b\): 73.34
Energy Reserves:
- Oil\(^a\): 104.1
- Gas\(^a\): 42.0
Trade with U.S.\(^b\):
- From U.S. Imports: 3,931
- To U.S. Exports: 5,166

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quad = quadrillion \((10^{15})\).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.
STATISTICAL PROFILE: VENEZUELA (Concluded)

Embassies:
Venezuela: 2445 Massachusetts Ave., NW
           Washington, D.C. 20008
          
U.S.: Avenida Francisco de Miranda and Avenida Principal de la Floresta
      Caracas, Venezuela

Chambers of Commerce:
Edificio Fedecamaras, 5º Piso
Avda. El Empalme
Urb. El Bosque
Apdo. 2568 Venezuela

Federacion Venezolana de Camaras y Asociaciones de Comercio y Produccion (FEDE CAMARAS)
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<th>Literacy Rate (%)</th>
<th>Monetary Unit</th>
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*Insolation: langleys per day (1 langley = 1 cal/cm² = 3.69 Btu/ft²).*
### INSOLATION: EUROPEa (Concluded)

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*aInsolation: langleys per day (1 langley = a cal/cm² = 3.69 Btu/ft²).*
STATISTICAL PROFILE: AUSTRIA

Population (millions): 7.5
Per capita income (US$): 5,576
Primary language: German
Urban/rural (%): 52/48
Literacy rate (%): 99
Monetary unit: Schilling
Population density
per sq. mile: 232
per sq. kilometer: 90

GNP (US$ billions): 40.1
GNP per capita (US$): 5,334
Energy production (quad Btu)a: 0.303
Gross energy consumptiona (quad Btu): 0.774
Consumption per capita (MBtu)b: 102.82

Energy Reserves:
Oilc: 0.754
Gasc: 0.365

Trade with U.S.
From U.S. Imports: 312
To U.S. Exports: 380

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec
Salzburg:
Lat.: 47° 48' N
Long.: 13° 00' E
Insolation 96 160 250 319 414 383 380 229 283 192 76 66
Temperature 2.5 1.1 3.7 8.3 13.2 16.0 17.8 17.1 14.0 8.4 3.3 -0.9

Vienna:
Lat.: 48° 15' N
Long.: 16° 22' E
Insolation 69 131 221 331 432 456 453 389 276 159 78 51
Temperature -1.4 0.4 4.7 10.3 14.8 18.1 19.9 19.3 15.6 9.8 4.8 1.0

quad = quadrillion (10^{15}).
Insolation: langleys (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.
^aBased on U.N. conversation of 7000 cal/gram.
^bF.A.S. transaction values.
^cQuads.

Embassies:
Austria: 2343 Massachusetts Ave., NW
Washington, D.C. 20008
U.S.: IX Boltzmangasse 16
A-1091 Vienna, Austria
Tel: (222) 346611, 347511
Telex: 74634

Chambers of Commerce:
Bundeskammer der Gewerblichen
Wirtschaft
(Federal Economic Chamber)
Stubenring 12
1010 Vienna, Austria
(Promotes international contacts and
represents the economic interest of
trade and industry.)
STATISTICAL PROFILE: AUSTRIA (Concluded)

Trade and Solar Interest Organizations:
- Austrian Solar and Space Industry (ASSA)
  Garnisongasse 7
  A-1090 Vienna, Austria

- Fachverband der Bavindustrie
  Engelsberggasse 4
  A-1090 Vienna, Austria
  (building association)

- Fachverband der Elektronindustrie
  Rathausplaz 8
  A-1090 Vienna, Austria
  (electrical organization)

- Fachverband der Gas- und Wärmeversorgungs-Unternehmungen
  Bauernmarkt 13
  A-1011 Vienna, Austria

Trade Fairs:
- Vienna International Trade Fair
  Messeplatz
  A-1071 Vienna, Austria
  (Twice yearly, March and September; all categories of merchandise.)

- Grazer Süd-Ost-Messe
  Messeplatz 1
  P.O. Box 63
  A-8011 Graz, Austria
  (Twice yearly, May and October; exhibits all categories with special emphasis on agriculture and building.)
STATISTICAL PROFILE: BELGIUM

Population (millions): 9.8
Per capita income (US$): 7,449
Primary language: Flemish
Urban/rural (%): 95/5
Literacy rate (%): 98
Monetary unit: Franc

Population density
  per sq. mile: 839
  per sq. kilometer: 324

GNP (US$ billions): 66.7
GNP per capita (US$): 6,741
Energy production (quad Btu)a: 0.234
Gross energy consumptiona
  (quad Btu): 1.52
Consumption per capita (MBtu)b: 155.18

Energy Reserves:
  Oilc: —
  Gasc: —

Trade with U.S.
  From U.S. Imports: 5,186
  To U.S. Exports: 1,741

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Brussels-UCCUE:
Lat.: 50° 48' N
Long.: 04° 22' E
Insolation | 58 | 106 | 185 | 288 | 382 | 397 | 383 | 329 | 242 | 142 | 69 | 41
Temperature | 2.2 | 2.6 | 6.0 | 9.2 | 13.0 | 16.0 | 17.5 | 17.3 | 14.7 | 10.3 | 6.2 | 3.3

quad = quadrillion (10^15).
Insolation: langley (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

Embassies:
Belgium: 3330 Garfield St., NW Washington, D.C. 20008
U.S.: 27 Boulevard du Regent B-1000 Brussels, Belgium
  Tel: 513-3830
  Telex: 846-21336

Chambers of Commerce:
Chambre de Commerce de Bruxelles
112 rue de Treves
1040 Brussels, Belgium

Trade and Solar Interest Organizations:
Belgian Solar Trade Association (Heliobel)
Avenue Forsny 114
B-1060 Brussels, Belgium

Trade Organizations (Contd.)
International Solar Energy Society (ISES)
Belgian Section
Universite Libre de Bruxelles
Avenue F.D. Roosevelt 50
Bruxelles, Belgium

Association des Centrales Electriques Industrielles de Belgique
36 rue Joseph II
B-1040 Brussels, Belgium
(industrial electricity)

Confederation Nationale de la Construction (CNC)
34-42 rue de Lombard
B-1000 Brussels, Belgium
(civil engineering, road and building contractors)
Trade Organizations (Contd.)
Union des Exploitations Electriques en Belgique
galerie Ravenstein 4
Box 6
B-1000 Brussels, Belgium
(electrical association)

Trade Fairs:
Foire Internationale de Bruxelles
(Brussels International Trade Fair)
Palais du Centraire
Brussels, Belgium
(15 fairs per year)
## STATISTICAL PROFILE: FINLAND

| Population (millions): | 4.7 |
| Per capita income (US$): | 5,660 |
| Primary language: | Finnish |
| Urban/rural (%): | 59/41 |
| Literacy rate (%): | 99 |
| Monetary unit: | Markka |
| Population density | |
| per sq. mile: | 36 |
| per sq. kilometer: | 14 |

| GNP (US$ billions): | 26.6 |
| GNP per capita (US$): | 5,621 |
| Energy production (quad Btu)^a: | 0.0423 |
| Gross energy consumption^a | |
| (quad Btu): | 0.623 |
| Consumption per capita (M/Btu)^b: | 132.45 |
| Energy Reserves: | |
| Oil^c: | — |
| Gas^c: | — |

| Trade with U.S. | |
| From U.S. Imports: | 337 |
| To U.S. Exports: | 449 |

### Climate

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quad = quadrillion \(10^{15}\).

Insolation: langley (1 langley = 1 cal/cm²).

Temperature: daily mean centigrade.

^aBased on U.N. conversation of 7000 cal/gram.

^bF.A.S. transaction values.

^cQuads.

### Embassies:
- **Finland:**
  - 1900 24th St., NW Washington, D.C. 20008
  - Itainen Puistotie 14A Helsinki, Finland
  - Tel: 171931 Telex: 121644 USEMB SF

- **U.S.:**
  - Suomen Keskuskauppakamari (The Central Chamber of Commerce)
  - Fabianinkatu 14 Helsinki 14, Finland

### Trade Fairs:
- Osuskunta Suomen Messut Helsingin Kansainvalinen Messukeskus (Finnish Fair Corporation)
  - POB 24 00521 Helsinki 52, Finland

### Chambers of Commerce (Contd.):
- **International Chamber of Commerce (Finnish Section)**
  - Fabianinkatu 14A 00100 Helsinki 10, Finland
STATISTICAL PROFILE: FRANCE

Population (millions): 53.1  
Per capita income (US$): 6,380  
Primary language: French  
Urban/rural (%): 70,130  
Literacy rate (%): 99  
Monetary unit: Franc  
Population density  
  per sq. mile: 249  
  per sq. kilometer: 96  

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| Lat.: 43° 27' N  
Long.: 05° 13' E  
Insolation | 140 | 220 | 320 | 430 | 480 | 580 | 620 | 510 | 400 | 250 | 170 | 120 |
| Temperature | 5.5 | 6.6 | 10.0 | 13.0 | 16.8 | 20.8 | 23.3 | 22.8 | 19.9 | 15.0 | 10.2 | 6.9 |
| Nantes |     |     |     |     |     |     |     |     |     |     |     |     |
| Lat.: 47° 15' N  
Long.: 01° 35' W  
Insolation | 100 | 160 | 250 | 380 | 460 | 490 | 510 | 420 | 290 | 200 | 110 | 80  |
| Temperature | 5.0 | 5.3 | 8.4 | 10.8 | 13.9 | 17.2 | 18.8 | 18.6 | 16.4 | 12.2 | 8.2  | 5.5  |
| Paris |     |     |     |     |     |     |     |     |     |     |     |     |
| Lat.: 48° 58' N  
Long.: 02° 27' E  
Insolation | 75  | 131 | 248 | 337 | 431 | 481 | 456 | 382 | 291 | 170 | 85  | 62  |
| Temperature | 3.1 | 3.8 | 7.2 | 10.3 | 14.0 | 17.1 | 19.0 | 18.5 | 15.9 | 11.1 | 6.8  | 4.1  |

quad = quadrillion (10^{15}).  
Insolation: langleys (1 langley = 1 cal/cm²).  
Temperature: daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.  
bF.A.S. transaction values.  
cQuads.

Embassies:  
France: 2535 Belmont Rd., NW  
  Washington, D.C. 20008  
U.S.: 2 Avenue Gabriel  
  75382 Paris Cedex 08  
  Paris, France  
  Tel: 296-1202, 261-8075  
  Telex: 65-221

Chambers of Commerce:  
Chambre de Commerce de Paris  
  27 ave. de Friedland  
  75382 Paris Cedex 08, France

51
Trade and Solar Interest Organizations:
Association Francaise pour l'Etude et le Development de l'Energie Solaire (AFEDES)
28, rue de la Source
F-75016 Paris, France

Commissariat A L'energie Solaire (COMES)
208, rue Raymond Losserand
75014 Paris, France
Tel: 545.67.60
Telx: COMES 203 712 F

Cooperation Mediterraneenne pour l'Energie Solaire (COMPILES)
Palais de la Boursse
13.001 Marseille
France

Federation des Industries Electriques et Electroniques (FIEE)
11 Rue Hamelin
75783 Paris-Cedex 16
(electrical association)

Development Organizations:
The Academie d'Energie solaire de Perpignan
13, rue Jean-Racine
F-66000 Perpignan France
(Promotes use of solar energy.)

Metropole Internationale solaire (MIS)
10 rue Lamartine
F-06000 Nice France
(Organization to promote use of solar energy)

U.S. International Marketing Center
12 Charles de Gaulle
92200 Nevilly
Tel: 624-3313
Telex: 610731
STATISTICAL PROFILE: WEST GERMANY

Population (millions): 61.4
Per capita income (US$): 7,465
Primary language: German
Urban/rural (%): NA
Literacy rate (%): 99
Monetary unit: Mark
Population density
  per sq. mile: 641
  per sq. kilometer: 247

GNP (US$ billions): 457.5
GNP per capita (US$): 7,438
Energy production (quad Btu)\(^a\): 4.609
Gross energy consumption\(^a\)
  (quad Btu): 9.184
Consumption per capita (MBtu)\(^b\): 148.54
Energy Reserves:
  Oil\(^c\): 2.61
  Gas\(^c\): 6.0
Trade with U.S.
  From U.S. Imports: 8,482
  To U.S. Exports: 10,955

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Hamburg:
  Lat.: 53° 38' N
  Long.: 10° 00' E
  Insolation
  Temperature
  51 | 102 | 197 | 318 | 412 | 432 | 402 | 338 | 255 | 137 | 55 | 33
  0.0 | 0.3 | 3.3 | 7.5 | 12.0 | 15.3 | 17.0 | 16.6 | 13.5 | 9.1 | 4.9 | 1.8
Karlsruhe:
  Lat.: 49° 01' N
  Long.: 08° 23' E
  Insolation
  Temperature
  68 | 148 | 240 | 342 | 502 | 518 | 525 | 370 | 302 | 202 | 69 | 52
  0.8 | 1.8 | 6.0 | 10.1 | 14.4 | 17.7 | 19.5 | 18.6 | 15.2 | 9.8 | 5.3 | 1.7

quad = quadrillion \(10^{15}\).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.
\(^a\)Based on U.N. conversion of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

Embassies:
  Germany: 1717 Massachusetts Ave., NW
  Washington, D.C. 20036
  U.S.: Deichmannsaue
  5300 Bonn 2
  Bonn, West Germany
  Tel: (02221) 89-55
  Telex: 885-452

Chambers of Commerce:
  Deutscher Industrie- und Handelstag
  (Association of German Chambers of Commerce and Industry)
  Adenauerallee 148
  53 Bonn, West Germany

Chambers of Commerce (Contd.):
  Bundesstelle fur Aussenhandelsinformation
  (German Foreign Trade Information Office)
  Blaubach 13
  5 Cologne, West Germany

Trade and Solar Interest Organizations:
  Bundes Verband Solar Energie (BSE)
  Kruppstrasse 5
  D-4300 Essen 1
  Tel: 0201/1853392
  Telex: 0857851
TRADE AND SOLAR INTEREST ORGANIZATIONS:

**German Solar Energy Society**
DGS Office
Goethestrasse 28
D-2800 Munich 2
Federal Republic of Germany

**International Solar Energy Society** (ISES)
West German Section
VDI - Gesellschaft Energietechnik
4 Dusseldorf 1
Postfach 1139
Federal Republic of Germany

**Bundesvereinigung der Deutschen Ernahrungsindustrie**
Stressemanallee 19
6000 Frankfurt a.M. 70
(electrical equipment)

**Hauptverband der Deutschen Bauindustrie**
Abraham-Lincoln Strasse 30
6200 - Wiesbaden
Federal Republic of Germany
(building association)

TRADE FAIRS:

**Berlin:**
AMK Berlin Ausstellungs - Messe - Kongress - G.m.b.H.
Messedamm 22
1000 Berlin 19
Federal Republic of Germany

**Munich:**
Munchener Messen - Ausstellungsgesellschaft m.b.H.
Messegelände
P.O.B. 12 10 09
8000 Munich 12
Federal Republic of Germany

**U.S. International Trade Center**
Bahnhofstrasse 1-9
ABC Haus
5000 Koen, Cologne
Tel: (0221) 137091
Telex: 888-3267
STATISTICAL PROFILE: GREECE

Population (millions): 9.3
Per capita income (US$): 2,701
Primary language: Greek
Urban/rural (%): 65/35
Literacy rate (%): 84
Monetary unit: Drachma
Population density
per sq. mile: 180
per sq. kilometer: 69
GNP (US$ billions): 23.6
GNP per capita (US$): 2,575
Energy production (quad Btu)a: 0.171
Gross energy consumptiona (quad Btu): 0.525
Consumption per capita (MBtu)b: 58.05
Energy Reserves:
Oilc: 0.87
Gasc: 4.0
Trade with U.S.
From U.S. Imports: 812
To U.S. Exports: 183

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quad = quadrillion (10^{15}).
Insolation: langley (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

a Based on U.N. conversation of 7000 cal/gram.
b F.A.S. transaction values.
c Quads.

