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Agency for International Development

ENERGY AND ENVIRONMENT TRADE DATABASE USER MANUAL

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ENERGY AND ENVIRONMENTAL TRADE DATABASE USER MANUAL

SUMMARY

SUMMARY

This manual provides the information necessary to familiarize new users with the contents and operation of the Energy and Environment Trade Database. The manual includes both general descriptions of the database contents and program, and specific operating instructions.

The following three chapters present increasing levels of detail about the database. Chapter 1 summarizes the types of information included in the database and the basic organization of the data. Chapter 1 presents the overall structure of the menu-driven computer program developed to access and manipulate the database contents. Chapter 3 provides detailed instructions -- including several specific examples -- on how to move around within the database and use the various menu-based features. The Appendices present more detailed reference information on the database program, report formats, and the definition and contents of key data categories.

Almost all of the exhibits in the manual show the menus and related operations exactly as they are displayed on the computer screen. In the text, the menu options are printed in boldface, and enclosed with braces; for example **{Define Subset}**.

ENERGY AND ENVIRONMENTAL TRADE DATABASE USER MANUAL

CHAPTER 1

BACKGROUND/DATABASE CONTENTS

CHAPTER 1: BACKGROUND/DATABASE CONTENTS

The Energy and Environment Trade Database contains basic information about companies that provide products and services in the energy and environment fields. The main goals of the database are to:

- identify the most important U.S. companies providing products and services in energy and environment;
- assemble basic economic, geographic, and organizational information about the selected companies;
- classify products and services of selected companies according to a detailed taxonomy of energy and environmental technology and service categories;
- organize the company-specific data into a computer-based format that is user-friendly and allows for the rapid identification of subsets of companies based on several user-defined criteria.

To achieve those goals, the following procedures and sources were used to develop the current version of the database.

Identify and select U.S. energy and environmental companies. Companies were identified through a combination of several research tasks. Based on the contractor's own extensive experience in these sectors and industry-specific information sources, a basic list of the most important and well-known companies in each product/service category was developed. This "core" roster of companies was supplemented with information from other sources, such as trade and government directories, journals and periodicals, and lists of participants in relevant conferences and similar events.

Assemble basic company information. Once companies were selected, both industry-specific and standard business information directories were consulted for basic company information. For the most part, the more specialized sources were the primary sources for product service information, while the standard business directories, such as *Ward's Business Directory*, were the primary source of basic economic, location, and organizational information. In addition, in selected cases where important information was unavailable from published sources, the companies were contacted directly. The main categories of basic company information are:

sales: the most recent actual sales if available; otherwise, a sales range.

location: full mailing address.

exporter status: whether a company is identified as an exporter. The exporter status of companies not so identified was considered to be unknown rather than definitely not an exporter.

place in company organization: whether the company is a parent, division, subsidiary, etc. To the extent possible, the main information in the database is on the company unit closest to providing the actual product or service.

contact(s): the person or persons judged to be best able to utilize information from USAID and answer queries from USAID. The president/CEO is the contact if no other information was available.

products/services: a listing or description of the primary products and/or services provided by the selected companies.

Not all of the basic company information was available for all selected companies. However, the database contains product/service information on all companies.

At an early stage in the development of the database, approximately 300 companies were interviewed about their geographic and product/service export interests and priorities. They were also asked about their interest in various types of export promotion programs being considered by USAID's Office of Energy and Infrastructure. The results of these interviews are included in the database, and there are several menu options for viewing these data and selecting companies on the basis of "interest" criteria. These data cover about 20% of the total number of companies in the current database.

Classify products and services. After reviewing related classification systems, a detailed taxonomy of energy and environmental products/services was developed to categorize the product/service data for each company. The taxonomy includes several levels of detail, in order to capture as much information as possible while still allowing data to be sorted at more general category levels. Appendix C contains a listing of the complete taxonomy. The main product/service categories included in the taxonomy are:

Energy:

Electrical Systems
HVAC/Refrigeration Systems
Liquid, Gas, Air Handling/Processing
Power/Steam Systems
Energy/Heat Recovery Systems
Control Systems
Energy Efficiency Services
Energy Storage Systems
Lighting
Motors/Drives
Process Heating Systems
Measurement & Analysis Systems
Energy Efficient Industrial Processes

Environment:

Air/Gaseous Pollution Controls
Solid Waste Pollution Controls
Environmental Services
Water/Liquid Pollution Controls
Other Pollution Controls

Organize company information into a computerized database. Using the Clipper database language compiler software, a menu-driven program was developed to allow both easy user-friendly access to the database information and the capability to easily extract subsets of companies based on a wide range

of selection parameters. The program also provides a data entry/editing module for adding, deleting, and editing company information.

ENERGY AND ENVIRONMENTAL TRADE DATABASE USER MANUAL

CHAPTER 2

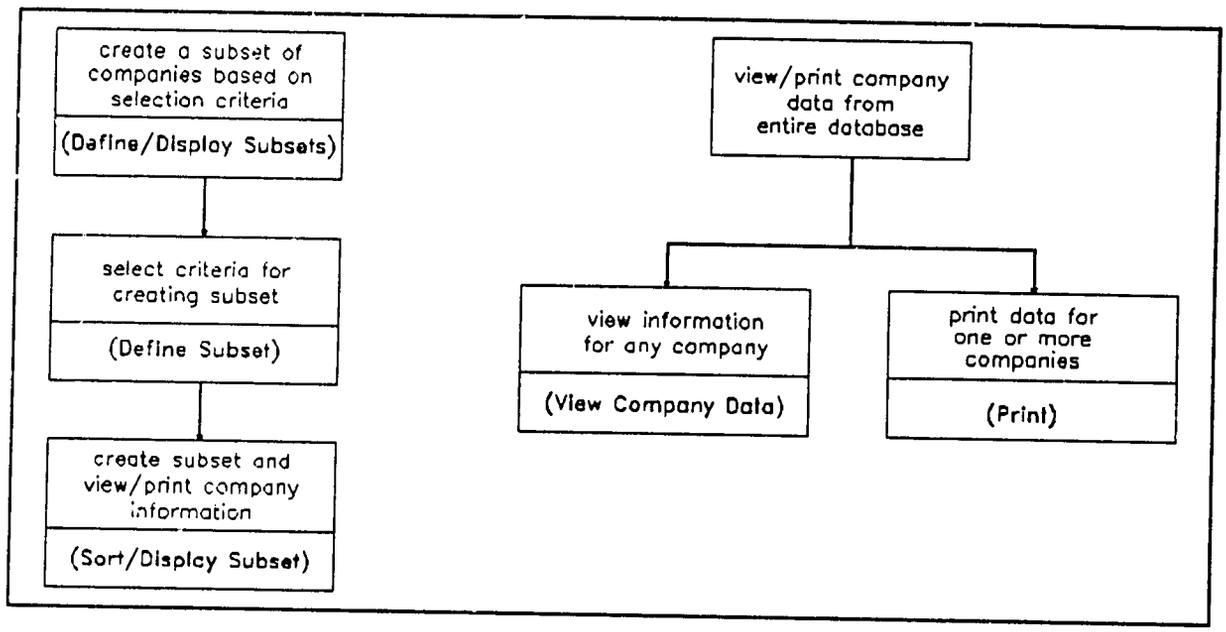
DATABASE PROGRAM STRUCTURE

CHAPTER 2: DATABASE PROGRAM STRUCTURE

Information about the companies included in the Energy and Environment Trade Database is accessible through a series of menus that provide many different viewing, sorting, and printing options. The user may view and print all data available for specific companies, set up search and sort routines based on one or more criteria and view or print the results, and edit/update the company information. A variety of print options are also available, depending on the amount of information and output format required. There is also a limited graph generation capability.