Embassies:
Greece: 2221 Massachusetts Ave., NW
Washington, D.C. 20008
U.S.: 91 Vasilissis Sophias Blvd.
Athens, Greece
Tel: 712951 or 718401
Telex: 21-5548

Chambers of Commerce:
Athens Chamber of Commerce and Industry
7 Akadénias St.
Athens 134, Greece

Trade Fairs:
International Fair of Thessaloniki
Thessaloniki, Greece
STATISTICAL PROFILE: ICELAND

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<td>Literacy rate (%):</td>
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<td>Monetary unit:</td>
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<td>Population density</td>
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<td>per sq. mile:</td>
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<td>per sq. kilometer:</td>
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<td>GNP (US$ billions):</td>
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<td>GNP per capita (US$):</td>
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<td>Energy production (quad Btu)^a:</td>
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<td>Gross energy consumption^a (quad Btu):</td>
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</table>

quad = quadrillion \(10^{15}\).
Insolation: langley\(^s\) (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

^a Based on U.N. conversation of 7000 cal/gram.
^b F.A.S. transaction values.
^c Quads.

Embassies:
- Iceland: 2022 Connecticut Ave., NW Washington, D.C. 20008
- U.S: Laudasavegur 21 Reykjavik, Iceland Tel: 29100

Chambers of Commerce:
- Verslunarrad Islands POB 514
- 101 Reykjavik, Iceland
STATISTICAL PROFILE: IRELAND

Population (millions): 3.2
Per capita income (US$): 2,711
Primary language: English
Urban/rural (%): 52/48
Literacy rate (%): 99
Monetary unit: Pound
Population density
  per sq. mile: 117
  per sq. kilometer: 45

GNP (US$ billions): 8.1
GNP per capita (US$): 2,559
Energy production (quad Btu)\textsuperscript{a}: 0.0648
Gross energy consumption\textsuperscript{a} (quad Btu): 0.289
Consumption per capita (MBtu)\textsuperscript{b}: 86.07

Energy Reserves:
  Oil\textsuperscript{c}: —
  Gas\textsuperscript{c}: 0.95

Trade with U.S.
From U.S. Imports: 695
To U.S. Exports: 323

<table>
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<th>Jan</th>
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<th>Apr</th>
<th>May</th>
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<td>11.6</td>
<td>9.1</td>
<td>7.8</td>
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</table>

quad = quadrillion \((10^{15})\).
Insolation: langley \((1 \text{ langley} = 1 \text{ cal/cm}^2)\).
Temperature: daily mean centigrade.

\textsuperscript{a}Based on U.N. conversation of 7000 cal/gram.
\textsuperscript{b}F.A.S. transaction values.
\textsuperscript{c}Quads.

Embassies:
Ireland: 2234 Massachusetts Ave., NW
         Washington, D.C. 20008
U.S.: 42 Elgin Rd.
      Ballsbridge
      Dublin, Ireland
      Tel: Dublin 688777
      Telex: 5240

Trade and Solar Interest Organizations:
International Solar Energy Society (ISES)
Irish Section
School of Architecture
University College
Earlsfort Terrace
Dublin 2, Ireland

Chambers of Commerce:
Association of Chambers of Commerce of Ireland
7 Clare St.
Dublin 2, Ireland
**STATISTICAL PROFILE: ITALY**

<table>
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<th>Population (millions):</th>
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<td>Per capita income (US$):</td>
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<td>Urban/rural (%):</td>
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<td>Literacy rate (%):</td>
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<td>Monetary unit:</td>
<td>Lira</td>
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<td>Population density per sq. mile:</td>
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<tr>
<td>per sq. kilometer:</td>
<td>187</td>
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<tr>
<td>GNP (US$ billions):</td>
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<td>GNP per capita (US$):</td>
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<td>Energy production (quad Btu):</td>
<td>0.751</td>
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<td>Gross energy consumption (quad Btu):</td>
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<td>Trade with U.S.:</td>
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<td>From U.S. Imports:</td>
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<td>16.4</td>
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quad = quadrillion \( (10^{15}) \).
Insolation: langley (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

a Based on U.N. conversion of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

**Embassies:**

**Italy:**

1601 Fuller St., NW
Washington, D.C. 20009

**U.S.:**

Via Vittorio Veneto 119-A
00187 Rome, Italy
Tel: (06)4674
Telex: 613425 Amembro
610450 Amembro

**Embassies (Contd.):**

U.S. International Marketing Center
Via Gattamelata 5 (Milan Fairgrounds)
20149 Milan
Tel: 469-6451
Telex: 330208
STATISTICAL PROFILE: ITALY (Concluded)

Chambers of Commerce:
Unione Italiana delle Camere di Commercio, Industria, Agricoltura e Artigianato
(Italian Union of Chambers of Commerce Industry, Agriculture and Crafts)
Piazza Sallustio 21
00187 Rome, Italy

Trade and Solar Interest Organizations:
International Solar Energy Society (ISES)
Italien Section
Via Crispi 72
80121 Naples, Italy
Tel: 669325

Associazione Nazionale Construttori Edili (ANCE)
Via Guattani 16
00161 Rome
Italy
(national builders association)

Trade Organizations (Cont.):
Associazione Nazionale Installatori di Impianti Termici e de Ventilazione Idrici, Sanitari, Elettrici, Telefonici ed Affini (ASSISTAL)
Piazza della Republica 6
20121 Milan
(national association of heating, ventilation, hydraulic, sanitary and electrical plant)

COMFINDEUTRIA
Via le dell'Astronomia 30
00144 Rome
STATISTICAL PROFILE: NETHERLANDS

Population (millions): 13.8
Per capita income (US$): 6,989
Primary language: Dutch
Urban/rural (%): 77/23
Literacy rate (%): 98
Monetary unit: Guilder
Population density
per sq. mile: 866
per sq. kilometer: 335

GNP (US$ billions): 85.3
GNP per capita (US$): 6,196
Energy production (quad Btu)\(^a\): 3.106
Gross energy consumption\(^b\)
(quad Btu): 2.194
Consumption per capita (MBtu)\(^b\): 160.71

Energy Reserves:
Oil\(^c\): 1.653
Gas\(^c\): 62.0

Trade with U.S.
From U.S. Imports: 6,907
To U.S. Exports: 1,852

De Bilt:
Lat.: 52° 06' N
Long.: 05° 11' E
Insolation: \(62 \ 100 \ 210 \ 309 \ 419 \ 455 \ 411 \ 329 \ 252 \ 133 \ 62 \ 39\)
Temperature: \(1.7 \ 2.0 \ 5.0 \ 8.5 \ 12.4 \ 15.5 \ 17.0 \ 16.8 \ 14.3 \ 10.0 \ 5.9 \ 3.0\)

quad = quadrillion \((10^{15})\).
Insolation: langley \((1 \text{ langley} = 1 \text{ cal/cm}^2\).
Temperature: daily mean centigrade.
\(^a\) Based on U.N. conversation of 7000 cal/gram.
\(^b\) F.A.S. transaction values.
\(^c\) Quads.

Embassies:
Netherlands: 4200 Linnean Ave., NW
Washington, D.C. 20008
U.S.: Lange Voorhout 102
The Hague, Netherlands

Chambers of Commerce:
Nederlandse Organisatie voor de
Internationale Kamer van Koophandel
(Netherlands Committee of the
International Chamber of Commerce)
Prinses Beatrixlaan 5
The Hague, Netherlands

Trade Fairs:
Koninklijke Nederlandse Jaarbeurs (Int)
(Royal Netherlands Industries Fair)
Utrecht, Netherlands
STATISTICAL PROFILE: NORWAY

Population (millions): 4.0
Per capita income (US$): 7,253
Primary language: Norwegian
Urban/rural (%): 45/55
Literacy rate (%): 99
Monetary unit: Kroner
Population density
per sq. mile: 32
per sq. kilometer: 12

GNP (US$ billions): 29.9
GNP per capita (US$): 7,432
Energy production (quad Btu)\(^a\): 0.654
Gross energy consumption\(^a\) (quad Btu): 0.5129
Consumption per capita (MBtu)\(^b\): 128.0

Energy Reserves:
- Oil\(^c\): 31.9
- Gas\(^c\): 42.7

Trade with U.S.
- From U.S. Imports: 688
- To U.S. Exports: 1,266

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Bergen:
Lat.: 60° 24' N
Long.: 05° 19' E
Insolation | 22 | 57 | 200 | 248 | 419 | 416 | 336 | 276 | 151 | 64 | 27 | 10
Temperature | 1.5 | 1.3 | 3.1 | 5.8 | 10.2 | 12.6 | 15.0 | 14.7 | 12.0 | 8.3 | 5.5 | 3.3

Tromso:
Lat.: 69° 39' N
Long.: 18° 57' E
Insolation | 1 | 27 | 110 | 266 | 341 | 380 | 362 | 249 | 135 | 44 | 5 | 0
Temperature | -3.5 | -4.0 | -2.7 | 0.3 | 4.1 | 8.8 | 12.4 | 11.0 | 7.2 | 3.0 | -0.1 | -1.9

quad = quadrillion (10\(^15\)).
Insolation: langleys (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.

\(^b\)F.A.S. transaction values.

\(^c\)Quads.

Embassies:
- Norway: 3401 Massachusetts Ave., NW Washington, D.C. 20007
- U.S.: Drammensveien 18 Oslo 1, Norway
  Tel: 56-68-80
  Telex: 18470

Chambers of Commerce:
- Oslo Handelkammer
  (Oslo Chamber of Commerce)
  Drammensveien 30
  Oslo 2, Norway

61
STATISTICAL PROFILE: PORTUGAL

Population (millions): 8.7
Per capita income (US$): 1,498
Primary language: Portuguese
Urban/rural (%): NA
Literacy rate (%): 65
Monetary unit: Escudo
Population density
   per sq. mile: 273
   per sq. kilometer: 105

GNP (US$ billions): 16.5
GNP per capita (US$): 1,700
Energy production (quad Btu)\textsuperscript{a}: 0.0281
Gross energy consumption\textsuperscript{a}: 0.239
Consumption per capita (MBtu)\textsuperscript{b}: 24.84
Energy Reserves:
   Oil\textsuperscript{c}: —
   Gas\textsuperscript{c}: —

Trade with U.S.
From U.S. Imports: 691
To U.S. Exports: 244

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec

Lisbon:
Lat.: 38° 43' N
Long: 09° 09' W
Insolation 195 296 366 540 626 691 720 626 482 354 241 173
Temperature 10.8 11.6 13.6 15.6 17.2 20.1 22.2 22.5 21.2 18.2 14.4 11.5

quad = quadrillion (10\textsuperscript{15}).
Insolation: langley (1 langley = 1 cal/cm\textsuperscript{2}).
Temperature: daily mean centigrade.

\textsuperscript{a}Based on U.N. conversation of 7000 cal/gram.
\textsuperscript{b}F.A.S. transaction values.
\textsuperscript{c}Quads.

Embassies:
Portugal: 2125 Kalorama Rd., NW
Washington, D.C. 20008
U.S.: Avanida Duque de Louie No. 39
1098 Lisbon Codex, Portugal
Tel: 570102
Telex: 12528 AMEMB

Chambers of Commerce:
International Chamber of Commerce
Rua das Portas de Santo Antao 89
Lisbon 2, Portugal

Other:
Instituto Do Investimento Estrangeiro (L.E.)
Avda. da Liberdade 258, 3-4°
Lisbon
Supports and guides foreign investors and foreign exporters of technology.
Grants legal permission for direct foreign investment and contracts for the transfer of technology.)
STATISTICAL PROFILE: SPAIN

<table>
<thead>
<tr>
<th>Population (millions):</th>
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<th>GNP (US$ billions):</th>
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<tbody>
<tr>
<td>Per capita income (US$):</td>
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<td>Energy production (quad Btu):</td>
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<td>Urban/rural (%):</td>
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<td>Gross energy consumption:</td>
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<td>(quad Btu):</td>
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<td>Energy Reserves:</td>
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<td>per sq. mile:</td>
<td>184</td>
<td>Oil:</td>
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<td>per sq. kilometer:</td>
<td>71</td>
<td>Gas:</td>
<td>3.5</td>
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</tbody>
</table>

Population density per sq. mile: 184
Population density per sq. kilometer: 71

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec

Almeria:
Lat.: 37° N
Long.: 2.5° W
Insolation 215 296 403 503 552 588 595 541 443 337 241 190
Temperature 11.7 11.8 14.1 16.1 18.4 22.0 24.7 25.3 23.4 19.4 15.6 12.8

Madrid:
Lat.: 40.5° N
Long.: 3.5° W
Insolation 157 256 331 474 531 575 606 537 403 284 187 141
Temperature 4.9 6.5 10.0 13.0 15.7 20.6 24.2 23.6 19.8 14.0 8.9 5.6

quad = quadrillion (10^{15}).
Insolation: langleys (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

Embassies:
Spain: 2700 15th St., NW
Washington, D.C. 20009
U.S.: Serrano 75
Madrid, Spain
Tel: 276-3400
Telex: 27763

Chamber of Commerce:
Consejo Superior de las Camaras
Officiales de Comercio, Industrie y Navigacion de Espana
(Supreme Council of the Official Chamber of Commerce, Industry and Navigation of Spain)
Calle Claudio Coello 19-1°
Madrid, Spain

Chambers of Commerce:
International Chamber of Commerce
Claudio Coello 19-1°
Madrid, Spain
STATISTICAL PROFILE: SPAIN (Concluded)

Development Organizations:
- Ministerio de Industria y Energía
- Centro de Estudios de la Energía
- Madrid, Spain
  (government agency for energy development)

Other:
- Cooperation Méditerranéenne pour l'Energie Solaire
- Paseo del Pintor Rosales, 34
- Madrid (8), Spain
STATISTICAL PROFILE: SWEDEN

Population (millions): 8.3
Per capita income (US$): 8,369
Primary language: Swedish
Urban/rural (%): 83/17
Literacy rate (%): 99
Monetary unit: Kronor
Population density per sq. mile: 47
per sq. kilometer: 18

GNP (US$ billions): 71.3
GNP per capita (US$): 8,671
Energy production (quad Btu)\(^a\): 0.238
Gross energy consumption\(^a\) (quad Btu): 1.407
Consumption per capita (MBtu)\(^b\): 171.38

Energy Reserves:
- Oil\(^c\): —
- Gas\(^c\): —

Trade with U.S.:
- From U.S. Imports: 1,513
- To U.S. Exports: 1,652

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<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
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<td>Lat.:</td>
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<td>202</td>
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<td>488</td>
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<td>356</td>
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<td>16.6</td>
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<td>7.1</td>
<td>2.8</td>
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</table>

quad = quadrillion (10^15).
Insolation: langleys (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.
\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

Embassies:
- Sweden: 600 New Hampshire Ave., NW
  Washington, D.C. 20037
- U.S.: Strandvagen 101
  Stockholm, Sweden
  Tel: (08) 63.05.20
  Telex: 12060 AMEMB S

Chambers of Commerce:
- International Chamber of Commerce
  Vastra Tradgardsgatan 9
  POB 106050
  S-III 53
  Stockholm 16, Sweden

Trade and Solar Interest Organizations:
- Sveriges Elektroindustrieforening
  Storgatan 19
  11485 Stockholm, Sweden
  (Swedish Electrical Manufacturers Assn.)
- International Solar Energy Society (ISES)
  Scandinavian Section
  VVS Tekniska Foreningen
  Hantuerkargatan 8
  S-112-21 Stockholm
  Sweden
STATISTICAL PROFILE: SWITZERLAND

Population (millions): 6.3
Per capita income (US$): 8,918
Primary language: German/French
Urban/rural (%): 55/45
Literacy rate (%): 99
Monetary unit: Franc
Population density
  per sq. mile: 398
  per sq. kilometer: 154

GNP (US$ billions): 56.9
GNP per capita (US$): 8,671
Energy production (quad Btu)a: 0.138
Gross energy consumption
  (quad Btu): 0.6504
Consumption per capita (MBtu)b: 101.0
Energy Reserves:
  Oilc: —
  Gasd: —

Trade with U.S.
From U.S. Imports: 3,660
To U.S. Exports: 2,076

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<th>Mar</th>
<th>Apr</th>
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<td>Lat.:</td>
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<td>Long.:</td>
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<td>515</td>
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<td>8.6</td>
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<td>17.0</td>
<td>14.0</td>
<td>8.6</td>
<td>3.7</td>
<td>0.1</td>
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</table>

quad = quadrillion (10^{15}).
Insolation: langleys (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

a Based on U.N. conversion of 7000 cal/gram.
b F.A.S. transaction values.
c Quads.