Exhibit 2-1 presents a summary of the overall structure of the data base program. The main menu includes two browse/sort options and a data editing utility. The two sort/browse alternatives are: 1) select and then view/print specific subsets of companies **{Define/Display Subsets}**; and 2) view and/or print company information without first selecting a subset of companies **{View Company Data}** and **{Print}**.

Exhibit 2-1

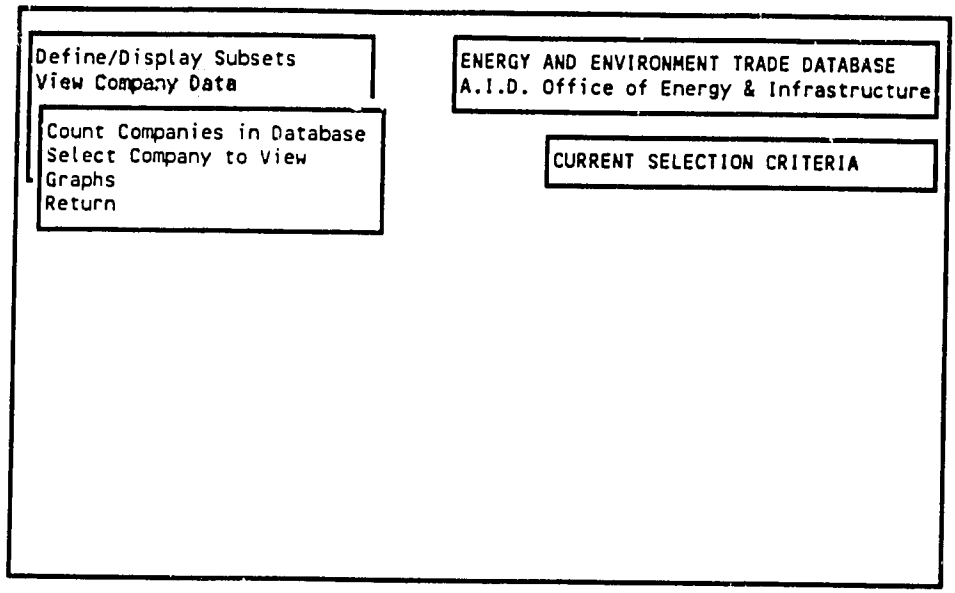


More detailed information on the structure of each of the main menus is presented below.

{View Company Data}

By using this menu path, the user can view all of the data available for any company in the database by specifying a word from the name of the company, its database ID number, or by selecting a company from a list of companies in the database. There are also options that show a total count of the number of companies currently in the data base and graphs that summarize key information about the companies in the database **{Graphs}**. Exhibit 2-2 shows the main submenus under this option.

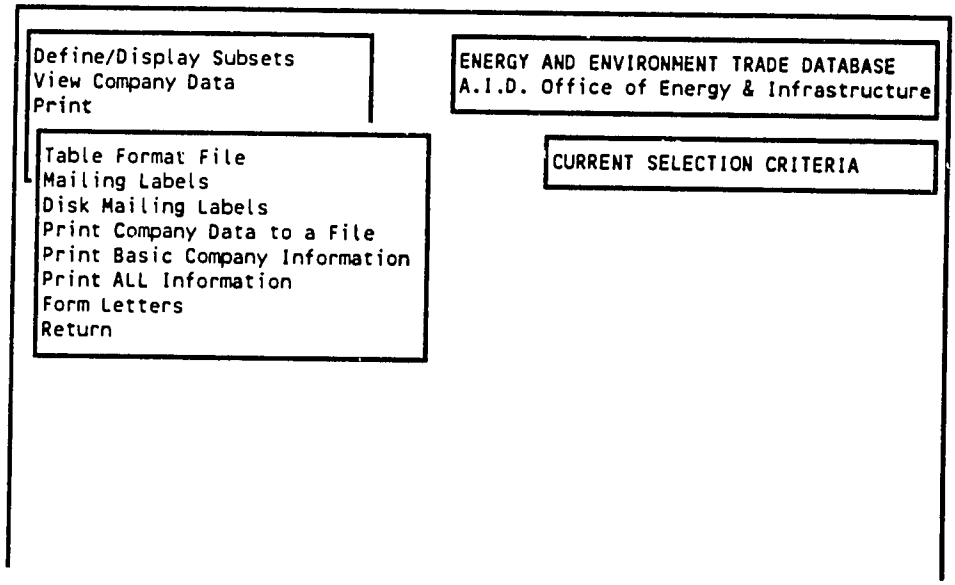
Exhibit 2-2



{Print}

This option provides options for printing company information without first defining and selecting a subset of companies through the **{Define/Display Subsets}** menus. Information on all companies or any subset of companies can be printed from this menu by utilizing company database ID numbers, which are shown on the **{View Company Data}** display screens. The **{Print}** menu includes several preset print options, depending on the format and amount of company information required (Exhibit 2-3).[1]

Exhibit 2-3

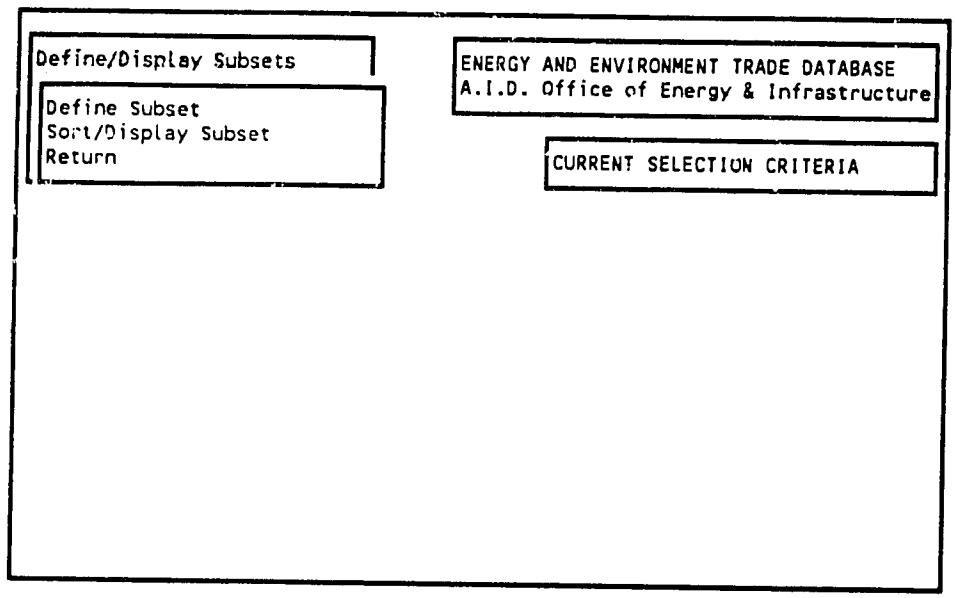


[1] Appendix D shows examples of all preset print options.