Embassies:
Switzerland: 2900 Cathedral Ave., NW
            Washington, D.C. 20008
U.S.: Jubilaeumstrasse 93
      3005 Bern, Switzerland
      Tel: (031) 437011
      Telex: 32128

Chambers of Commerce:
Chambre de Commerce et d'Industrie de Geneve
1 rue Petitet
1211 Geneva II, Switzerland

Trade and Solar Interest Organizations:
Schweizischer Baumeisterverband
Weinbergstrasse 49
8035-Zurich, Switzerland
(building contractors association)

Trade Fairs:
National Fair
Camptoir Suisse
Palais de Beaulieu
1002 Lausanne, Switzerland

quad = quadrillion (10^{15}).
Insolation: langleys (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.
STATISTICAL PROFILE: UNITED KINGDOM

Population (millions): 55.9
Per capita income (US$): 3,898
Primary language: English
Urban/rural (%): 70/30
Literacy rate (%): 98
Monetary unit: Pound
Population density
per sq. mile: 594
per sq. kilometer: 229

GNP (US$ billions): 225.2
GNP per capita (US$): 4,026
Energy production (quad Btu): 5.113
Gross energy consumption (quad Btu): 8.207
Consumption per capita (MBtu): 146.65
Energy Reserves:
Oil: 85.84
Gas: 24.8

Trade with U.S.
From U.S. Imports: 10,635
To U.S. Exports: 8,029

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<td>Lat.: 52° 13' N</td>
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<td>Long.: 00° 06' E</td>
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<td>14.3</td>
<td>10.4</td>
<td>6.7</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Lerwick Observatory:
Lat.: 60° 08' N
Long.: 01° 11' W
Insolation:
Temperature:

London:
Lat.: 51° 28' N
Long.: 00° 19' W

<table>
<thead>
<tr>
<th>City</th>
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<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
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<td>Long.: 00° 06' E</td>
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</table>

quad = quadrillion (10^{15}).
Insolation: langley (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

*aBased on U.N. conversation of 7000 cal/gram.

bF.A.S. transaction values.

cQuads.

Embassies:
United Kingdom: 3100 Massachusetts Ave.
Washington, D.C. 20008
U.S.: 24/31 Grosvenor Sq.
W 1A 1AE
London, England
Kingman Brewster, Jr. (AMB)
Tel: (01) 499-9000
Telex: 266777

Chambers of Commerce:
Association of British Chambers of Commerce
6-14 Dean Farrar St.
London, SW 1, England
Trade and Solar Interest Organizations:
International Solar Energy Society (ISES)
United Kingdom Section
The Royal Institution
19 Albemarle Street
London, WIX 4BS, England
Contact: Dr. J. Barber

Confederation of British Industry
21 Tothill Street
London, SWI, England
(Acts as a reference point for all seeking views of industry and is recognized internationally as the representative organization of British industry and management.)

Other:
U.S. International Marketing Center
c/o U.S. Embassy
Solar Trade Association, Fed.
26 Store Street
London WCIE 7BT
Tel: 01-6364717
Ex. Sec.: J. R. Stammers
## STATISTICAL PROFILE: MIDDLE EAST

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (million)</th>
<th>Per Capita Income (US$)</th>
<th>Primary Language</th>
<th>Urban Rural (%)</th>
<th>Literacy Rate (%)</th>
<th>Monetary Unit</th>
<th>Population Density (sq m) (sq k)</th>
<th>GNP (US$ million)</th>
<th>GNP Per Capita (US$)</th>
<th>Production (quad Btu)</th>
<th>Gross Energy Consumption (quad Btu)</th>
<th>Energy Use Per Capita (MBtu)</th>
<th>Reserves (quad)</th>
<th>Oil (MBtu)</th>
<th>Gas (MBtu)</th>
<th>Trade (US$)</th>
<th>Export</th>
<th>Import</th>
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<td>34.3</td>
<td>1,986</td>
<td>Persian</td>
<td>47/53</td>
<td>37</td>
<td>Rial</td>
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<td>1,972</td>
<td>11.856</td>
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<td>485</td>
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*a* Insolation: langley per day (1 langley = 1 cal/cm² = 3.69 Btu/ft²).
STATISTICAL PROFILE: IRAN

Population (millions): 34.3
Per capita income (US$): 1,986
Primary language: Persian
Urban/rural (%): 47/53
Literacy rate (%): 37
Monetary unit: Rial
Population density
per sq. mile: 53
per sq. kilometer: 20

GNP (US$ billions): 66.3
GNP per capita (US$): 1,972
Energy production (quad Btu)a: 11.856
Energy reserves:
Oilc: 333.5
Gasc: 485

Trade with U.S.
From U.S. Imports: 1,019
To U.S. Exports: 2,784

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quad = quadrillion (10^{15}).
Insolation: langleys (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads

Embassies:
Iran: 3005 Massachusetts Ave., NW
      Washington, D.C. 20008
U.S.: 260 Takhte Jamshid Avenue
      P.O. Box 50 or Box 2000
      Tehran, Iran
      Tel: 82091/9, 824-001,
            820-091, 829-051

Chambers of Commerce:
Iran Chamber of Commerce, Industry
      and Mines
      254 Ave. Takht-Jamshid
      Tehran, Iran
STATISTICAL PROFILE: IRAQ

Population (millions): 11.9
Per capita income (US$): 1,159
Primary language: Arabic
Urban/rural (%): 66/34
Literacy rate (%): 26
Monetary unit: Dinar
Population density
   per sq. mile: 72
   per sq. kilometer: 28

GNP (US$ billions): 15.9
GNP per capita (US$): 1,385
Energy production (quad Btu)
   (quad Btu): 4.602
   Gross energy consumption
   (quad Btu): 0.220
Consumption per capita (MBtu)
   (MBtu): 19.81

Energy Reserves:
   Oil: 174
   Gas: 27.45

Trade with U.S.
From U.S. Imports: 442
To U.S. Exports: 618

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec

Baghdad:
   Lat.: 33° 20' N
   Long.: 44° 24' E
   Insolation
   Temperature 9.8 12.9 15.4 21.6 27.7 31.8 34.2 33.9 30.3 24.8 17.6 11.3

quad = quadrillion (10^15).
Insolation: langley (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

Embassies:
   Iraq:
   U.S.: Opp. For. Ministry Club (Masbah Quarter)
   P.O. Box 2447 Alwiyah
   Baghdad, Iraq
   Tel: 96138
   Telex: 2287 USINT 1K

Embassy was closed June 7, 1967. The government of Belgium serves as protective power for the United States in Iraq.

Chamber of Commerce:
   Federation of Iraqi Chambers of Commerce
   Mustansir St.
   Baghdad, Iraq

Trade Fairs:
   Baghdad International Fair
   Damascus St.
   Baghdad, Iraq
STATISTICAL PROFILE: ISRAEL

- Population (millions): 3.5
- Per capita income (US$): 3,460
- Primary language: Hebrew/Arabic
- Urban/rural (%): 82/18
- Literacy rate (%): 88
- Monetary unit: Pound
- Population density
  - per sq. mile: 440
  - per sq. kilometer: 170
- GNP (US$ billions): 14.0
- GNP per capita (US$): 3,960
- Energy production (quad Btu)<sup>a</sup>: 0.202
- Gross energy consumption<sup>2</sup> (quad Btu): 0.262
- Consumption per capita (MBtu)<sup>b</sup>: 78.0
- Energy Reserves:
  - Oil<sup>c</sup>: 0.0058
  - Gas<sup>c</sup>: 0.1
- Trade with U.S.
  - From U.S. Imports: 1,857
  - To U.S. Exports: 749

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quad = quadrillion ($10^{15}$).
Insolation: langley (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

<sup>a</sup> Based on U.N. conversation of 7000 cal/gram.
<sup>b</sup> F.A.S. transaction values.
<sup>c</sup> Quads.

Embassies:
- Israel: 1621 22nd. Ave., NW
  Washington, D.C. 20008
- U.S.: 71 Hayarkon Street
  Tel Aviv, Israel
  Tel: 54338
  Telex: 33378

Chambers of Commerce:
- Federation of Israeli Chambers of Commerce
  POB 501
  Tel-Aviv, Israel
- Federation of Bi-National Chambers of Commerce with Israel
  99 Adad Haam St.
  Tel-Aviv, Israel
  POB 1127

Trade and Solar Interest Organizations:
- International Solar Energy Society
  Israel Section
- Faculty of Mechanical Engineering
  Israel Institute of Technology
  Haifa 32000
  Israel

Development Organizations:
- The Agricultural Union
  Tchlenov 20
  Tel-Aviv, Israel
  Consists of 50 agricultural settlements and is connected with marketing and supplying organizations.
STATISTICAL PROFILE: JORDAN

Population (millions): 2.3
Per capita income (US$): 552
Primary language: Arabic
Urban/rural (%): 42/58
Literacy rate (%): 0.32
Monetary unit: Dinar
Population density
per sq. mile: 58
per sq. kilometer: 23

GNP (US$ billions): 1.7
GNP per capita (US$): 615
Energy production (quad Btu)a: —
Gross energy consumption (quad Btu): 0.0306
Consumption per capita (MBtu)b: 11.34

Energy Reserves:
Oilc: —
Gasc: —

Trade with U.S.
From U.S. Imports: 334
To U.S. Exports: 4

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec
Amman:
Lat.: 31° 57' N
Long.: 35° 59' E
Insolation — — — — — — — — — — — —
Temperature 8.2 9.3 14.1 16.2 20.8 23.6 25.2 25.6 23.5 20.7 15.3 10.1

quad = quadrillion (1015).
Insolation: langley (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.
aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

Embassies:
Jordan: 2319 Wyoming Ave., NW Washington, D.C. 20008
U.S.: Jebel Amman Madi Bldg., 2nd fl., King Faisal Street Amman, Jordan Tel: 38930/38724

Chambers of Commerce:
Amman Chamber of Commerce POB 287 Amman, Jordan
Chamber of Industry POB 1800 Amman, Jordan
### STATISTICAL PROFILE: KUWAIT

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- **quad** = quadrillion (10^{15}).
- **Insolation**: langley (1 langley = 1 cal/cm^2).
- **Temperature**: daily mean centigrade.
- aBased on U.N. conversation of 7000 cal/gram.
- bF.A.S. transaction values.
- cQuads.

**Embassies:**
- Kuwait: 2940 Tilden St., NW
  Washington, D.C. 20008
- U.S: P.O. Box 77 Safat
  Kuwait
  Tel.: 424-151

**Chambers of Commerce:**
- Kuwait Chamber of Commerce and Industry
  POB 775 Chambers Building
  Ali Salem St.
  Kuwait State, Kuwait
STATISTICAL PROFILE: LEBANON

Population (millions): 3.1
Per capita income (US$): 589
Primary language: Arabic
Urban/rural (%): 60/40
Literacy rate (%): 86
Monetary unit: Pound
Population density
  per sq. mile: 775
  per sq. kilometer: 299

GNP (US$ billions): 3.3
GNP per capita (US$): 1,107

Energy production (quad Btu)$^a$: 0.00272
Gross energy consumption$^a$
  (quad Btu): 0.074
Consumption per capita (MBtu)$^b$: 24.21

Energy Reserves:
  Oil$^c$: —
  Gas$^c$: —

Trade with U.S.
From U.S. Imports: 227
To U.S. Exports: 15

<table>
<thead>
<tr>
<th>City</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
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quad = quadrillion ($10^{15}$).
Insolation: langleys (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

$^a$Based on U.N. conversation of 7000 cal/gram.

$^b$F.A.S. transaction values.

$^c$Quads.

Embassies:
Lebanon: 2560 28th St., NW
Washington, D.C. 20008
Najati, Kabbani (AMB)
U.S.: Corniche at Rue Ain Mreisseh
Beirut, Lebanon
Tel: 361-964, 361-800

Chambers of Commerce:
Beirut Chamber of Commerce and Industry
Sanayeh Spears St.
Chamber of Commerce and Industry
Building
POB 111801
Beirut, Lebanon
## STATISTICAL PROFILE: SAUDI ARABIA

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<th>Population (millions):</th>
<th>9.5</th>
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<td>Per capita income (US$):</td>
<td>5,616</td>
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<td>Arabic</td>
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<td>Riyal</td>
<td>Energy Reserves:</td>
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<tr>
<td>Population density</td>
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<td></td>
<td></td>
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<tr>
<td>per sq. mile:</td>
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<td>per sq. kilometer:</td>
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<td>Gas(^c):</td>
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### City Data

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<td>26.0</td>
<td>20.0</td>
<td>15.1</td>
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</table>

\(^a\)Based on U.N. conversion of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

### Embassies:

<table>
<thead>
<tr>
<th>Country</th>
<th>Address</th>
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<tbody>
<tr>
<td>Saudi Arabia</td>
<td>1520 18th St., NW Washington, D.C. 20036</td>
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<tr>
<td>U.S.:</td>
<td>Palestine Road Ruwais Jidda, Saudi Arabia</td>
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<tr>
<td>Tel:</td>
<td>53410, 54110, 52188, 52396, 52589</td>
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</table>

### Trade Organizations:

- International Solar Energy Society (ISES) Arab Section
- College of Engineering P.O. Box 800 Riyadh, Saudi Arabia

### Chambers of Commerce:

- Chamber of Commerce and Industries POB 1264 Jeddah, Saudi Arabia
STATISTICAL PROFILE: SYRIA

Population (millions): 7.8
Per capita income (US$): 676
Primary language: Arabic
Urban/rural (%): 48/52
Literacy rate (%): 40
Monetary unit: Pound
Population density
per sq. mile: 106
per sq. kilometer: 41

GNP (US$ billions): 6.0
GNP per capita (US$): 786
Energy production (quad Btu)a: 0.399
Gross energy consumptiona (quad Btu): 0.0974
Consumption per capita (MBtu)b: 13.23
Energy Reserves:
Oilc: 11.252
Gasc: 1.5

Trade with U.S.
From U.S. Imports: 229
To U.S. Exports: 165

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec
Damascus:
Lat.: 33° 29' N
Long.: 36° 14' E
Insolation
Temperature 7.5 8.8 11.6 16.4 21.3 24.0 26.5 27.1 23.0 22.7 13.3 8.8

quad = quadrillion (10^{15}).
Insolation: langley (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

Embassies:
Syria: 2215 Wyoming Ave., NW
Washington, D.C. 20008
U.S: Abu Rumanah
Rue al Mansour No. 2
P.O. Box 29
Damascuse, Syria
Tel: 332315, 332814, 330416
Telex: 11919 USDAMA SY

Chambers of Commerce:
Damascus Chamber of Commerce
B.P. 1040
Mor'awiah St.
Damascuse, Syria
### STATISTICAL PROFILE: YEMEN

- **Population (millions):** 5.238
- **Per capita income (US$):** 122
- **Primary language:** Arabic
- **Urban/rural (%):** NA
- **Literacy rate (%):** 10
- **Monetary unit:** Rial
- **Population density**
  - per sq. mile: 70
  - per sq. kilometer: 27
- **GNP (US$ billions):** 1.5
- **GNP per capita (US$):** 294
- **Energy production (quad Btu)\(^a\):** —
- **Gross energy consumption\(^a\)**
  - (quad Btu): 0.00911
- **Consumption per capita (MBtu)\(^b\):** 1.75
- **Energy Reserves:**
  - Oil\(^c\): NA
  - Gas\(^c\): NA
- **Trade with U.S.:**
  - From U.S. Imports: 214
  - To U.S. Exports: 2 or Z*

### City Data

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<th>Mar</th>
<th>Apr</th>
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<tr>
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<td>15.4</td>
<td>16.5</td>
<td>17.0</td>
<td>18.7</td>
<td>19.3</td>
<td>20.9</td>
<td>20.9</td>
<td>17.6</td>
<td>13.8</td>
<td>15.4</td>
<td>11.0</td>
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</table>

quad = quadrillion (10\(^15\)).

Insolation: langley (1 langley = 1 cal/cm\(^2\)).

Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversion of 7000 cal/gram.

\(^b\)F.A.S. transaction values.

\(^c\)Quads.

*Z = less than $500,000.