{Define/Display Subsets}

The two submenu paths in this option (Exhibit 2-4) allow the user to define a subset of companies {Define Subset}; and make a sort of the database to extract the set of companies that meet the defined criteria, and then view, print and/or graph all or part of the information available for the selected companies {Sort/Display Subset}.

Exhibit 2-4



{Define Subset}

As shown in Exhibit 2-5, the four main criteria for identifying and selecting subsets of companies are: {Company Data}, {Products/Services}, {Export Interest}[2], and {Interest in EIN Support Programs}[2]. Each of these options also includes submenus. The four criteria and their submenus are:

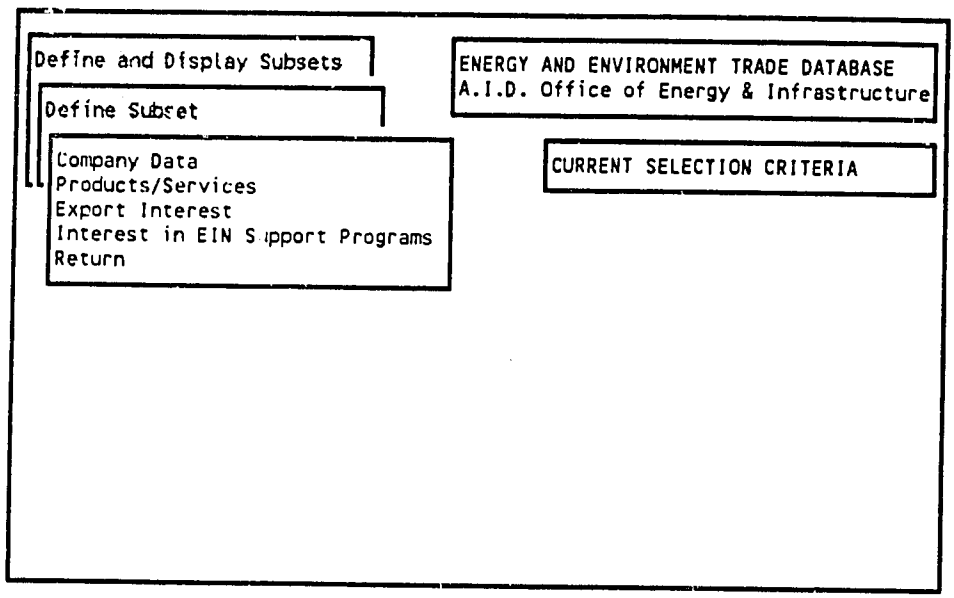
> {Company Data}. This option contains selection criteria based on size {Sales}, location {State}, and identification as an exporter {Export Status}. Each of the company data menu options also has a submenu for selecting more specific sorting criteria.
>
> > {Sales}. The sales menu includes five sales value ranges (with wider ranges as sales levels rise) and a "No Information" category.

[2] The Export Interest and Interest in EIN Programs criteria are based on the round of telephone interviews conducted with a subset of the companies in the database. See Chapter 2 for more details.

{State}. The state in which the company is located. The state abbreviation can be entered directly or selected from a menu.

{Export Status}. There is an either/or choice under this menu: "Exporter" or "No Information."

Exhibit 2-5



{Products and Services}. This menu covers the products and/or services produced by the companies included in the database. The information is recorded in the database according to a detailed taxonomy[3] of energy and environment technologies. Each company in the database has been assigned to at least one product/service technology category.

From the menu, the user can select all energy or all environment categories at once **{All Energy}**, **{All Environment}**; one or more specific energy and environment categories **{Specific Energy}**, **{Specific Environment}**; or specify a continuous range of technology categories **{Name a Range}**. The technology coding system is multi-level, so the database has an automatic "roll-up" feature; i.e., if a 1st- or 2nd-tier category is selected, any subcategories within that category are also automatically included in the selection criteria.

{Export Interest}. These criteria only apply to the subset of companies that were interviewed.[4] The interviews included questions about the companies' interest in

[3] See Appendix C for a list of the technology categories and codes.

[4] See Chapter 2.

exporting to specific regions or countries and the products/services that the companies were most interested in exporting. Based on these questions, the database selection criteria are: location **{Region}** **{Country}**, and products/services **{Products/Services}**. The selection menus allow the user to select one or more regions, countries, products, and services.

{Interest in EI Programs}. These criteria also only apply to the subset of companies that were interviewed. The interviews included questions about the companies' interest in both general and specific export promotion activities that might be carried out by the Office of Energy and Infrastructure of USAID. The range of responses from the interviews were divided into the four categories presented in the database selection menu.

Any combination of the available selection criteria can be used to select a subset of companies from the database. As criteria from one or more categories are selected, the choices are displayed in the CURRENT SELECTION CRITERIA box on the right side of the menu screen. Selections can also be modified at any time before the actual data sort is made **{Select/Display Subset}**.

{Sort/Display Subset}

After one or more selection criteria have been identified by using the **{Define Subset}** menus, the program carries out the sorting operation when the **{Sort/Display Subset}** option is chosen (Exhibit 2-6). After the sort is completed, a menu then provides several options for viewing, displaying, and printing information about the companies included in the selected subset. These subset options are quite similar to the options available through the **{View Company Data}** and **{Print}** menus in the main database menu.

After a subset is created, information on the companies in the subset can be viewed, analyzed, and printed through the menu options shown in Exhibit 2-7. The specific options are:

{Count Number of Companies}. The total number of companies in the subset is displayed.

{Show Selected Companies}. The names and database ID numbers of the companies in the subset are displayed. Screens that show all available information for each of the companies in the subset can also be viewed from this option.

{Graphs}. Several preset graph options are available for displaying information about the companies in the selected subset. The graph options can be used to analyze the selected subset of companies according to criteria other than those used in the **{Define Subset}** process. For example, if a subset of companies that produce similar products is created through **{Define Subset}**, the **{Graphs}** option can display how many are exporters or the distribution of company size within the subset.

{Print Subset}. This option provides several preset print options, depending on the format and amount of company information desired.[5] The menu options are identical to the options in the **{Print}** menu of the main menu. The **{Table Format File}** option provides a choice of ten column-oriented formats for printing different combinations of company information. The other menu options allow quick printing of some or all company information, printing to computer files, and printing form letters or mailing labels.

Exhibit 2-6

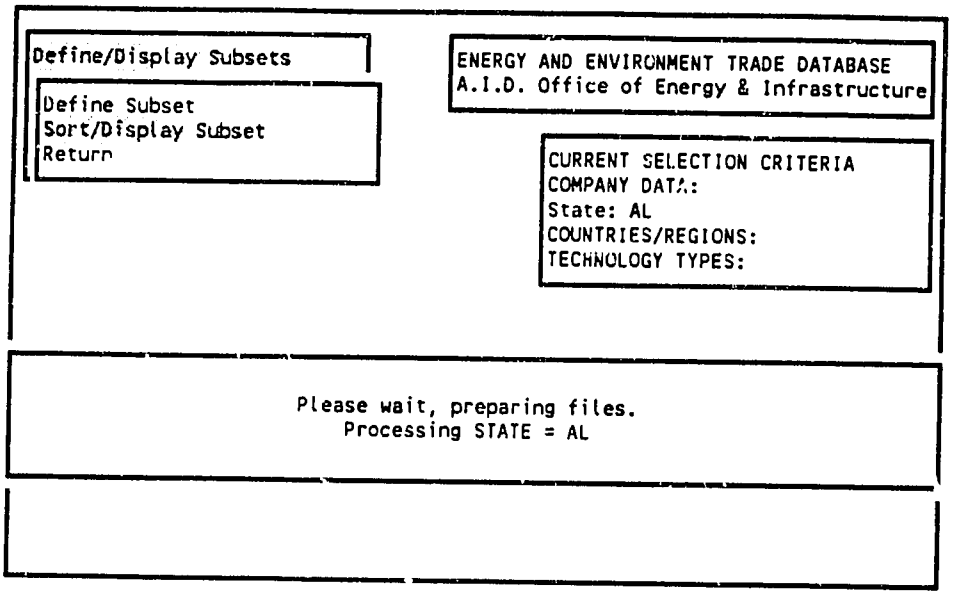
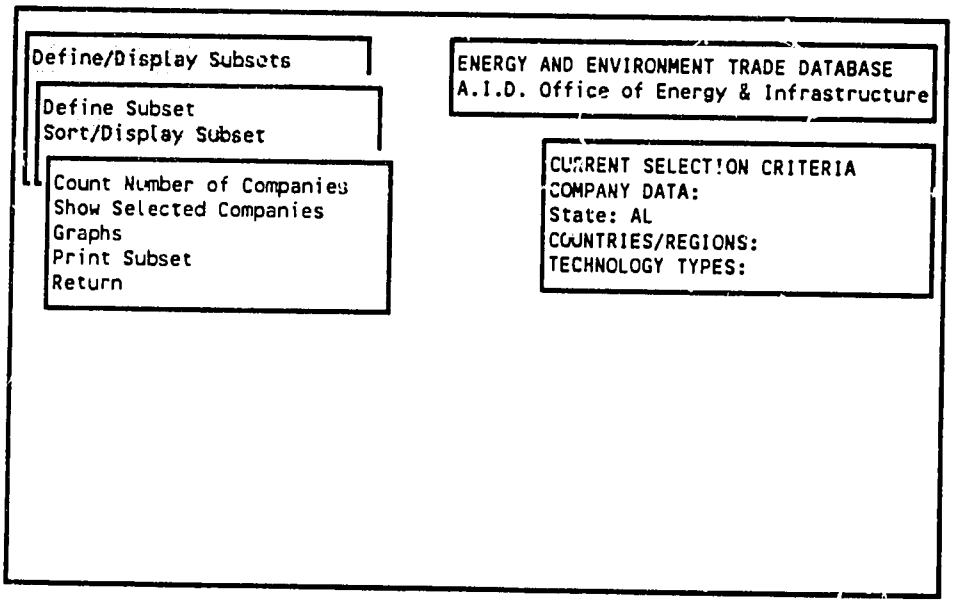


Exhibit 2-7



[5] Appendix D shows examples of all preset print options.

Note: This sort would result in selecting all companies located in the state of Alabama.

{Enter/Update Data}

This menu choice provides a series of submenus that allow authorized users to add, delete, or modify any data in the database.[6]

[6] Appendix G contains a detailed explanation of the data editing menus.

ENERGY AND ENVIRONMENTAL TRADE DATABASE USER MANUAL

CHAPTER 3

USING THE TRADE DATABASE

CHAPTER 3: USING THE TRADE DATABASE

This chapter describes the general rules for using the program that operates the Energy and Environment Trade Database and navigating through its menus and data screens. It also provides detailed "walk-throughs" and related explanations for several of the most common uses of the database.

3.1 PROGRAM OPERATIONS

The database is a free-standing program created with Clipper 5.01, a database language compiler. The only hardware required is an IBM-compatible computer with a hard disk and sufficient memory. No additional software is required. This section will describe the general rules and procedures for accessing data and moving around the program. Appendix A provides details on computer setup requirements and installating the database files. Appendix B presents details of the program file structure.

Starting the Database Program

The program is contained in the file TRADE.EXE. To run the program after installing the program, change to the new directory:

CD\TRADE

Then run the program by typing:

TRADE

The program will ask for the user's name (maximum of 8 characters). Type it and press the ENTER/RETURN key. The program will then ask for a password. No password is needed to query and view the data; a password is only needed to edit or add new data. After the main menu is presented, the program can be exited at any point by hitting the ESCAPE key or choosing "Quit" from the main menu.

Sample applications are provided later in this chapter to illustrate typical uses of the database. The following paragraphs present some general rules for using the menus and navigating through the data screens.

Menu Operations

Moving between menus

The database menus can be navigated by using the arrow keys and the RETURN/ENTER key, or by typing the first letter of the desired menu option. Most menus include as their last option **{Return}** to return to the previous menu. In addition, the ESCAPE key will usually close the current menu and return to the previous menu.

Making menu selections

Most menu options have specific instructions about making selections. Some menus -- usually those that appear separated from the standard menus on the left side of the screen -- will allow you to select options by typing the first letter of the option, and then pressing the ENTER/RETURN key to complete the selection.

Company data displays

The two most common display formats for viewing the data are full-screen and by columns. The full-screen view shows all data for one company at a time in the form of separate data display screens. There are usually several screens per company. The column view format shows a screen with multiple company names, where the data for each company fill only one row. Selected information for each company on the screen can be viewed in column format by scrolling to the right to reveal additional columns. Each column presents the same type of data for all companies on the screen (e.g., address, sales). Several rules of thumb for moving through each type of data display are presented below.

full-screen display

When viewing data in the full-screen format, all of the keyboard keys are active, but the PAGE DOWN key is most useful for bringing up the next page of information (there can be up to 12 "screens" of information for each company). Pressing the ESCAPE key will skip the remaining pages of company information and return to the company selection display. On-screen data can be modified when you are in the full-screen display mode, but the program will not save any changes unless the screens have been accessed through the data editing menus.

column-oriented screen display

When viewing data in the column-oriented screen, only a limited number of keyboard keys are active. In general, the ENTER/RETURN key will select the highlighted option. The ESCAPE key will either select the highlighted option or return to the next-highest menu/selection screen -- it is best used for returning to the next-highest screen. The Up, Down, Right, and Left arrow keys and PAGE UP and PAGE DOWN will move the cursor through the data in the column-oriented screen. Data will scroll on and off the screen horizontally and/or vertically as these keys are pressed.

The user can keep any column on the screen so that it does not scroll out of view as the right arrow is pressed by "freezing" the column: place the cursor on the column to be frozen in place and press the ALT and F keys simultaneously (ALT-F). The highlighted column will move to the left side of the screen and will remain in place as the user scrolls through the data. To un-freeze or release the frozen column, press the ALT-U key combination with the cursor on the frozen column.