### Embassies:
- **Yemen:** 600 New Hampshire Ave., NW
  (Arab Republic) Washington, D.C. 20008
  Yama M. Al-Mutalwakel
  (AMB)
- **U.S.:** Box 33
  Sana, Yemen
  Tel: 2790, 5826, 4407, 2506

### Chambers of Commerce:
- **Hodeida Chamber of Commerce**
  Tahrir Square
  POB 3370
  Hodeida, Yemen
## STATISTICAL PROFILE: AFRICA

<table>
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<th>Per Capita Income (US$)</th>
<th>Primary Language</th>
<th>Urban Rural (%)</th>
<th>Literacy Rate (%)</th>
<th>Monetary Unit</th>
<th>Population Density (sq m) (sq k)</th>
<th>GNP (US$ million)</th>
<th>GNP Per Capita (US$)</th>
<th>GNP Per Capita (quad Btu)</th>
<th>Production (quad Btu)</th>
<th>Gross Energy Consumption (quad Btu)</th>
<th>Energy Used Per Capita (MBtu)</th>
<th>Reserves (quad)</th>
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## Statistical Profile: Africa (Continued)

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<th>Per Capita Income (US$)</th>
<th>Primary Language</th>
<th>Urban Rural (%)</th>
<th>Literacy Rate (%)</th>
<th>Monetary Unit</th>
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*a Insolation: Langley per day (1 langley = 1 cal/cm² = 3.69 Btu/ft²).
*b World Survey of Climatology; Volume 10.
*c Solar Radiation and Radiation Balance Data (The World Network).
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*a Insolation: Langleyes per day (1 langley = 1 cal/cm² = 3.69 Btu/ft²).

*b World Survey of Climatology; Volume 10.

*c Solar Radiation and Radiation Balance Data (The World Network).
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<td>458</td>
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<td>373</td>
</tr>
</tbody>
</table>

---

\(^a\) Insolation: langley per day (1 langley = 1 cal/cm\(^2\) = 3.69 Btu/ft\(^2\)).

\(^b\) World Survey of Climatology; Volume 10.

\(^c\) Solar Radiation and Radiation Balance Data (The World Network).
### STATISTICAL PROFILE: ALGERIA

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<th>Population (millions):</th>
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<td>Literacy rate (%):</td>
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<td>Monetary unit:</td>
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<td>Population density  per sq. mile:</td>
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<td>per sq. kilometer:</td>
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<tr>
<td>GNP (US$ billions):</td>
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<td>GNP per capita (US$):</td>
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<td>Energy production (quad Btu)(^a):</td>
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<td>Consumption per capita (MBtu)(^b):</td>
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<td>Energy Reserves:</td>
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<td>Oil(^c):</td>
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<td>Gas(^c):</td>
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<td>Trade with U.S.</td>
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<td>From U.S. Imports:</td>
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<td>To U.S. Exports:</td>
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<th>Mar</th>
<th>Apr</th>
<th>May</th>
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<th>Jul</th>
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<td>22.0</td>
<td>18.5</td>
<td>13.5</td>
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</table>

quad = quadrillion \((10^{15})\).
Insolation: langleyes \((1 \text{ langley} = 1 \text{ cal/cm}^2)\).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversion of 7000 cal/gram.

\(^b\)F.A.S. transaction values.

\(^c\)Quads.

**Embassies:**
- **Algeria:** 2118 Kalorama Rd., NW Washington, D.C. 20008
- **U.S.:** 4 Chemin Cheikh Bachir Brahimi Algiers, Algeria
  - Tel: 601425, 601255, 601186, 601716, 601828, 603670
  - Telex: 52064

**Chambers of Commerce:**
- **Chambre Francaise de Commerce et d'Industrie en Algerie**
  - 1 rue du Languedoc
  - Algiers, Algeria

**Trade Fairs:**
- **Foire Internationale d'Alger**
  - Palais des Expositions Pins Maritimes
  - BP 571
  - Algiers, Algeria
  - (annual)
STATISTICAL PROFILE: BURUNDI

Population (millions): 4.0
Per capita income (US$): 69
Primary language: French
Urban/rural (%): 2/98
Literacy rate (%): 10
Monetary unit: Franc
Population density
per sq. mile: 360
per sq. kilometer: 139

GNP (US$ billions): 0.46
GNP per capita (US$): 119
Energy production (quad Btu)\(^a\): —
Gross energy consumption\(^a\)
(quad Btu): 0.00133
Consumption per capita (MBtu)\(^b\): 0.36

Energy Reserves:
Oil\(^c\): NA
Gas\(^c\): NA

Trade with U.S.
From U.S. Imports: 3
To U.S. Exports: 371

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----
Kisozì:
Lat.: 03° 33' S
Long.: 29° 41' E
Insolation | 438 | 434 | 445 | 467 | 465 | 471 | 469 | 454 | 481 | 461 | 429 | 424
Temperature | 17.0 | 17.0 | 17.0 | 17.0 | 16.0 | 15.0 | 15.5 | 16.5 | 17.0 | 17.0 | 17.0 | 17.0

quad = quadrillion (10\(^15\)).
Insolation: langleys (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.

\(^b\)F.A.S. transaction values.

\(^c\)Quads.

Embassies:
Burundi: 2717 Connecticut Ave., NW
Washington, D.C. 20009
U.S.: Chaussee Prince Louise
Rwagasore
Boîte Postale 1720
Bujumbura, Burundi
Tel: 34-54

Chambers of Commerce:
Chambre de Commerce de l'Industrie due Rwanda et du Burundi
POB 313
Bujumbura, Burundi
### STATISTICAL PROFILE: CENTRAL AFRICAN EMPIRE

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<td>Population density</td>
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<tr>
<td>per sq. mile:</td>
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</tr>
<tr>
<td>per sq. kilometer:</td>
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<td>Energy production (quad Btu):</td>
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<tr>
<td>Gross energy consumption (quad Btu):</td>
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<td>Consumption per capita (MBtu):</td>
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<td>Gas:</td>
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<tr>
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<tr>
<td>To U.S. Exports:</td>
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<th>Mar</th>
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<td>25.5</td>
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</table>

**quad = quadrillion (10^{15}).**

**Insolation:** langley (1 langley = 1 cal/cm²).

**Temperature:** daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.

bF.A.S. transaction values.

cQuads.

**Embassies:**

<table>
<thead>
<tr>
<th>Central African Empire:</th>
<th>1618 22nd St., NW</th>
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<tr>
<td>U.S.:</td>
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<td></td>
<td>BP 924</td>
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<td>Bangui, Central African Empire</td>
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<tr>
<td></td>
<td>Tel: 610-200, 610-205</td>
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<tr>
<td></td>
<td>Telex: 5216</td>
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**Chambers of Commerce:**

<table>
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<th>Chambre Nationale de Commerce</th>
</tr>
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<tr>
<td>BP 813</td>
</tr>
<tr>
<td>Bangui, Central African Empire</td>
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STATISTICAL PROFILE: CHAD

Population (millions): 4.1
Per capita income (US$): 165
Primary language: French
Urban/rural (%): 14/86
Literacy rate (%): 7
Monetary unit: Franc
Population density per sq. mile: 9.0
per sq. kilometer: 3.5

GNP (US$ billions): 0.51
GNP per capita (US$): 124
Energy production (quad Btu)a: —
Gross energy consumptiona (quad Btu): 0.00439
Consumption per capita (MBtu)b: 1.08

Energy Reserves:
Oilc: NA
Gasc: NA

Trade with U.S.
From U.S. Imports: 3
To U.S. Exports: Z*

<table>
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<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
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</table>

quad = quadrillion (10^{15}).
Insolation: langleys (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.

aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

*Z = Less than $500,000.

Embassies:
Chad: 2600 Virginia Ave., NW
      Washington, D.C 20037
U.S.: Rue due St. Col. Colonna
      D'Oranano
      B.P. 413
      N'Djamena, Chad
      Tel: 30-91/2/3/4
      Telex: 5203 KD

Trade and Solar Interest Organizations:
Societe Nationale de Commercialisation du
Tchad (SONACOT)
B.P. 630
N'Djamena, Chad
(State owned, national marketing, distribution and export-import company.)

Chambers of Commerce:
Chambre de Commerce, d'Agriculture et
d'Industrie de la Republique du Tchad
B.P. 458
N'Djamena, Chad
# Statistical Profile: Egypt

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<tr>
<td>Urban/rural (%):</td>
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<td>Literacy rate (%):</td>
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<td>Population density per sq. mile:</td>
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<tr>
<td>GNP (US$ billions):</td>
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<td>GNP per capita (US$):</td>
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<td>Trade with U.S.</td>
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<tr>
<td>From U.S. Imports:</td>
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<td>To U.S. Exports:</td>
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<td>26.0</td>
<td>24.0</td>
<td>20.0</td>
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</tbody>
</table>

Quad = quadrillion \(10^{15}\).

Insolation: langley (1 langley = 1 cal/cm\(^2\)).

Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversion of 7000 cal/gram.

\(^b\)F.A.S. transaction values.

\(^c\)Quads.

**Embassies:**
- **Egypt:** 2310 Decatur Place, NW
  Washington, D.C. 20008
- **U.S.:** 5 Sharia Latin America
  Cairo, Egypt
  Tel: 28211/9
  Telex: 93773

**Chambers of Commerce:**
- **Egyptian Chamber of Commerce**
  El-Ghorfa Eltegarein St.
  Alexandria, Egypt
STATISTICAL PROFILE: ETHIOPIA

Population (millions): 29.0
Per capita income (US$): 91
Primary language: Amharic
Urban/rural (%): 12/88
Literacy rate (%): 7
Monetary unit: Birr
Population density
per sq. mile: 61
per sq. kilometer: 23

GNP (US$ billions): 2.9
GNP per capita (US$): 103
Primary Energy production (quad Btu)\(^a\): 0.00119
Gross energy consumption\(^a\)
(quad Btu): 0.0222
Consumption per capita (MBtu)\(^b\): 0.81
Energy Reserves:
Oil\(^c\): —
Gas\(^c\): —

Trade with U.S.
From U.S. Imports: 104
To U.S. Exports: 109

<table>
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<tr>
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<th>Jan</th>
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<td>21.5</td>
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</tbody>
</table>

quad = quadrillion (10\(^{15}\)).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

Embassies:
- Ethiopia: 2134 Kalorama Rd., NW Washington, D.C. 20008
- U.S.: Entoto Street P.O. Box 1014 Addis Ababa, Ethiopia
  Tel: 110666, 110117, 110129

Chambers of Commerce:
- Ethiopian Chamber of Commerce POB 517 Addis Ababa, Ethiopia
### STATISTICAL PROFILE: GUINEA BISSAU

<table>
<thead>
<tr>
<th>Population (millions):</th>
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<tr>
<td>Per capita income (US$):</td>
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<td>Primary language:</td>
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<tr>
<td>Urban/rural (%):</td>
<td>NA</td>
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<td>Literacy rate (%):</td>
<td>NA</td>
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<tr>
<td>Monetary unit:</td>
<td>Escudo</td>
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<tr>
<td>Population density per sq. mile:</td>
<td>38</td>
</tr>
<tr>
<td>per sq. kilometer:</td>
<td>15</td>
</tr>
</tbody>
</table>

| GNP (US$ billions): | 0.07 |
| GNP per capita (US$): | 131 |
| Energy production (quad Btu)\(^a\): | — |
| Gross energy consumption \(^a\): | 0.00119 |
| Consumption per capita (MBtu)\(^b\): | 2.23 |
| Energy Reserves: |
| Oil\(^c\): | NA |
| Gas\(^c\): | NA |
| Trade with U.S.: |
| From U.S. Imports: | NA |
| To U.S. Exports: | NA |

<table>
<thead>
<tr>
<th>City</th>
<th>Jan</th>
<th>Feb</th>
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</table>

quad = quadrillion \((10^{15})\).
Insolation: langleys \((1 \text{ langley} = 1 \text{ cal/cm}^2\).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

**Embassies:**

| Guinea Bissau: | 211 East 43rd St. |
| New York, NY 10017 |
| Ibrahima Camare (AMB) |
| U.S.: | Avenida Domingos Ramos |
| C.P. 297 |
| Bissau, Guinea Bissau |
| Tel: 28-6/7 |

**Chambers of Commerce:**

Since independence the government has been actively pursuing a policy of small-scale industrialization to compensate for the almost total lack of manufacturing capacity. No Chamber of Commerce presently.
STATISTICAL PROFILE: IVORY COAST

- Population (millions): 5.2
- Per capita income (US$): 1,150
- Primary language: French
- GNP (US$ billions): 4.3
- GNP per capita (US$): 609
- Energy production (quad Btu)\(a\): 0.0009
- Gross energy consumption\(a\) (quad Btu): 0.0497
- Consumption per capita (MBtu)\(b\): 7.45
- Energy Reserves:
  - Oil\(c\): 0.29
  - Gas\(c\): —
- Trade with U.S.:
  - From U.S. Imports: 128
  - To U.S. Exports: 363

<table>
<thead>
<tr>
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<th>Mar</th>
<th>Apr</th>
<th>May</th>
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<td>28.0</td>
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<td>25.5</td>
<td>26.0</td>
<td>26.5</td>
<td>25.0</td>
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</table>

quad = quadrillion \(10^{15}\).
Insolation: langleys \(1 \text{langley} = 1 \text{cal/cm}^2\).
Temperature: daily mean centigrade.
\(a\) Based on U.N. conversation of 7000 cal/gram.
\(b\) F.A.S. transaction values.
\(c\) Quads.

Embassies:
- Ivory Coast: 2424 Massachusetts Ave., NW
  Washington, D.C. 20008
- U.S.: Rue Jesse Owens
  01 Boite Postale 1712
  Abidjan, Ivory Coast
- Monteagle Stearns (AMB)
  Tel: 32-46-30
  Telex: 660

Chambers of Commerce:
- Chambre de Commerce de la Republique de Cote d'Ivoire
  BP 1399
  Abidjan, Ivory Coast

Development Organizations:
- Societe de Gestion Financiere de l'Habitat (SOGEFIHA)
  BP 9278
  Abidjan, Ivory Coast
  (Development of urban and rural housing).
STATISTICAL PROFILE: KENYA

Population (millions): 14.3
Per capita income (US$): 276
Primary language: Swahili
Urban/rural (%): 10/90
Literacy rate (%): 25
Monetary unit: Shilling
Population density
per sq. mile: 62
per sq. kilometer: 24

GNP (US$ billions): 3.3
GNP per capita (US$): 237
Energy production (quad Btu)\(^a\): 0.00222
Gross energy consumption\(^a\) (quad Btu): 0.0646
Consumption per capita (MBtu)\(^b\): 4.84

Energy Reserves:
- Oil\(^c\): —
- Gas\(^c\): —

Trade with U.S.
From U.S. Imports: 61
To U.S. Exports: 50

<table>
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<tr>
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<th>Apr</th>
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<th>Oct</th>
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<td>18.5</td>
<td>18.0</td>
<td>17.5</td>
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</table>

quad = quadrillion (10\(^{15}\)).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.
\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

Embassies:
Kenya: 2249 R St., NW
    Washington, D.C. 20008
    John P. Mbogua (AMB)
U.S.: Cotts House
    Wabera Street
    P. O. Box 30137
    Nairobi, Kenya
    Jack Felt (COM)
    Tel: 334141

Chambers of Commerce:
Kenya National Chamber of Commerce
    and Industry
    Ufanisi House
    Haile Selassie Ave.
    POB 47124
    Nairobi, Kenya
STATISTICAL PROFILE: LIBERIA

Population (millions): 1.7
Per capita income (US$): 422
Primary language: English
Urban/rural (%): 28/92
Literacy rate (%): 10
Monetary unit: Dollar

Population density
per sq. mile: 37
per sq. kilometer: 14

GNP (US$ billions): 0.72
GNP per capita (US$): 450

Energy production (quad Btu)\(^a\): 0.00108
Gross energy consumption\(^a\)

(qquad Btu): 0.0191
Consumption per capita (MBtu)\(^b\): 12.37

Energy Reserves:

Oil\(^c\): —
Gas\(^c\): —

Trade with U.S.
From U.S. Imports: 108
To U.S. Exports: 136

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Monrovia: | | | | | | | | | | | | |
Lat.: 06° 18' N
Long.: 10° 45' W

Insolation
Temperature | 26.0 | 26.5 | 27.0 | 26.5 | 25.5 | 25.5 | 24.5 | 25.0 | 25.0 | 25.5 | 26.0 | 26.0

\(^a\) Based on U.N. conversation of 7000 cal/gram.
\(^b\) F.A.S. transaction values.
\(^c\) Quads.

Embassies:
Liberia: 5201 16th St., NW Washington, D.C. 20011
Francis A. W. Dennis (AMB)

U.S.: APO New York 09155
111 United Nations Drive
P. O. Box 98
Monrovia, Liberia (COM)
Tel: 22991, 22992-3-4

Chambers of Commerce:
Liberia Chamber of Commerce
POB 92
Monrovia, Liberia
### Statistical Profile: Libya

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
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</thead>
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<tr>
<td>Population (millions)</td>
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<tr>
<td>Per capita income (US$)</td>
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<tr>
<td>Primary language</td>
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<tr>
<td>Urban/rural (%)</td>
<td>30/70</td>
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<td>Literacy rate (%)</td>
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<td>Monetary unit</td>
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<td>Population density per sq. mile</td>
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<tr>
<td>Population density per sq. kilometer</td>
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<td>GNP (US$ billions)</td>
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<tr>
<td>GNP per capita (US$)</td>
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<tr>
<td>Energy production (quad Btu)</td>
<td>3.102</td>
</tr>
<tr>
<td>Gross energy consumption</td>
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</tr>
<tr>
<td>(quad Btu)</td>
<td>0.0882</td>
</tr>
<tr>
<td>Consumption per capita (MBtu)</td>
<td>36.15</td>
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<tr>
<td>Energy Reserves</td>
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<tr>
<td>Oil</td>
<td>133.4</td>
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<td>Gas</td>
<td>23.8</td>
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<tr>
<td>Trade with U.S.</td>
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<tr>
<td>From U.S. Imports</td>
<td>468</td>
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<tr>
<td>To U.S. Exports</td>
<td>5,256</td>
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<th>Mar</th>
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<th>May</th>
<th>Jun</th>
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<tr>
<td>Lat.:</td>
<td>24° 13' N</td>
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<tr>
<td>Long.:</td>
<td>23° 20' E</td>
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<tr>
<td>Insolation</td>
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</tr>
<tr>
<td>Temperature</td>
<td>13.0</td>
<td>15.0</td>
<td>18.5</td>
<td>24.0</td>
<td>28.5</td>
<td>30.5</td>
<td>30.5</td>
<td>30.5</td>
<td>28.5</td>
<td>24.0</td>
<td>19.0</td>
<td>14.0</td>
</tr>
</tbody>
</table>

| Tripoli:   |      |      |      |      |      |      |      |      |      |      |      |      |
| Lat.:      | 32° 13' N |   |   |   |   |   |   |   |   |   |   |   |
| Long.:     | 13° 11' E |   |   |   |   |   |   |   |   |   |   |   |
| Insolation |      |      |      |      |      |      |      |      |      |      |      |      |
| Temperature| 12.5 | 13.5 | 15.0 | 18.0 | 20.5 | 24.0 | 25.5 | 26.5 | 25.5 | 23.0 | 18.0 | 13.5 |

quad = quadrillion \((10^{15})\).

Insolation: langleys \((1 \text{ langley} = 1 \text{ cal/cm}^2)\).

Temperature: daily mean centigrade.

*a* Based on U.N. conversation of 7000 cal/gram.

*b* F.A.S. transaction values.

*c* Quads.

**Embassies:**
- Libya: 2344 Massachusetts Ave., NW Washington, D.C. 20008
- U.S.: Shari Mohammad Thabit P. O. Box 289 Tripoli, Libya Tel: 34021/6

**Chambers of Commerce:**
- Tripolitania Chamber of Commerce, Industry and Agriculture Al-Jomhourieh St. POB 2321 Tripoli, Libya

**Trade Fairs:**
- Tripoli International Fair POB 891 Tripoli
- Annual Fair March 1-20
STATISTICAL PROFILE: MALI

Population (millions): 6.0
Per capita income (US$): 96
Primary language: French
Urban/rural (%): NA
Literacy rate (%): 10
Monetary unit: Franc

Population density
per sq. mile: 13
per sq. kilometer: 49

GNP (US$ billions): 0.59
GNP per capita (US$): 98
Energy production (quad Btu): 0.000111
Gross energy consumption (quad Btu): 0.00391
Consumption per capita (MBtu): 0.67

Energy Reserves:
Oil: NA
Gas: NA

Trade with U.S.
From U.S. Imports: 61
To U.S. Exports: 69

---

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec
Gao:
Lat.: 16° 16' N .
Long.: 00° 03' W
Insolation 440 470 510 550 550 520 530 520 510 480 450 400
Temperature 21.0 25.0 29.0 33.0 34.0 33.5 31.5 29.5 31.5 32.0 27.5 24.0

quad = quadrillion (10^15),
Insolation: langley (1 langleys = 1 cal/cm^2).
Temperature: daily mean centigrade.

^Based on U.N. conversation of 7000 cal/gram.
^F.A.S. transaction values.
^Quads.
STATISTICAL PROFILE: MADAGASCAR

Population (millions): 8.5
Per capita income (US$): 230
Primary language: Malagasy
Urban/rural (%): 14/86
Literacy rate (%): 39
Monetary unit: Franc
Population density
per sq. mile: 34
per sq. kilometer: 13

GNP (US$ billions): 1.9
GNP per capita (US$): 244
Energy production (quad Btu)\(^a\): 0.000583
Gross energy consumption\(^a\)
(quad Btu): 0.0149
Consumption per capita (MBtu)\(^b\): 2.0
Energy Reserves:
Oil\(^c\): —
Gas\(^c\): —

Trade with U.S.
From U.S. Imports: 7
To U.S. Exports: Z*

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
---|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----
Tananarive:
Lat.: 18° 54' S
Long.: 47° 32' E
Insolation 514 512 490 466 406 365 381 472 562 619 624 580
Temperature 20.5 21.0 20.5 19.5 17.0 15.5 15.0 15.0 16.5 18.5 20.5 20.5

quad = quadrillion \((10^{15})\).
Insolation: langleys (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.
\(^a\)Based on U.N. conversion of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.
*Z = Less than $500,000.

Embassies:
Madagascar: 2374 Massachusetts Ave.,
  NW Washington, D. C. 20008
U.S.: 14 and 16 rue Rainitovo,
  Antsohavola
  Boite Postale 620
  Antananarivo, Madagascar
  Tel: 212-57
  Telex: TANA 22202

Chambers of Commerce:
Federacion des Chambres de Commerce,
d'Industrie et d'Argiculture de
Madagascar
BP 166
20 rue Colbert
Antananarivo, Madagascar

Trade and Solar Interest Organizations:
Societe Nationale de Commerce
(SONACO)
BP 3187
Antananarivo, Madagascar
(handles all imports and exports)
STATISTICAL PROFILE: MAURITANIA

Population (millions): 1.2
Per capita income (US$): 240
Primary language: French
Urban/rural (%): 23/77
Literacy rate (%): 5
Monetary unit: Ouguiya
Population density
  per sq. mile: 3.7
  per sq. kilometer: 1.4

GNP (US$ billions): 0.46
GNP per capita (US$): 311
Energy production (quad Btu)\(^a\): —
Gross energy consumption\(^a\)
  (quad Btu): 0.00397
Consumption per capita (MBtu)\(^b\): 3.0

Energy Reserves:
  Oil\(^c\): NA
  Gas\(^c\): NA

Trade with U.S.
  From U.S. Imports: 7
  To U.S. Exports: Z*

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec

Nema:
Lat.: 16° 36' N
Long.: 07° 16' W
Insolation
  430 480 520 540 540 490 520 520 500 470 400 370
Temperature
  23.5 26.0 30.0 33.0 35.5 35.0 32.0 29.5 31.0 32.5 29.5 24.5

Nouakchott:
Lat.: 18° 09' N
Long.: 15° 36' W
Insolation
  490 530 620 670 660 660 620 610 580 540 470 440
Temperature
  21.0 22.0 24.5 25.5 27.5 28.0 28.0 28.0 29.0 28.5 25.5 21.5

quad = quadrillion (10\(^{15}\)).
Insolation: langleys (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.
\(^a\)Based on U.N. conversion of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

*Z = Less than $500,000.

Embassies:
Mauritania: 2129 Leroy Place, NW
  Washington, D.C. 20008
U.S.: Boite Postale 222
  Nouakchott, Mauritania
  Tel: 52660/52663
  Telex: AMEMB 558 MTN

Chambers of Commerce:
Chambre de Commerce, d'Agriculture et
d'Industrie de la Republique Islamique de
Mauritania
BP 215
Nouakchott, Mauritania
STATISTICAL PROFILE: MOROCCO

Population (millions): 18.2
Per capita income (US$): 440
Primary language: Arabic
Urban/rural (%): 32/68
Literacy rate (%): 20
Monetary unit: Dirham
Population density
per sq. mile: 10
per sq. kilometer: 39

GNP (US$ billions): 9.2
GNP per capita (US$): 517
Energy production (quad Btu)\textsuperscript{a}: 0.0251
Gross energy consumption\textsuperscript{a}
(quad Btu): 0.132
Consumption per capita (MBtu)\textsuperscript{b}: 7.64
Energy Reserves:
Oil\textsuperscript{c}: 0.000435
Gas\textsuperscript{c}: —

Trade with U.S.
From U.S. Imports: 271
To U.S. Exports: 40

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<th>Jul</th>
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<th>Oct</th>
<th>Nov</th>
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<tr>
<td>Lat.: 31° 36' N</td>
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<td>Long.: 08° 01' W</td>
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<tr>
<td>Temperature</td>
<td>12.5</td>
<td>14.0</td>
<td>16.0</td>
<td>18.0</td>
<td>21.5</td>
<td>24.0</td>
<td>28.0</td>
<td>28.0</td>
<td>25.0</td>
<td>21.0</td>
<td>15.5</td>
<td>12.5</td>
</tr>
</tbody>
</table>

quad = quadrillion (10\textsuperscript{15}).
Insolation: langley (1 langley = 1 cal/cm\textsuperscript{2}).
Temperature: daily mean centigrade.

\textsuperscript{a}Based on U.N. conversation of 7000 cal/gram.

\textsuperscript{b}F.A.S. transaction values.

\textsuperscript{c}Quads.

Embassies:
Morocco: 1601 21st St., NW
Washington, D.C. 20009
U.S.: 2 Avenue de Marrakech
Box 99
Rabat, Morocco
Tel: 30361, 30362
Telex: 31005

Chambers of Commerce:
Le Federacion des Chambres de Commerce et d'Industrie du Moroc
BP 218
11 rue Allal Ben Abdullah
Rabat, Morocco

Trade Fairs:
Foire Internationale de Casablanca
11 rue Jules Mairan
Casablanca, Morocco
## Statistical Profile: Mozambique

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Population (millions):</td>
<td>9.7</td>
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<tr>
<td>Per capita income (US$):</td>
<td>275</td>
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<td>Primary language:</td>
<td>Portuguese</td>
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<tr>
<td>Urban/rural (%):</td>
<td>NA</td>
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<tr>
<td>Literacy rate (%):</td>
<td>7</td>
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<tr>
<td>Monetary unit:</td>
<td>Escudo</td>
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<tr>
<td>Population density</td>
<td></td>
</tr>
<tr>
<td>per sq. mile:</td>
<td>31</td>
</tr>
<tr>
<td>per sq. kilometer:</td>
<td>12</td>
</tr>
<tr>
<td>GNP (US$ billions):</td>
<td>1.6</td>
</tr>
<tr>
<td>GNP per capita (US$):</td>
<td>169</td>
</tr>
<tr>
<td>Energy production (quad Btu)(^a):</td>
<td>0.0148</td>
</tr>
<tr>
<td>Gross energy consumption(^a):</td>
<td>0.0476</td>
</tr>
<tr>
<td>Consumption per capita (MBtu)(^b):</td>
<td>5.14</td>
</tr>
</tbody>
</table>

### Energy Reserves
- Oil\(^c\): —
- Gas\(^c\): —

### Trade with U.S.
- From U.S. Imports: 30
- To U.S. Exports: 50

### City Data

<table>
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<tr>
<th>City</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
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<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<tbody>
<tr>
<td>Beira</td>
<td>560</td>
<td>490</td>
<td>546</td>
<td>482</td>
<td>394</td>
<td>387</td>
<td>383</td>
<td>466</td>
<td>484</td>
<td>520</td>
<td>574</td>
<td>528</td>
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</tbody>
</table>

- Insolation: langley (1 langley = 1 cal/cm\(^2\)).
- Temperature: daily mean centigrade.

\(^a\) Based on U.N. conversation of 7000 cal/gram.

\(^b\) F.A.S. transaction values.

\(^c\) Quads.

### Embassies
- Mozambique: No U.S. Diplomatic Representation
- U.S.: 35 Rue Da Mesquita
  - 3rd FL
  - P. O. box 783
  - Maputo, Mozambique
  - Tel: 26051

### Trade and Solar Interest Organizations
- Direccao Nacional de Comercio Externo
  - Praca 25 de Junho
  - Maputo, Mozambique
  - (national board of external trade)
- Empresa Nacional de Comercializacao (ENACOMO)
  - C.P. 1831
  - Maputo, Mozambique
  - (handles all of Mozambique's foreign trade)
STATISTICAL PROFILE: NIGER

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<th>Value</th>
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<td>Population (millions)</td>
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<td>124</td>
</tr>
<tr>
<td>Primary language</td>
<td>French</td>
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<tr>
<td>Urban/rural (%)</td>
<td>NA</td>
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<td>Literacy rate (%)</td>
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<tr>
<td>Monetary unit</td>
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<td>Population density</td>
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<tr>
<td>per sq. mile</td>
<td>9.8</td>
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<tr>
<td>per sq. kilometer</td>
<td>3.8</td>
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<tr>
<td>GNP (US$ billions)</td>
<td>0.74</td>
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<td>GNP per capita (US$)</td>
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<tr>
<td>Energy production (quad Btu)(a)</td>
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<tr>
<td>Gross energy consumption (quad Btu)</td>
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<td>Consumption per capita (MBtu)(b)</td>
<td>0.97</td>
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<td>Energy Reserves:</td>
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<td>Oil(c)</td>
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</tr>
<tr>
<td>Gas(c)</td>
<td>—</td>
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<td>Trade with U.S.</td>
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<tr>
<td>From U.S. Imports</td>
<td>37</td>
</tr>
<tr>
<td>To U.S. Exports</td>
<td>Z*</td>
</tr>
</tbody>
</table>

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec
Bilma: 440 510 520 580 590 610 560 600 550 530 480 420
Lat.: 18° 39' N
Long.: 13° 23' E
Insolation 17.0 19.5 24.0 27.5 31.5 33.0 32.5 31.5 31.0 27.0 22.0 17.5
Temperature
Niamey: 500 584 623 604 600 585 540 505 544 574 543 521
Lat.: 13° 30' N
Long.: 02° 07' E
Insolation 24.0 27.0 31.0 33.5 34.0 31.5 28.5 27.5 28.5 30.5 28.0 25.5
Temperature

quad = quadrillion (10\(^{15}\)).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.
\(a\)Based on U.N. conversion of 7000 cal/gram.
\(b\)F.A.S. transaction values.
\(c\)Quads.
*Z = Less than $500,000.

Embassies:
Niger: 2204 R St., NW
Washington, D.C. 20008
U.S.: Boite Postale 11201
Niamey, Niger
Tel: 72-26-61

Chambers of Commerce:
Chambre de Commerce d'Agriculture et d'Industrie du Niger
BP 209
Niamey, Niger

Development Organizations:
Office National de L'Energie Solaire
BP 614
Niamey, Niger
(government office for building and commercial exploitation of solar powered machinery)
STATISTICAL PROFILE: NIGERIA

Population (millions): 66.6
Per capita income (US$): 363
Primary language: English
Urban/rural (%): NA
Literacy rate (%): 25
Monetary unit: Naira
Population density
per sq. mile: 216
per sq. kilometer: 83

GNP (US$ billions): 29.3
GNP per capita (US$): 381
Energy production (quad Btu)\(^a\): 3.642
Gross energy consumption\(^a\)
(quad Btu): 0.1568
Consumption per capita (MBtu)\(^b\): 2.08

Energy Reserves:
Oil\(^c\): 96.86
Gas\(^c\): 41.0

Trade with U.S.
From U.S. Imports: 632
To U.S. Exports: 8,162

<table>
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<td>Lat.: 06° 28' N</td>
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<td>Long.: 07° 33' E</td>
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</tbody>
</table>

quad = quadrillion (10\(^{15}\)).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.