There are two ways to move the cursor rapidly through data in the column-oriented screen (besides using the arrow and PAGE UP or PAGE DOWN keys). When the data are sorted in alphabetical order, pressing a letter key will cause the cursor to jump forward or backward to the first row starting with that letter (usually based on the company name). In some cases, the ALT-S key

combination allows an option to search for data by entering more detailed search criteria -- either a company database ID number or the first few letters of the company name.

Prompts and explanations

Most menu options and screen displays include prompts that idenfify the keystrokes needed to make the available selections. The bottom line of each menu screen also often includes a more detailed description of the information available through that menu option.

Other Program Rules and Parameters

Alphabetical order

The program alphabetizes records in accordance with the ASCII value of each character within the string, taking each character in turn. In most cases, the company name is the relevant "string." (ASCII is the standard set of characters, numbers, and punctuation marks universal to most IBM-PC-compatible computers and programs.) The standard ASCII order places numbers first, capital letters second, and lower case letters third. Thus, any company name starting with a number will be found at the beginning of the sorted list. Company names starting with more than one capital letter will precede similar names composed of lower case letters: "ACME" will be found before "Absolute" and "Azerbaijan." Company names starting with lower case letters will be found after all of the companies starting with upper case letters: "deTerra Inc." will be after "Zoo, Inc." Also, the program includes in its alphabetization articles and common first names that are often not used in alphabetical lists: "The Acme Company" would be found under "T" rather than "A," and E.I. DuPont would be found under "E."

Subset/subcategory "roll-up" features

Because the product/service technology coding system is a multi-level system, the program contains an automatic "roll-up" feature; i.e., if a 1st- or 2nd-tier category is selected for a search, any subcategories within that category are also automatically included in the search criteria.

Program speed

The speed of many program operations can vary greatly depending on the speed of the computer hardware, the number and type of selection/sorting parameters, and the display format. In cases where the choice between options would yield substantially different processing or screen display speeds, the program provides a prompt that alerts the user to the difference in processing time.

The ESCAPE key

The program can store keystrokes in a keyboard buffer when they are entered faster than the program can process them. As a result, hitting the ESCAPE key twice or more in rapid succession can cause unexpected consequences, including exiting the program entirely. In most cases, the program will respond very rapidly to hitting the ESCAPE key; however, when there are delays the user should wait for the program to respond to the first ESCAPE key before pressing it again.

Using the database on a network

The database program was designed to operate in either a single-user environment on a single computer or in a multi-user environment on a network.[1] In a multi-user environment, the program automatically locks individual files and records at various points in the data entry and editing process to prevent two users from editing the same record at the same time. When a second user attempts to use a locked record or file, the program will inform them that the record is locked by another user and return them to the menu.

[1] AT&T Starlan Network (an Ethernet network).

3.2 SAMPLE APPLICATIONS

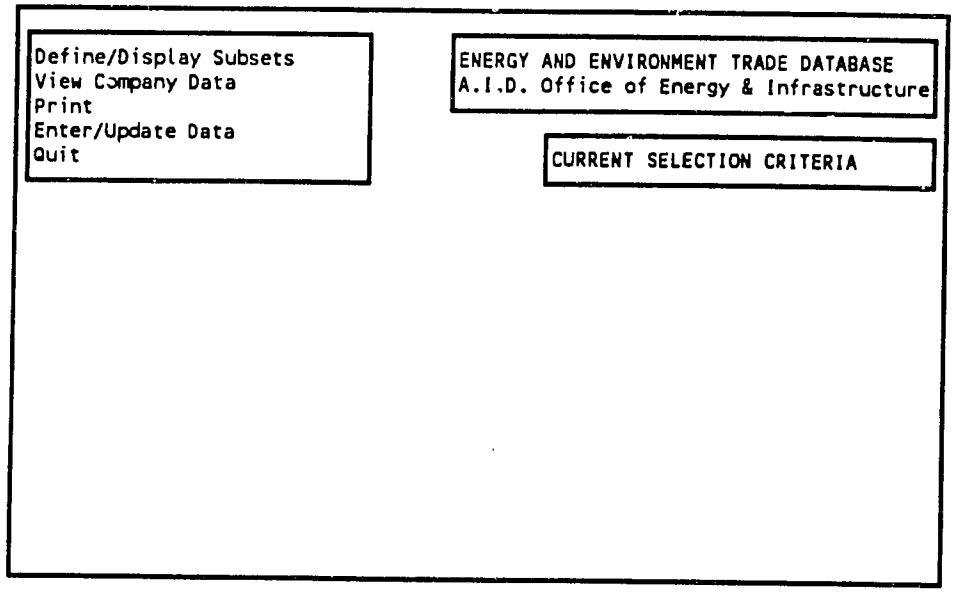
This section provides step-by-step instructions for using several of the most common applications of the database. The description of each application includes exhibits showing what appears on the computer screen in each step of the process, along with comments and instructions. The shaded portions in each exhibit highlight either important data to note or indicate which menu choices have been made up to that point. This section will cover the following menu options and related applications:

{View Company Data}

Upon entering the database, the screen shown in Exhibit 3-1 is displayed. The box in the upper left corner of the screen is a vertical light-bar menu. Pressing the up and down arrows will move the highlighted bar through the menu options. Pressing ENTER/RETURN will select the highlighted

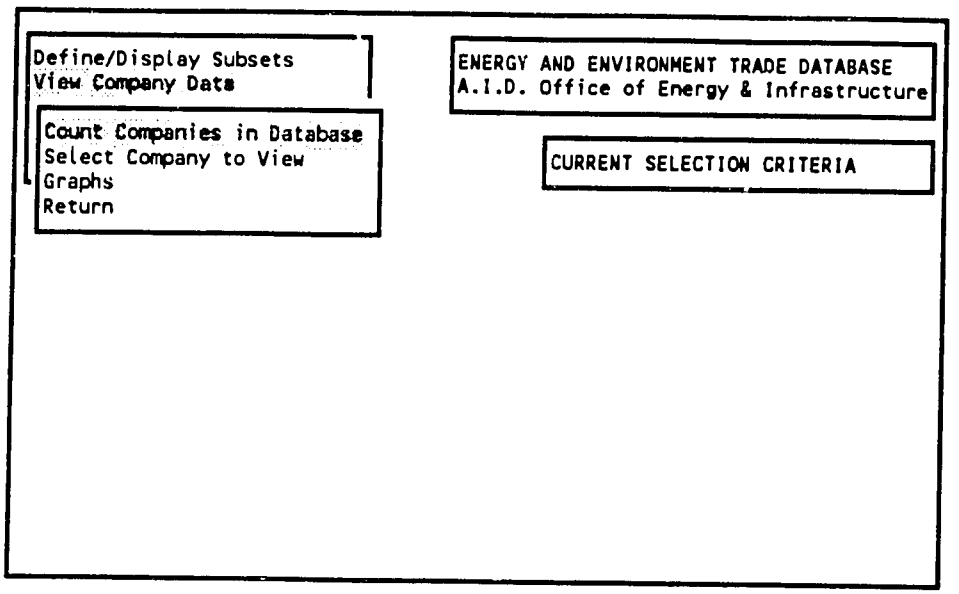
option. In addition, pressing the first letter of any one of the options in any menu will automatically select that option.