\(^b\)F.A.S. transaction values.

\(^c\)Quads.

Embassies:
Nigeria: 2201 M St., NW
          Washington, D.C. 20037
U.S.: 15 Eleke Crescent
      P. O. Box 554
      Lagos, Nigeria
      Tel: 610097

Chambers of Commerce:
African Chamber of Commerce
73 Oluwole St.
POB 2189
Lagos, Nigeria

The Nigerian Association of Chambers of Commerce, Industry and Agriculture
POB 109
Lagos, Nigeria
STATISTICAL PROFILE: NIGERIA (Concluded)

Trade and Solar Interest Organizations:
Federation of Building and Civil Engineering Contractors in Nigeria
34 McCarthy St.
P. O. Box 282
Lagos, Nigeria

Nigerian Association of African Importers and Exporters
33 Kosoko St.
Lagos, Nigeria
### STATISTICAL PROFILE: RHODESIA

<table>
<thead>
<tr>
<th>Population (millions):</th>
<th>6.7</th>
<th>GNP (US$ billions):</th>
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<td>Energy production (quad Btu)(^a):</td>
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<td>Population density per sq. mile:</td>
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<td>Oil(^c):</td>
<td>NA</td>
</tr>
<tr>
<td>per sq. kilometer:</td>
<td>17</td>
<td>Gas(^c):</td>
<td>NA</td>
</tr>
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</table>

#### City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec

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<th>City</th>
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<tr>
<td>Insolation</td>
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<td>21.5</td>
<td>20.5</td>
<td>19.5</td>
<td>17.0</td>
<td>14.0</td>
<td>14.0</td>
<td>15.5</td>
<td>19.5</td>
<td>22.5</td>
<td>22.0</td>
<td>21.5</td>
</tr>
</tbody>
</table>

quad = quadrillion \((10^{15})\).
Insolation: langley \((1 \text{ langley} = 1 \text{ cal/cm}^2)\).
Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

\(*\text{Z} = \text{Less than $500,000.}\)

### Trade and Solar and Interest Organizations:

- Embassies:
  - Rhodesia: No diplomatic relations
  - U.S.: No diplomatic relations

- Trade Fair of Rhodesia
  - P. O. Box 3794
  - Salisbury, Rhodesia

- Associated Chambers of Commerce of Rhodesia
  - Equity House, Rezende Street
  - POB 1934
  - Salisbury, Rhodesia
STATISTICAL PROFILE: RWANDA

Population (millions): 4.4  
Per capita income (US$): 151  
Primary language: French  
Urban/rural (%): 4/96  
Literacy rate (%): 23  
Monetary unit: Franc  
Population density  
per sq. mile: 422  
per sq. kilometer: 163  

GNP (US$ billions): 0.48  
GNP per capita (US$): 112  
Energy production (quad Btu)a: 0.0005  
Gross energy consumptiona (quad Btu): 0.00158  
Consumption per capita (MBtu)b: 0.39  

Energy Reserves:  
Oilc: NA  
Gasc: NA  

Trade with U.S.:  
From U.S. Imports: 6  
To U.S. Exports: 41  

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec  
---|---|---|---|---|---|---|---|---|---|---|---|---  
Rubona:  
Lat.: 02° 29' S  
Long.: 29° 46' E  
Insolation: 460 470 481 453 463 454 449 471 490 475 469 460  
Temperature: 19.5 19.0 19.5 19.5 19.0 18.5 19.0 20.0 20.5 20.0 19.5 19.5  

quad = quadrillion (10^15).  
Insolation: langleys (1 langley = 1 cal/cm²).  
Temperature: daily mean centigrade.  
aBased on U.N. conversion of 7000 cal/gram.  
bF.A.S. transaction values.  
cQuads.  

Embassies:  
Rwanda: 1714 New Hampshire Ave., NW  
Washington, D.C. 20008  
Bonaventure Ubalijoro (AMB)  
U.S.: Ave. Centrale  
B.P. 28  
Kigali, Rwanda  
Tel: 5601  
Telex: 16 AMEMB RW  

Chambers of Commerce:  
Chambre de Commerce et d'Industrie du Rwanda  
BP 319  
Kigali, Rwanda
### STATISTICAL PROFILE: SENEGAL

- **Population (millions):** 3.9
- **Per capita income (US$):** 333
- **Primary language:** French
- **Urban/rural (%):** 32/68
- **Literacy rate (%):** 10
- **Monetary unit:** CFA Franc
- **Population density per sq. mile:** 67
- **per sq. kilometer:** 26
- **GNP (US$ billions):** 2.0
- **GNP per capita (US$):** 389
- **Energy production (quad Btu)\(^a\):** —
- **Gross energy consumption\(^a\):** 0.0224
- **Consumption per capita (MBtu)\(^b\):** 4.59
- **Population density per sq. mile: 67**
- **per sq. kilometer: 26**
- **City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec**
- **Dakar:**
  - **Lat.:** 13° 48' S
  - **Long.:** 17° 00' W
  - **Insolation:**
    - Jan: 395
    - Feb: 461
    - Mar: 539
    - Apr: 567
    - May: 556
    - Jun: 539
    - Jul: 456
    - Aug: 415
    - Sept: 417
    - Oct: 401
    - Nov: 401
    - Dec: 364
  - **Temperature:**
    - Jan: 22.0
    - Feb: 21.0
    - Mar: 22.0
    - Apr: 21.0
    - May: 22.0
    - Jun: 25.5
    - Jul: 27.0
    - Aug: 27.5
    - Sept: 28.0
    - Oct: 27.5
    - Nov: 24.5
    - Dec: 22.5

- **quad** = quadrillion (10\(^15\)).
- **Insolation:** langley (1 langley = 1 cal/cm\(^2\)).
- **Temperature:** daily mean centigrade.
- **a**Based on U.N. conversation of 7000 cal/gram.
- **b**F.A.S. transaction values.
- **c**Quads.

### Embassies:
- **Senegal:**
  - 2112 Wyoming Ave., NW
  - Washington, D.C. 20008
- **U.S.:**
  - Boîte Postale 49
  - Avenue Jean XXIII
  - Dakar, Senegal
  - Tel: 21-42-96
  - Telex: 517 AMEMB SG

### Chambers of Commerce:
- **Chambre de Commerce, d'Industrie et d'Artissant de l'Region du Cap Verf**
  - BP 118
  - Dakar

### Trade Fairs:
- **Foire Internationale de Dakar**
- **Sofidak**
- **Route de Yoff**
  - BP 3329
  - Dakar
STATISTICAL PROFILE: SOMALIA

Population (millions): 3.4
Per capita income (US$): 151
Primary language: Somali
Urban/rural (%): 20/80
Literacy rate (%): 5
Monetary unit: Shilling
Population density
   per sq. mile: 13
   per sq. kilometer: 5.1

GNP (US$ billions): 0.37
GNP per capita (US$): 113
Energy production (quad Btu)\(^a\): —
Gross energy consumption\(^a\) (quad Btu): 0.00314
Consumption per capita (MBtu)\(^b\): 1.00

Energy Reserves:
   Oil\(^c\): NA
   Gas\(^c\): NA

Trade with U.S.
   From U.S. Imports: 32
   To U.S. Exports: Z\(^*\)

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Mogadiscio:
Lat.: 02° 02' N
Long.: 45° 21' E
Insolation | 606 | 615 | 613 | 581 | 558 | 492 | 503 | 567 | 613 | 615 | 588 | 570
Temperature | 26.5 | 26.5 | 28.0 | 29.0 | 28.0 | 27.0 | 26.0 | 26.0 | 26.0 | 27.0 | 27.5 | 27.0

quad = quadrillion \((10^{15})\).
Insolation: langleys \((1 \text{ langley} = 1 \text{ cal/cm}^2)\).
Temperature: daily mean centigrade.
\(^a\)Based on U.N. conversion of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.
\(^*\)Z = Less than $500,000.

Embassies:
Somalia: 600 New Hampshire Ave., NW
   Suite 710
   Washington, D.C. 20037
   Tel: (202) 234-3261
U.S.: Corso Primo Luglio
   Mogadiscio, Somalia
   Tel: 2811

Chambers of Commerce:
   Chamber of Commerce, Industry and Agriculture
   POB 27
   Via Asha, Somalia
### Statistical Profile: South Africa

- Population (millions): 22.5
- Per capita income (US$): 1,174
- Primary language: Afrikaans
- Urban/rural (%): 48/52
- Literacy rate (%): 35
- Monetary unit: Rand
- Population density per sq. mile: 55
  per sq. kilometer: 21
- GNP (US$ billions): 34.9
- GNP per capita (US$): 1,334
- Energy production (quad Btu)$a$: 1.934
- Gross energy consumption$^a$ (quad Btu): 2.34
- Consumption per capita (MBtu)$^b$: 81.54
- Energy Reserves:
  - Oil$^c$: —
  - Gas$^c$: —
- Trade with U.S.
  - From U.S. Imports: 1,413
  - To U.S. Exports: 2,617

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<td>14.0</td>
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<td>23.0</td>
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<td>13.0</td>
<td>16.0</td>
<td>18.5</td>
<td>19.0</td>
<td>20.0</td>
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</tbody>
</table>

- quad = quadrillion ($10^{15}$).
- Insolation: langley (1 langley = 1 cal/cm$^2$).
- Temperature: daily mean centigrade.
- $^a$Based on U.N. conversion of 7000 cal/gram.
- $^b$F.A.S. transaction values.
- $^c$Quads.

### Embassies:
- South Africa: 3051 Massachusetts Ave., NW Washington, D.C. 20008
- U.S.: Thibault House 225 Pretorious Street Pretoria, South Africa

### Embassies 'Contd.:
- Tel: 48-4266
- Telex: 3-751
STATISTICAL PROFILE: SOUTH AFRICA (Concluded)

Chambers of Commerce:
Association of Chambers of Commerce
POB 694
Johannesburg 2000, South Africa

Trade and Solar Interest Organizations:
International Solar Energy Society (ISES)
Southern African Section
c/o National Building Research Institute
P.O. Box 395
Pretoria, 0001
South Africa
STATISTICAL PROFILE: SUDAN

Population (millions): 17.0
Per capita income (US$): 274
Primary language: Arabic
Urban/rural (%): 20/80
Literacy rate (%): 19
Monetary unit: Pound
Population density per sq. mile: 16
per sq. kilometer: 6.2

Population density per sq. mile: 16
per sq. kilometer: 6.2

GNP (US$ billions): 4.6
GNP per capita (US$): 298
Primary language: Arabic
Urban/rural (%): 20/80
Literacy rate (%): 19
Monetary unit: Pound
Population density per sq. mile: 16
per sq. kilometer: 6.2

GNP (US$ billions): 4.6
GNP per capita (US$): 298
Primary language: Arabic
Urban/rural (%): 20/80
Literacy rate (%): 19
Monetary unit: Pound
Population density per sq. mile: 16
per sq. kilometer: 6.2

Energy production (quad Btu)a: 0.000416
Gross energy consumptionb (quad Btu): 0.0688
Consumption per capita (MBtu)d: 4.64

Energy Reserves:
Oilc: —
Gasc: —

Trade with U.S.
From U.S. Imports: 103
To U.S. Exports: 16

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Wadi Halfa: | | | | | | | | | | | | |
Lat.: 21° 50' N
Long.: 31° 18' E
Insolation | 483 | 557 | 612 | 648 | 622 | 589 | 571 | 563 | 562 | 522 | 488 | 455
Temperature | 16.5 | 18.0 | 22.0 | 26.5 | 31.5 | 32.5 | 32.5 | 33.0 | 31.0 | 30.5 | 28.5 | 23.0 | 18.0

Malakai:
Lat.: 09° 33' N
Long.: 31° 39' E
Insolation | 471 | 521 | 527 | 536 | 510 | 448 | 448 | 486 | 484 | 487 | 487 | 477
Temperature | 27.5 | 28.5 | 30.5 | 31.5 | 29.5 | 27.5 | 26.5 | 26.0 | 27.0 | 28.0 | 28.0 | 26.5

quad = quadrillion (10^15).
Insolation: langley (1 langley = 1 cal/cm^2).
Temperature: daily mean centigrade.
aBased on U.N. conversation of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

Embassies:
Sudan: 600 New Hampshire Ave., NW
Washington, D.C. 20037
U.S.: Gamhouria Avenue
P.O. Box 699
Khartoum, Sudan
Tel: 74611 and 74700

Chambers of Commerce:
Sudan Chamber of Commerce
POB 81
Khartoum, Sudan

Trade and Solar Interest Organizations:
Engineering Equipment Corporation
POB 97
Kartoum, Sudan
(Importer and distributor of agricultural, engineering, and electronic equipment.)

Public Corporation for Building and Construction
POB 2110
Khartoum, Sudan
STATISTICAL PROFILE: SUDAN (Concluded)

Trade Organizations (Contd.):

Trade and Service Corporation
POB 215
Khartoum, Sudan
(Largest importer of general merchandise and service in storage, shipping, and insurance.)

Building Materials and Refractories Corporation
POB 2241
Khartoum, Sudan

Development Organizations:

Sudan Development Corporation
POB 710
Khartoum, Sudan
(To promote and cofinance development projects with special emphasis on projects in the agricultural, agribusiness, and industrial sectors, within the framework of the government's overall development planning.)
### STATISTICAL PROFILE: TANZANIA

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<tr>
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<td>Per capita income (US$):</td>
<td>203</td>
<td>GNP per capita (US$):</td>
<td>178</td>
</tr>
<tr>
<td>Primary language:</td>
<td>Swahili</td>
<td>Energy production (quad Btu)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.0116</td>
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<tr>
<td>Urban/rural (%):</td>
<td>7/93</td>
<td>Gross energy consumption&lt;sup&gt;a&lt;/sup&gt; (quad Btu):</td>
<td>0.0292</td>
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<td>Literacy rate (%):</td>
<td>18</td>
<td>Consumption per capita (MBtu)&lt;sup&gt;b&lt;/sup&gt;:</td>
<td>1.92</td>
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<td>Monetary unit:</td>
<td>Shilling</td>
<td>Energy Reserves:</td>
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<tr>
<td>Population density</td>
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<td>Oil&lt;sup&gt;c&lt;/sup&gt;:</td>
<td>—</td>
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<td></td>
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<td>Gas&lt;sup&gt;c&lt;/sup&gt;:</td>
<td>—</td>
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<tr>
<td>per sq. mile:</td>
<td>43</td>
<td>Trade with U.S.</td>
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<td>per sq. kilometer:</td>
<td>17</td>
<td>From U.S. Imports:</td>
<td>36</td>
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<td>To U.S. Exports:</td>
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<th>Apr</th>
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quad = quadrillion \(10^{15}\).
Insolation: langleys \((1 \text{ langley} = 1 \text{ cal/cm}^2)\).
Temperature: daily mean centigrade.

<sup>a</sup>Based on U.N. conversation of 7000 cal/gram.
<sup>b</sup>F.A.S. transaction values.
<sup>c</sup>Quads.

Embassies:
- **Tanzania:** P. O. B. 9123
  National Bank of Commerce
  House (4th Floor)
  City Drive (E)
  Dar es Salaam, Tanzania
- **U.S.:** 2139 R. Street, NW
  Washington, D.C. 20008

Chambers of Commerce:
- **Tangany, Ka Assn. of Chambers of Commerce**
  P. O. B. 41
  Dar es Salaam, Tanzania
## STATISTICAL PROFILE: TUNISIA

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<th>Population (millions):</th>
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<td>per sq. mile:</td>
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### Tunis-El Aouina:

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quad = quadrillion \((10^{15})\).
Insolation: langley (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

\(^{a}\) Based on U.N. conversion of 7000 cal/gram.

\(^{b}\) F.A.S. transaction values.

\(^{c}\) Quads.

### Embassies:

- **Tunisia**: 2408 Massachusetts Ave. NW
  Washington, D.C. 20008
  Tel: (202) 234-6644
- **U.S.**: 144 Ave. de la Liberta
  Tunis, Tunisia
  Tel: 282.566

### Trade Fairs:

- **International Fair in Tunis**
  Mohammmed V St.
  Tunis, Tunisia
## STATISTICAL PROFILE: ZAIRE

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<thead>
<tr>
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<td>per sq. mile:</td>
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<td>Gas(^c):</td>
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<td>per sq. kilometer:</td>
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<td>Trade with U.S.</td>
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### City Data

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</tbody>
</table>

quad = quadrillion \(10^{15}\).
Insolation: langley (1 langley = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.
\(^a\)Based on U.N. conversation of 7000 cal/gram.
\(^b\)F.A.S. transaction values.
\(^c\)Quads.