Exhibit 3-1



Choose **{View Company Data}** from the main menu and a second menu will appear (Exhibit 3-2). Each option in the menu corresponds to a message that is displayed on the last line of the screen. For example, the message shown below the box in Exhibit 3-2 corresponds to the highlighted **{Count Companies in Database}** option.

Exhibit 3-2

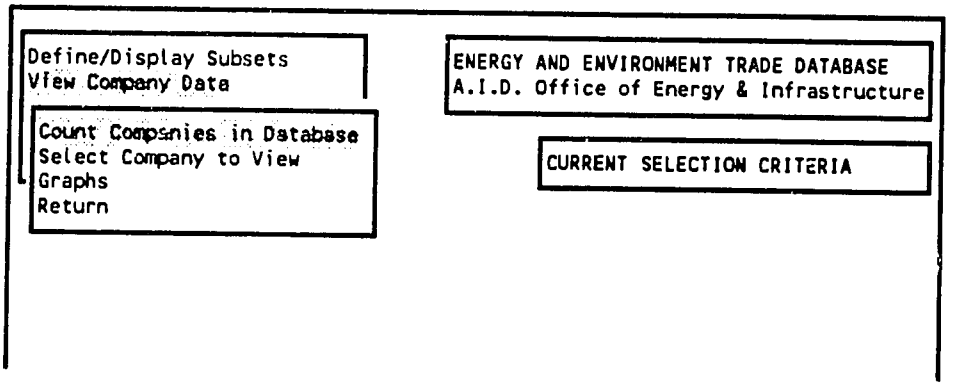


Count number of companies in database

{Count Companies in Database}

Selecting this first option in the menu will count the number of companies in the database, with the results shown on the screen below the menu (Exhibit 3-3).

Exhibit 3-3



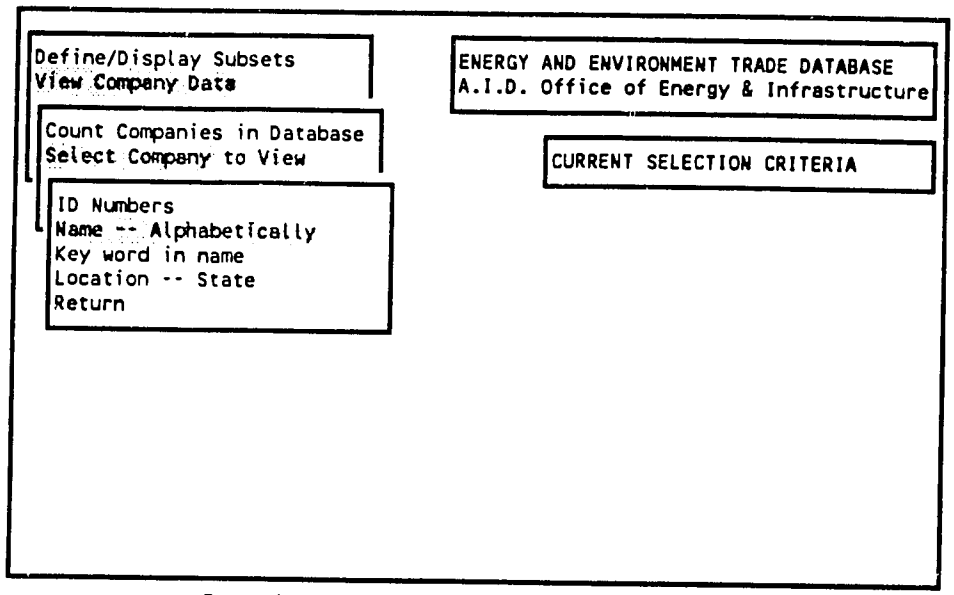
Number of companies in database: 1509

Hit any key to continue.

{Select Company to View}

Choosing the second option in the **{View Company Data}** submenu brings up the menu shown in Exhibit 3-4. If either of the first two options in this menu -- **{ID Numbers}** and **{Name -- Alphabetically}** is chosen, the selection/display options that follow it are the same. This example illustrates the **{Name -- Alphabetically}** option.

Exhibit 3-4



{Name -- Alphabetically}

This option allows the user to search for a specific company by name, by presenting a list of the database companies in alphabetical order. Upon choosing this option, the screen clears and the user is presented with a prompt (the shaded area) to enter one or more letters of the company name (Exhibit 3-5). In this example, the letters entered are "Ind" (the program automatically capitalizes the first letter).

Exhibit 3-5

Enter letter of alphabet as lower bound for browsing: Ind

After entering the appropriate letters -- "Ind" in this case -- and pressing ENTER/RETURN, the user is presented with a list of all the companies in the database, in alphabetical order, starting with the specified letters (Exhibit 3-6). By scrolling up and down through this list using the arrow, PAGE UP or PAGE DOWN keys, the appropriate company is highlighted. At this point either the full-screen or column-oriented display options can be used to view the company data. Both options are illustrated below.

Exhibit 3-6

ENERGY AND ENVIRONMENT TRADE DATABASE
COMPANY DATA

ID	COMPANY
571	Indeck Energy Services Inc.
167	Independent Equipment Corporation
572	Inductoheat, Inc.
1595	Industrial Acoustics
574	Industrial Boiler Co. Inc.
573	Industrial Furnace Systems
575	Industrial Solar Technology
169	Ingersoll-Rand Company
576	Inland Motor
888	Innerfeld & Associates
1579	Insituform Group Ltd.
577	Integrated Power Corp.
1520	Intercontinental Power
170	International Boiler Works Company
171	International Chimney Corporation

[ALT-F = FREEZE, ALT-U = UNFREEZE, ALT-S = SEARCH]
HIT RETURN TO SELECT, ESCAPE TO CANCEL

Full-Screen Display Option

Pressing the ENTER/RETURN key will bring up the first of several full-screen displays for the highlighted company. This display format emulates the screens used to enter/edit company data, and so shows all the types of data that might be collected for the company. Therefore, not all items on the data screens are filled in for all companies. Exhibits 3-7 through 3-11 show the main full-screen displays with the data for the company selected for this example. The PAGE DOWN key should be used to move from one screen to the next. It is not possible to return to previous screens using PAGE UP. Using the ESCAPE key will interrupt the display and return to the column-oriented screen shown in Exhibit 3-6.

Exhibit 3-7

```
                ENERGY AND ENVIRONMENT TRADE DATABASE
                        COMPANY DATA

    574     Industrial Boiler Co. Inc.

Division
 Address  P.O. Drawer 2258

    City  Thomasville              State  GA  Zipcode  31799

   Phone  800-476-1314          Fax   912-226-3027

   Date this record last edited  03/12/92

   Temporary field:  N

   Was this company surveyed? (Y/N)      F

                                                Press PAGE DOWN
                                                to advance
```

Exhibit 3-8

```
                ENERGY AND ENVIRONMENT TRADE DATABASE
                        COMPANY DATA

          574  Industrial Boiler Co. Inc.
CONTACTS
Name                          Title
     Phone                    Fax
-------------------------------------------------------------------
Mr. Paul W. Goggins           President
     800-476-1314             912-226-3027
```

Press PAGE DOWN to advance

********** HIT ANY KEY TO CONTINUE. **********

Exhibit 3-9

```
                ENERGY AND ENVIRONMENT TRADE DATABASE
                        COMPANY DATA

          574  Industrial Boiler Co. Inc.
PRODUCE TECHNOLOGIES
  AGB3    POWER/STEAM SYSTEMS
          Boilers
          Gas/oil-packaged
  AGB6    POWER/STEAM SYSTEMS
          Boilers
          Multifuel
  AGB7    POWER/STEAM SYSTEMS
          Boilers
          Wood/biomass
  AHJ1    PROCESS HEATING SYSTEMS
          Thermal Fluid Heaters
          General
```

Press PAGE DOWN to advance

**********HIT ANY KEY TO CONTINUE.**********

Exhibit 3-10

```
                    ENERGY AND ENVIRONMENT TRADE DATABASE
                                COMPANY DATA

              574  Industrial Boiler Co. Inc.

Product/Service

Type of company P    P=Products, S=Services, PS=Both
Company type    EGY    EGY=Energy, ENV=Environment, BOTH=Both
Public or Private Company:  2                                  1=Public, 2=Private
Sales in million US dollars $           12
    Is this a specific value (not the lower end of a range)? (Y/N):  Y
SIC Code                    3433
Does the company export products or services? (Y/N)  Y
Associations

Parent Company ID       0    Name
Parent company's country
Parent company sales in million US dollars  $            0        Press PAGE DOWN
                                                                  to advance
```

Exhibit 3-11

```
                    ENERGY AND ENVIRONMENT TRADE DATABASE
                                COMPANY DATA

              574  Industrial Boiler Co. Inc.

Sources for this information:
┌──[Sources for this information]──────────────────────────────────┐
│                                                                  │
│                                                                  │
│                                                                  │
└──CONTROL-W TO WRITE AND EXIT─────────────────────────────────────┘
**********DO NOT TYPE MORE THAN WILL FIT IN THE BOX**********
```

If the user presses any of the cursor keys or letter keys when presented with the screen shown in Exhibit 3-11, the program will move the cursor into the "Sources for this information" box, allowing the user to scroll through the information in the box. Pressing ESCAPE or the CONTROL-W key combination will exit the box.

For most companies this is the last screen of the full-screen display (see "Example of Interview Data Screens" below). If there is no more data, pressing PAGE DOWN or ESCAPE will return to the screen format shown in Exhibit 3-6.

Column-Oriented Display Option

If the full-screen display format is not chosen, a column-oriented display format is presented, as shown in Exhibit 3-6. Several actions are available from within this screen. Pressing the right and left arrows allow the user to scroll through a subset of selected information for any company in the database (see Appendix E). Similarly, PAGE UP, PAGE DOWN, or the up-down arrow keys will move through the data to display different companies.

As the user scrolls left and right through the data, columns move into and out of view. To keep one column fixed on the screen while scrolling through other columns, there is a "freeze" option. By placing the cursor on the relevant column and pressing the ALT-F key combination, the column will remain at the left side of the screen. In Exhibit 3-12, the "ID" field is "frozen" while the data columns are scrolled right until the "ADDRESS1" field is displayed. Pressing the ALT-U combination will unfreeze the highlighted column.

Exhibit 3-12

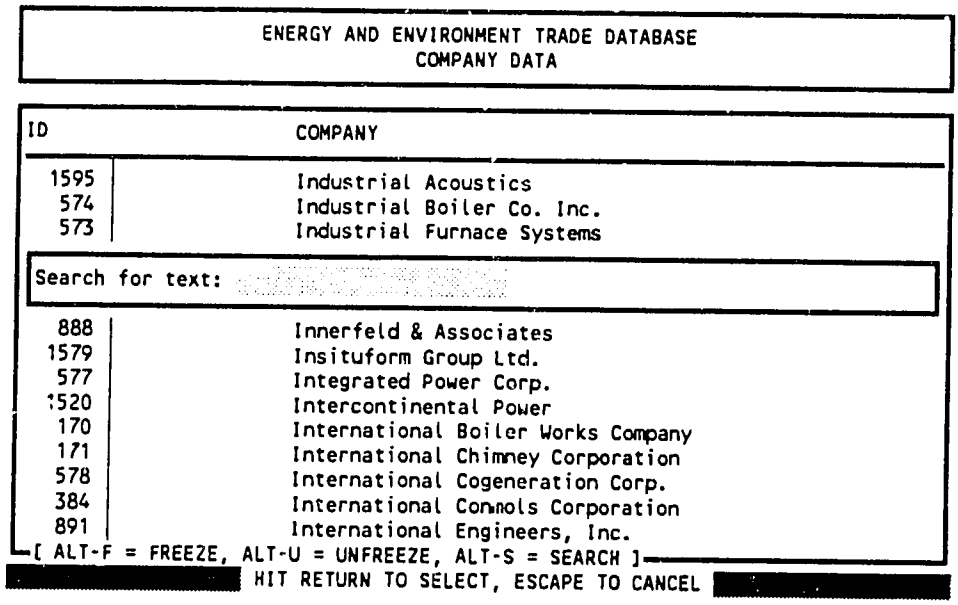
ENERGY AND ENVIRONMENT TRADE DATABASE
COMPANY DATA

ID	ADDRESS1
1595	1160 Commerce Ave.
574	P.O. Drawer 2258
573	P.O. Box 571
575	5775 W. 52nd Ave.
169	200 Chestnut Ridge Road
576	501 First St.
888	468 Brookside Lane
1579	3421 Pennsy Drive
577	IPC Bldg.
1520	350 Lincoln Street
170	P.O. Box 498
171	55 S. Long St.
578	441 N. 5th Street #102
384	12 Oregon St.
891	1776 S. Naperville Rd., Bldg. B # 102

[ALT-F = FREEZE, ALT-U = UNFREEZE, ALT-S = SEARCH]
HIT RETURN TO SELECT, ESCAPE TO CANCEL

When the data in this display option are presented alphabetically by company name, the screen will scroll up or down automatically when a letter key is pressed, scrolling to the first name starting with the letter pressed. For example, pressing "J" advances the screen to the first company starting with the letter "J". A more precise search command is possible by pressing the ALT-S key. This combination will bring up a prompt (Exhibit 3-13) to allow the user to enter several letters from the beginning of a company's name (use normal capitalization rules). After entering the letters and pressing ENTER/RETURN, the screen highlight moves to the first company starting with the specified letters. When the data are sorted based on a number (usually a company's database ID number), pressing ALT-S will bring up a prompt requesting a number rather than a series of letters.

Exhibit 3-13



{Key Word in Name}

If the first few letters of a company name are not known, but at least one word of the name is known, a search for a key word within the name can be initiated by choosing the third option from the **{Select Company to View}** menu (see Exhibit 3-4). This selection presents a prompt to enter the key word. In Exhibit 3-14, "BOILER" has been typed in the prompt space.