### Embassies:

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<th>Telex</th>
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<tr>
<td>Zaire</td>
<td>1800 New Hampshire Ave., NW Washington, D.C. 20009</td>
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<td>25881-2-3-4-5-6</td>
<td>386</td>
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<td>U.S.</td>
<td>310 Avenue des Aviateurs Kinshasa, Zaire</td>
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### Chambers of Commerce:

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<td>Chambre de Commerce, d'Industrie et d'Agriculture POB 358 Kisangani, Zaire</td>
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### Trade Fairs:

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<td>Zaire</td>
<td>Foire Internationale de Kinshasa BP 1397 Kinshasa, Zaire</td>
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STATISTICAL PROFILE: ZAMBIA

Population (millions): 5.3
Per capita income (US$): 441
Primary language: English
Urban/rural (%): 36/64
Literacy rate (%): 40
Monetary unit: Kwacha
Population density
  per sq. mile: 18
  per sq. kilometer: 6.8

GNP (US$ billions): 2.2
GNP per capita (US$): 428
Energy production (quad Btu)a: 0.0429
   (quad Btu): 0.0686
Gross energy consumptiona
   Consumption per capita (MBtu)b: 14.01
   Energy Reserves:
     Oilc: —
     Gasc: —

Trade with U.S.
From U.S. Imports: 68
To U.S. Exports: 121

City| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
---|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----
Lusaka:
Lat.: 15° 25'S
Long.: 28° 19'E
Insolation
Temperature | 21.5 | 21.5 | 21 | 20.5 | 18.5 | 16.5 | 16.5 | 19 | 22 | 24.5 | 23.5 | 22
Kasama:
Lat.: 10° 13'S
Long.: 31° 08'E
Insolation
Temperature | 21 | 21 | 21 | 21 | 19.5 | 17 | 17.5 | 19.5 | 22 | 23.5 | 23 | 21.5

quad = quadrillion (10^{15}).
Insolation: langleys (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

aBased on U.N. conversion of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

Embassies:
Zambia: 2419 Massachusetts Ave., NW
  Washington, D.C. 20008
U.S.: Cnr. of Independence & United
  Nations Ave.
  P. O. B. 1617
  Lusaka, Zambia

Chambers of Commerce:
  Lusaka Chamber of Commerce & Industry
  P. O. Box 844
  Lusaka, Zambia
### STATISTICAL PROFILE: ASIA

<table>
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<th>Population (million)</th>
<th>Per Capita Income (US$)</th>
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<th>GNP (US$ million)</th>
<th>GNP Per Capita (US$)</th>
<th>Energy Use Per Capita (MBtu)</th>
<th>Energy Reserves (quad)</th>
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### INSOLATION: ASIA

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*aInsolation = langleys per day (1 langley = 1 cal/cm² = 3.69 Btu/ft²).*
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<td>27.4</td>
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</tbody>
</table>

quad = quadrillion \(10^{15}\).

Insolation: langleys \(1\text{ langley} = 1\text{ cal/cm}^2\).

Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversation of 7000 cal/gram.

\(^b\)F.A.S. transaction values.

\(^c\)Quads.

**Embassies:**

- **Indonesia:** 2020 Massachusetts Ave., NW Washington, D.C. 20036
  Rusmin Nurjadin (AMB)

- **U.S.:** Medan Merdeka Selatan 5 Jakarta, Indonesia
  Tel: 340001-9
  Telex: 44218 AMEMB JKT

**Chambers of Commerce:**

Kamar Dagang dan Industri Indonesia (KADIN)
11 Jalan Mardeka Timur
Jakarta, Indonesia

**Trade and Solar Interest Organizations:**

GINSI (Importers Association of Indonesia)
Wisma Nusantara
Jalan Majapahit I
Jakarta, Indonesia
POB 2744

**STATISTICAL PROFILE: INDONESIA**

- Population (millions): 143.3
- Per capita income (US$): 289
- Primary language: Bahasa Indonesian (Malay)
- Urban/rural (%): 18/82
- Literacy rate: 60
- Monetary unit: Rupiah
- Population density:
  - per sq. mile: 183
  - per sq. kilometer: 71
- GNP (US$ billions): 32.4
- GNP per capita (US$): 239
- Energy production (quad Btu)^a: 2.864
- Gross energy consumption^a (quad Btu): 0.6728
- Consumption per capita (MBtu)^b: 5.09
- Energy Reserves:
  - Oil^c: 55.1
  - Gas^c: 23.5
- Trade with U.S.
  - From U.S. Imports: 982
  - To U.S. Exports: 3,621

- Population density per sq. mile: 183
- Population density per sq. kilometer: 71
- GNP (US$ billions): 32.4
- GNP per capita (US$): 239
- Energy production (quad Btu)^a: 2.864
- Gross energy consumption^a (quad Btu): 0.6728
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  - Oil^c: 55.1
  - Gas^c: 23.5
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  - From U.S. Imports: 982
  - To U.S. Exports: 3,621

- Chambers of Commerce:
  - Kamar Dagang dan Industri Indonesia (KADIN)
    11 Jalan Mardeka Timur
    Jakarta, Indonesia

- Trade and Solar Interest Organizations:
  - GINSI (Importers Association of Indonesia)
    Wisma Nusantara
    Jalan Majapahit I
    Jakarta, Indonesia
    POB 2744
STATISTICAL PROFILE: JAPAN

Population (millions): 113.7
Per capita income (US$): 4,293
Primary language: Japanese
Urban/rural (%): 76/24
Literacy rate (%): 99
Monetary unit: Yen

Population density
per sq. mile: 776
per sq. kilometer: 300

GNP (US$ billions): 553.1
GNP per capita (US$): 4,891
Energy production (quad Btu)a: 37,437
Gross energy consumptiona (quad Btu): 11.168
Consumption per capita (MBtu)b: 99.77

Energy Reserves:
Oilc: 0.3016
Gasc: 0.5

Trade with U.S.
From U.S. Imports: 17,579
To U.S. Exports: 26,243

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec
Tokyo:
Lat.: 35° 41' N
Long.: 139° 46' E
Insolation 186 226 268 306 336 297 329 331 249 198 181 166
Temperature 3.7 4.3 7.6 13.1 17.6 21.1 25.1 26.4 22.8 16.7 11.3 6.1

quad = quadrillion (10^{15}),
Insolation: langley (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.

Based on U.N. conversation of 7000 cal/gram.
F.A.S. transaction values.
Quads.

Embassies:
Japan: 2520 Massachusetts Ave., NW
Washington, D.C. 20009
Fumihiko Togo (AMB)

U.S.: 10-1 Akasaka 1-chome
Minato-Ku (107)
Tokyo, Japan
Tel: 583-7141
Telex: 2422118

U.S. Trade Center:
7th Flr., World Import Mart, 1-3
Higashi Ikeburukuro 3-chome
Toshima-ku, Tokyo 170
Tel: 987-2441
Telex: 2722446

Chambers of Commerce:
The Japan Chamber of Commerce and Industry
2-2, 3-chome
Marunouchi, Chiyodaku
Tokyo, Japan

Trade and Solar Interest Organizations:
International Solar Energy Society (ISES)
Japanese Section
Solar Research Laboratory
Government Industrial Research Institute
Karate Machi, Ki a-Ku
Nagaya 462, Japan
Tel: (052) 9110211 ext. 255
Trade Organizations (Contd.):
Japan External Trade Organization (JETRO)
2-S Toranomon 2-chome
Minatu-Ku, Tokyo 107
(information for foreign firms, investigation of foreign markets, import promotion)

Trade Fairs:
Tokyo International Trade Fair Commission
7-24, 4-chome
Harumi, Chuo-Iai
Tokyo, Japan
STATISTICAL PROFILE: TAIWAN

Population (millions): 16.3
Per capita income (US$): NA
Primary language: Mandarin Chinese
Urban/rural (%): NA
Literacy rate (%): 88
Monetary unit: New Taiwan Dollar
Population density per sq. mile: 1,167
per sq. kilometer: 450

Population density

GNP (US$ billions): 17.5
GNP per capita (US$): 1,1074
Energy production (quad Btu)\(a\): 0.184
Gross energy consumption\(a\) (quad Btu): 0.577
Consumption per capita (MBtu)\(b\): 35.99
Energy Reserves:
   Oil\(c\): 0.0522
   Gas\(c\): 0.06

Trade with U.S.
From U.S. Imports: 961
To U.S. Exports: 5,901

City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Taipei:
Lat.: 25° 02' N
Long.: 121° 31' E
Insolation | 186 | 216 | 261 | 312 | 381 | 393 | 400 | 412 | 341 | 340 | 296 | 225
Temperature | 15.2 | 14.8 | 16.9 | 20.6 | 24.1 | 26.6 | 28.2 | 27.9 | 26.2 | 23.0 | 19.8 | 16.8

quad = quadrillion \((10^{15})\).
Insolation: langley\(s\) (1 langle\(y\) = 1 cal/cm\(^2\)).
Temperature: daily mean centigrade.

\(a\)Based on U.N. conversion of 7000 cal/gram.
\(b\)F.A.S. transaction values.
\(c\)Quads.

Embassies:
No diplomatic representation

Chambers of Commerce:
General Chamber of Commerce of the Republic of China
Rose Bldg., 4th Floor
162 Hsin yi Rd.
Section 3, Taipei, Taiwan

Chinese National Association of Industry and Commerce
4th Floor
7 Roosevelt Rd.
Section I, Taipei, Taiwan
### STATISTICAL PROFILE: OCEANIA

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (million)</th>
<th>Per Capita Income (US$)</th>
<th>Primary Language</th>
<th>Literacy Rate (%)</th>
<th>Monetary Unit</th>
<th>Population Density (sq km)</th>
<th>GNP (US$ million)</th>
<th>GNP Per Capita (US$)</th>
<th>Production (quad Btu)</th>
<th>Gross Energy Consumption (quad Btu)</th>
<th>Energy Use Per Capita (MBtu)</th>
<th>Reserves (quad)</th>
<th>Trade (US$)</th>
<th>Export</th>
<th>Import</th>
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<tbody>
<tr>
<td>Australia</td>
<td>14.1</td>
<td>6,709</td>
<td>English</td>
<td>86/14</td>
<td>Dollar</td>
<td>4.7</td>
<td>83.4</td>
<td>5,992</td>
<td>3.086</td>
<td>2.433</td>
<td>178.27</td>
<td>13.688</td>
<td>30.0</td>
<td>2,164</td>
<td>3,617</td>
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<tr>
<td>New Zealand</td>
<td>3.1</td>
<td>3,855</td>
<td>English</td>
<td>81/19</td>
<td>Dollar</td>
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<td>0.266</td>
<td>86.79</td>
<td>1.0034</td>
<td>6.1</td>
<td>708</td>
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<td>Filipino</td>
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<td>Peso</td>
<td>371</td>
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<td>415</td>
<td>0.0156</td>
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<td>9.20</td>
<td>0.0116</td>
<td>0.01</td>
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## INSOLATION: OCEANIA\(^a\)

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<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<tbody>
<tr>
<td>Australia</td>
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<tr>
<td>Darwin</td>
<td>442</td>
<td>458</td>
<td>481</td>
<td>440</td>
<td>451</td>
<td>436</td>
<td>458</td>
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<td>550</td>
<td>557</td>
<td>531</td>
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<tr>
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<td>336</td>
<td>434</td>
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<tr>
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<tr>
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<td>445</td>
<td>313</td>
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<td>125</td>
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<td>115</td>
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<td>460</td>
<td>433</td>
<td>352</td>
<td>364</td>
<td>355</td>
<td>364</td>
<td>353</td>
<td>347</td>
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</tbody>
</table>

\(^a\)Insolation = langley s per day (1 langley = 1 cal/cm\(^2\) = 3.69 Btu/ft\(^2\)).
STATISTICAL PROFILE: AUSTRALIA

<table>
<thead>
<tr>
<th>Population (millions):</th>
<th>14.1</th>
<th>Per capita income (US$):</th>
<th>6,709</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary language:</td>
<td>English</td>
<td>Energy production (quad Btu)(^a):</td>
<td>3.086</td>
</tr>
<tr>
<td>Urban/rural (%):</td>
<td>86/14</td>
<td>GNP (US$ billions):</td>
<td>83.4</td>
</tr>
<tr>
<td>Literacy rate (%):</td>
<td>98</td>
<td>GNP per capita (US$):</td>
<td>5,992</td>
</tr>
<tr>
<td>Monetary unit:</td>
<td>Dollar</td>
<td>Energy consumption(^a) (quad Btu):</td>
<td>2.433</td>
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<tr>
<td>Population density</td>
<td></td>
<td>Consumption per capita (MBtu)(^b):</td>
<td>178.27</td>
</tr>
<tr>
<td>per sq. mile:</td>
<td>4.7</td>
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<tr>
<td>per sq. kilometer:</td>
<td>1.8</td>
<td>Energy Reserves:</td>
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<td>Oil(^c):</td>
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<td></td>
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<td>Gas(^c):</td>
<td>30.0</td>
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<td></td>
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<td>Trade with U.S.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>From U.S. Imports:</td>
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<tr>
<td></td>
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<td>To U.S. Exports:</td>
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<table>
<thead>
<tr>
<th>City</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
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<th>May</th>
<th>Jun</th>
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<tbody>
<tr>
<td>Darwin</td>
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<tr>
<td>Long.:</td>
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<tr>
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<td>481</td>
<td>440</td>
<td>451</td>
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<td>484</td>
</tr>
<tr>
<td>Temperature</td>
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<td>83.4</td>
<td>83.6</td>
<td>83.9</td>
<td>81.4</td>
<td>78.5</td>
<td>77.2</td>
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<td>82.5</td>
<td>84.9</td>
<td>85.7</td>
<td>85.0</td>
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<tr>
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<tr>
<td>Long.:</td>
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<td>315</td>
<td>290</td>
<td>215</td>
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<tr>
<td>Temperature</td>
<td>67.3</td>
<td>68.3</td>
<td>65.1</td>
<td>59.3</td>
<td>54.5</td>
<td>50.3</td>
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<td>54.7</td>
<td>58.3</td>
<td>61.5</td>
<td>65.3</td>
</tr>
</tbody>
</table>

\(quad = \text{quadrillion} \left(10^{15}\right)\).

Insolation: langley's (1 langley = 1 cal/cm\(^2\)).

Temperature: daily mean centigrade.

\(^a\)Based on U.N. conversion of 7000 cal/gram.

\(^b\)F.A.S. transaction values.

\(^c\)Quads.

Embassies:
- Australia: 1601 Massachusetts Ave., NW Washington, D.C. 20036
- U.S.: Moonah Pl. Canberra, A.C.T. 2600, Australia

Embassies (Contd.):
- U.S. International Marketing Center 4 Cliff St. Milsons Point, Sydney, NSW 2061 Tel: (02) 929-0977

Chambers of Commerce:
- International Chamber of Commerce (Australian Council) 161 Clarence St. POB 5329 Sydney NSW 2001, Australia
STATISTICAL PROFILE: AUSTRALIA (Concluded)

Chambers of Commerce (Contd.):
Australian Chamber of Commerce
Brisbane Ave.
Barton, ACT 2600, Australia

Trade and Solar Interest Organizations:
International Solar Energy Society (ISES)
Headquarters
P.O. Box 52
Parkville, Victoria
3052
Australia

International Solar Energy Society (ISES)
Australian and New Zealand Sections
P.O. Box 26
Highett, Victoria
3190
Australia
Tel: 95-0333

Trade Organizations (Contd.):
Solar Energy Industries Association of Australia
c/o Metal Trade Industry Association
165 Eastern Road
South Melbourne, Victoria
3805 Australia

Development Organizations:
Department of Natural Development
Tasman House
Hobart Place
P.O. Box 5
Canberra ACT 2000
Australia
(government organizations dealing with national energy policy including planning and research into coal, oil, gas, nuclear and solar energy)
STATISTICAL PROFILE: NEW ZEALAND

Population (millions): 3.1
Per capita income (US$): 3,855
Primary language: English
Urban/rural (%): 81/19
Literacy rate (%): 98
Monetary unit: Dollar

Population density
per sq. mile: 30
per sq. kilometer: 12

GNP (US$ billions): 13.1

Per capita income (US$): 4,193

Energy production (quad Btu)\textsuperscript{a}: 0.1298
Gross energy consumption\textsuperscript{a} (quad Btu): 0.266

Consumption per capita (MBtu)\textsuperscript{b}: 86.79

Energy Reserves:
Oil\textsuperscript{c}: 1.0034
Gas\textsuperscript{c}: 6.1

Trade with U.S.
From U.S. Imports: 530
To U.S. Exports: 708

<table>
<thead>
<tr>
<th>City</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invercargil:</td>
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<td></td>
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<tr>
<td>Lat.: 46° 25' S</td>
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<td>Long.: 168° 19' E</td>
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<tr>
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<td>86</td>
<td>115</td>
<td>181</td>
<td>287</td>
<td>389</td>
<td>465</td>
<td>521</td>
</tr>
<tr>
<td>Temperature</td>
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<td>56.3</td>
<td>53.9</td>
<td>50.4</td>
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<td>43.1</td>
<td>46.8</td>
<td>50.4</td>
<td>52.6</td>
<td>54.9</td>
</tr>
</tbody>
</table>

| Wellington: |     |     |     |     |     |     |     |     |      |     |     |     |
| Lat.: 41° 17' S |     |     |     |     |     |     |     |     |      |     |     |     |
| Long.: 174° 46' E |     |     |     |     |     |     |     |     |      |     |     |     |
| Insolation | 563 | 452 | 361 | 249 | 151 | 130 | 135 | 208 | 330  | 413 | 486 | 521 |
| Temperature | 61.2 | 61.6 | 59.7 | 56.3 | 51.6 | 47.9 | 46.5 | 47.9 | 50.3 | 53.1 | 56.0 | 59.1 |

quad = quadrillion (10\textsuperscript{15})
Insolation: langley (1 langley = 1 cal/cm\textsuperscript{2})
Temperature: daily mean centigrade
\textsuperscript{a}Based on U.N. conversation of 7000 cal/gram.
\textsuperscript{b}F.A.S. transaction values.
\textsuperscript{c}Quads.

Embassies:
New Zealand: 19 Observatory Circus, NW Washington, D.C. 20008
Lloyd White (AMB)
U.S.: 29 Fitzherbert Ter, Thorndon
P. O. Box 1190 Wellington, New Zealand
Tel: 722-068 Telex: NZ3305

Chambers of Commerce:
New Zealand Chamber of Commerce Molesworth St.
Thorndon
POB 1071 Wellington I, New Zealand

Trade and Solar Interest Organizations:
The New Zealand Bureau of Importers and Exporters Inc.
Parnell House
470 Parnell Rd.
Aukland, New Zealand
STATISTICAL PROFILE: NEW ZEALAND (Concluded)

Trade Organizations (Cont.):
New Zealand Export-Import Corporation
Robert Jones House
I Willeston St.
POB 11332
Wellington, New Zealand
(Undertakes the export and import of
goods and sometimes acts as the govern-
ment's agent)
STATISTICAL PROFILE: PHILIPPINES

Population (millions): 45.0
Per capita income (US$): 412
Primary language: Filipino
Urban/rural (%): 32/68
Literacy rate (%): 80
Monetary unit: Peso
Population density
per sq. mile: 371
per sq. kilometer: 143

GNP (US$ billions): 17.8
GNP per capita (US$): 415
Energy production (quad Btu)a: 0.0156
Gross energy consumptiona (quad Btu): 0.3848
Consumption per capita (MBtu)b: 9.20
Energy Reserves:
Oilc: 0.0116
Gasc: 0.01
Trade with U.S.
From U.S. Imports: 1,570
To U.S. Exports: 1,489

City Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec
Quezon City:
Lat.: 14° 40' N
Long.: 121° 05' E
Insolation 308 302 436 518 460 433 352 364 355 364 353 347
Temperature

quad = quadrillion (10^{15}).
Insolation: langleys (1 langley = 1 cal/cm²).
Temperature: daily mean centigrade.
aBased on U.N. conversion of 7000 cal/gram.
bF.A.S. transaction values.
cQuads.

Embassies:
Philippines: 1617 Massachusetts Ave.,
            NW Washington, D.C. 20008
            (AMB)
U.S.: 1201 Roxas Blvd.
      Manila, Philippines
      Tel: 598-011
      Telex: 722-7366

Chambers of Commerce:
Chamber of Commerce of the Philippines
           Magallanes Drive
           Intramuros
           Manila 2801 Philippines

           Chamber of International Trade
           Room 914 L&S Building
           1515 Paeo de Roxas
           Metro, Manila
SECTION 11.0

REFERENCES

Auldridge, Larry, Associate International Editor. "Worldwide Oil and Gas at a Glance." Oil and Gas Journal.


SECTION 12.0
SOURCE FOR SPECIFIC INFORMATION

Statistics are based on the following sources: items 1 (Population) and 2 (Per Capita Income) are from the U.N. 1978 Statistical Yearbook (30th ed.) 1979, pp. 68-74 and pp. 751-756; items 3 (Primary language), 4 (Urban/rural %), 5 (Literacy rate %), and 6 (Monetary Unit) are from The World Almanac and Book of Facts, 1980, pp. 513-599; items 7 through 12 are from World Facts and Figures, 1980; items 8 and 9 were originally based on figures from the World Bank, World Bank Atlas, 12th ed., 1977; items 10, 11, and 12 were originally based on figures from the United Nations Statistical Office; items 13 and 14 (Energy Reserves) are from World Energy Supplies, 1971-75, 1977; originally based on figures in the December 29, 1980 Oil and Gas Journal, pp. 78-179; items 15 and 16 (Export/Import Figures) are taken from the United States Foreign Trade Annual 1973-1979 and Overseas Business exports, July 1980.

For any given country, more recent or specific information may be available in a number of sources including those of that country's representatives. Very often, however this information is expressed in terms of that country's currency or various energy units, and its organization may make comparison difficult.

The publications we have used are as recent as possible, available generally, and reprinted yearly. The reader may wish to be aware of such publications as the Europa Year Book (a world-wide, country-by-country survey), International Financial Statistics (a yearbook published by the International Monetary Fund), and publications of the World Bank, in addition to those of the U.S. government.
SECTION 13.0
MAILING PROCEDURES

It is important that correspondence to a Foreign Service post be addressed to a section or position rather than to an officer by name. This will eliminate delays resulting from the forwarding of official mail to officers who have transferred. Normally, correspondence concerning commercial matters should be addressed simply "Commercial Section" followed by the name and correct mailing address of the post.

13.1 Sample Mailing Addresses

Below are the three accepted forms of addressing mail to a Foreign Service post using the Economic/Commercial Section of the American Embassy in Manama as an example:

<table>
<thead>
<tr>
<th>International Address</th>
<th>Dept. of State Pouch Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic/Commercial Section</td>
<td>Economic/Commercial Section</td>
</tr>
<tr>
<td>American Embassy</td>
<td>Manama</td>
</tr>
<tr>
<td>P.O. Box 26431*</td>
<td>Department of State</td>
</tr>
<tr>
<td>Manama, Bahrain</td>
<td>Washington, D.C. 20520</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APO/FPO Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic/Commercial Section</td>
</tr>
<tr>
<td>American Embassy</td>
</tr>
<tr>
<td>FPO New York 09526</td>
</tr>
</tbody>
</table>

NOTE: DO NOT COMBINE any of the above forms (e.g., international plus APO/FPO addresses). This will result in confusion and possible delays in delivery.

The Federal Government makes available two publications for the names of diplomatic personnel.

1. The Diplomatic List
2. Key Officers of Foreign Service Posts

These are available at no cost and are continually updated. However, the advice above is taken from these handbooks since personnel move frequently.

*Use street address only when P.O. Box is not supplied.
## SECTION 14.0

### U.S. DEPARTMENT OF COMMERCE DISTRICT OFFICE LOCATIONS

<table>
<thead>
<tr>
<th>City/State</th>
<th>City/State</th>
<th>City/State</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBUQUERQUE, NM 87102</td>
<td>ANCHORAGE, AK 99513</td>
<td>ATLANTA, GA 30309</td>
</tr>
<tr>
<td>505 Marquette, N.W.</td>
<td>701 C. St.</td>
<td>Suite 600</td>
</tr>
<tr>
<td>Suite 1015</td>
<td>P. O. Box 32</td>
<td>1365 Peachtree St., NE.</td>
</tr>
<tr>
<td>(505) 766-2386</td>
<td>(907) 271-5041</td>
<td>(404) 881-7000</td>
</tr>
<tr>
<td>BALTIMORE, MD 21202</td>
<td>BIRMINGHAM, AL 35205</td>
<td>BOSTON, MA 02116</td>
</tr>
<tr>
<td>415 U.S. Customhouse</td>
<td>Suite 200-201</td>
<td>10th Floor</td>
</tr>
<tr>
<td>Gay and Lombard Sts.</td>
<td>908 S. 20th St.</td>
<td>441 Stuart St.</td>
</tr>
<tr>
<td>(303) 962-3560</td>
<td>(205) 254-1331</td>
<td>(617) 223-2312</td>
</tr>
<tr>
<td>BUFFALO, NY 14202</td>
<td>CHARLESTON, WV 25301</td>
<td>CHEYENNE, WY 82001</td>
</tr>
<tr>
<td>1312 Fed. Bldg.</td>
<td>3000 New Federal Office Bldg.</td>
<td>6022 O'Mahoney Federal Center</td>
</tr>
<tr>
<td>111 W. Huron St.</td>
<td>500 Quarrier St.</td>
<td>2120 Capitol Ave.</td>
</tr>
<tr>
<td>(716) 846-4191</td>
<td>(304) 343-6181, Ext. 375.</td>
<td>(307) 778-2220, Ext. 2151</td>
</tr>
<tr>
<td>CHICAGO, IL 60603</td>
<td>CINCINNATI, OH 45202</td>
<td>CLEVELAND, OH 44114</td>
</tr>
<tr>
<td>1406 Mid-Continental Plaza Bldg.</td>
<td>10504 Federal Office Bldg.</td>
<td>Room 600</td>
</tr>
<tr>
<td>55 E. Monroe St.</td>
<td>550 Main St.</td>
<td>666 Euclid Ave.</td>
</tr>
<tr>
<td>(312) 353-4450</td>
<td>(513) 684-2944</td>
<td>(216) 522-4750</td>
</tr>
<tr>
<td>COLUMBIA, SC 29201</td>
<td>DALLAS, TX 75242</td>
<td>DENVER, CO 80202</td>
</tr>
<tr>
<td>Strom Thurmond Fed. Bldg., Suite 172</td>
<td>Room 7A5</td>
<td>Room 165, New Custom House</td>
</tr>
<tr>
<td>1835 Assembly St.</td>
<td>1100 Commerce St.</td>
<td>19th &amp; Stout Sts.</td>
</tr>
<tr>
<td>(803) 765-5345</td>
<td>(214) 767-0542</td>
<td>(303) 837-3246</td>
</tr>
<tr>
<td>DES MOINES, IA 50309</td>
<td>DETROIT, MI 48226</td>
<td>GREENSBORO, NC 27402</td>
</tr>
<tr>
<td>210 Walnut St.</td>
<td>231 W. Lafayette St.</td>
<td>W. Market St., P. O. Box 1950</td>
</tr>
<tr>
<td>(515) 284-4222</td>
<td>(313) 226-3650</td>
<td>(919) 378-5345</td>
</tr>
<tr>
<td>HARTFORD, CT 06103</td>
<td>HONOLULU, HI 96850</td>
<td>HOUSTON, TX 77002</td>
</tr>
<tr>
<td>Room 610-B Federal Office Bldg.</td>
<td>4106 Fed. Bldg., P.O. Box 50026</td>
<td>2625 Federal Bldg., Courthouse</td>
</tr>
<tr>
<td>450 Main St.</td>
<td>300 Ala Moana Blvd.</td>
<td>515 Rusk St.</td>
</tr>
<tr>
<td>(203) 244-3530</td>
<td>(808) 546-8694</td>
<td>(713) 226-4231</td>
</tr>
<tr>
<td>City/State</td>
<td>City/State</td>
<td>City/State</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>INDIANAPOLIS, IN 46204</td>
<td>LOS ANGELES, CA 90049</td>
<td>MEMPHIS, TN 38103</td>
</tr>
<tr>
<td>357 Federal Office Bldg.</td>
<td>Room 800</td>
<td>Room 710</td>
</tr>
<tr>
<td>46 E. Ohio St.</td>
<td>11777 San Vicente Blvd.</td>
<td>147 Jefferson Ave.</td>
</tr>
<tr>
<td>(317) 269-6214</td>
<td>(213) 824-7591</td>
<td>(901) 521-3213</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MIAMI, FL 33130</th>
<th>MILWAUKEE, WI 53203</th>
<th>MINNEAPOLIS, MN 55401</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rm. 821, City National Bank Bldg.</td>
<td>Federal Bldg./U.S. Courthouse</td>
<td>218 Federal Bldg.</td>
</tr>
<tr>
<td>25 W. Flagler St.</td>
<td>517 E. Wisconsin Ave.</td>
<td>110 S. Fourth St.</td>
</tr>
<tr>
<td>(305) 350-5267</td>
<td>(414) 224-3473</td>
<td>(612) 725-2133</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NEW ORLEANS, LA 70130</th>
<th>NEW YORK, NY 10007</th>
<th>NEWARK, NJ 07102</th>
</tr>
</thead>
<tbody>
<tr>
<td>432 International Trade Mart</td>
<td>Room 3718, Federal Office Bldg.</td>
<td>4th Floor, Gateway Bldg.</td>
</tr>
<tr>
<td>No. 2 Canal St.</td>
<td>26 Federal Plaza, Foley Sq.</td>
<td>Market St., Penn Plaza</td>
</tr>
<tr>
<td>(504) 589-6546</td>
<td>(212) 264-0634</td>
<td>(201) 645-6214</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OMAHA, NE 68102</th>
<th>PHILADELPHIA, PA 19106</th>
<th>PHOENIX, AZ 85073</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitol Plaza, Suite 703A</td>
<td>9448 Federal Bldg.</td>
<td>Valley Bank Ctr., Suite 2950</td>
</tr>
<tr>
<td>1815 Capitol Ave.</td>
<td>600 Arch St.</td>
<td>201 No. Central Ave.</td>
</tr>
<tr>
<td>(402) 221-3365</td>
<td>(215) 597-2850</td>
<td>(602) 261-3285</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PITTSBURGH, PA 15222</th>
<th>PORTLAND, OR 97204</th>
<th>RENO, NV 89503</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 Liberty Ave.</td>
<td>1220 S.W. 3rd. Ave.</td>
<td>Room 120</td>
</tr>
<tr>
<td>(412) 644-2850</td>
<td>(503) 221-3001</td>
<td>(702) 784-5203</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RICHMOND, VA 23240</th>
<th>ST. LOUIS, MO 63105</th>
<th>SALT LAKE CITY, UT 84138</th>
</tr>
</thead>
<tbody>
<tr>
<td>8010 Federal Bldg.</td>
<td>120 S. Central Ave.</td>
<td>1201 Federal Bldg.</td>
</tr>
<tr>
<td>400 N. 8th St.</td>
<td>(314) 425-3302</td>
<td>125 S. State</td>
</tr>
<tr>
<td>(804) 782-2246</td>
<td></td>
<td>(801) 524-5116</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAN FRANCISCO, CA 94102</th>
<th>SAN JUAN, PR 00918</th>
<th>SAVANNAH, GA 31402</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Bldg., Box 36013</td>
<td>Room 659 Federal Bldg.</td>
<td>222 U.S. Courthouse</td>
</tr>
<tr>
<td>450 Golden Gate Ave.</td>
<td>(809) 753-4555, Ext. 555</td>
<td>P. O. Box 9746</td>
</tr>
<tr>
<td>(415) 556-5860</td>
<td></td>
<td>125-29 Bull Street</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEATTLE, WA 98109</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Room 706, Lake Union Bldg.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1700 Westlake Ave. North</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(206) 442-5615</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. DEPARTMENT OF COMMERCE DISTRICT OFFICE LOCATIONS (Concluded)
SOLAR ENERGY RES INSTITUTE
ATTN LIBRARY
1617 COLE BLVD
GOLDEN, CO 80401