If the program finds a company with the specified key word in its name, it will display the information in the full-screen format (Exhibits 3-7 through 3-11). After viewing the data, the user can continue to search for other companies using the same key word by entering "T" for True or "Y" for Yes to the prompt shown in Exhibit 3-15. Entering "N" or "F" will return the program to the menu.

If the program fails to find a match, it will present the message shown in Exhibit 3-16 and return to the **{Key Word in Name}** menu choice.

Exhibit 3-14

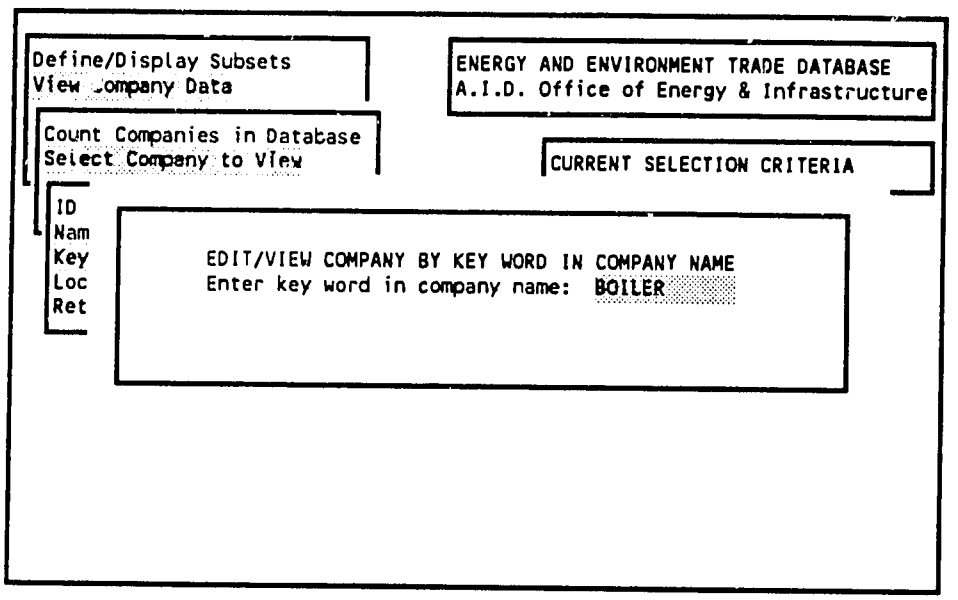


Exhibit 3-15

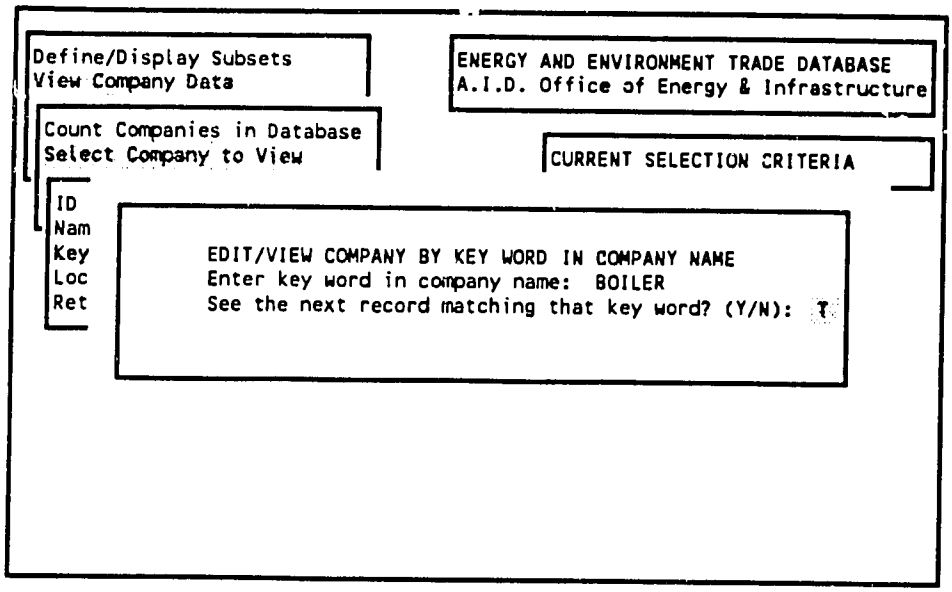
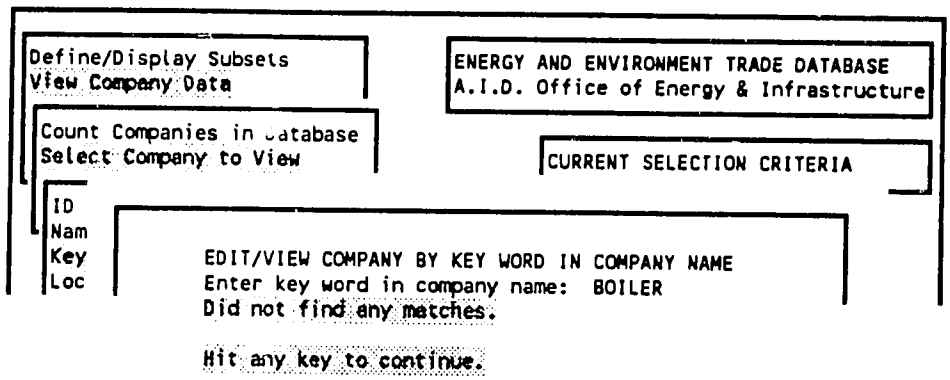


Exhibit 3-16



Example of Interview Data Screens

The categories of data shown in Exhibits 3-7 through 3-11 comprise the primary data set for all companies in the database. In addition to those types of information, a subset of 320 companies were interviewed regarding their export experience and interests, and their interest in certain types of trade promotion activities (see Chapter 1). Exhibits 3-17 through 3-20 present the additional screens on companies that have been interviewed. These are found at the end of the full-screen display option. Movement between these screens is the same as for any other screens in the full-screen display.

Exhibit 3-17

```
                ENERGY AND ENVIRONMENT TRADE DATABASE
                          COMPANY DATA

          134  GEA Power Cooling Systems Inc.
COUNTRIES OF INTEREST FOR EXPORTING

 Mexico
```

********** HIT ANY KEY TO CONTINUE. **********

Exhibit 3-18

```
                ENERGY AND ENVIRONMENT TRADE DATABASE
                          COMPANY DATA

          134  GEA Power Cooling Systems Inc.
REGIONS OF INTEREST FOR EXPORTING

 South America
```

********** HIT ANY KEY TO CONTINUE. **********

Exhibit 3-19

```
ENERGY AND ENVIRONMENT TRADE DATABASE
COMPANY DATA

134  GEA Power Cooling Systems Inc.

LEVEL OF INTEREST:
Trade seminars and conferences      m
Joint venture promotion projects    m      H = High
Trade and reverse trade missions    l
Information dissemination           m      M = Medium
Technology-specific market studies  h
Financing assistance                l      L = Low
Policy reform activities            l
Demonstration programs              l
Level of interest:
     0=Uninterested, 1=Slightly, 2=Moderately, 3=Interested, 4=Very Interested
Interest level in this type of program          1
Interest in helping to form an export forum     1

                Use spacebar or backspace to toggle
```

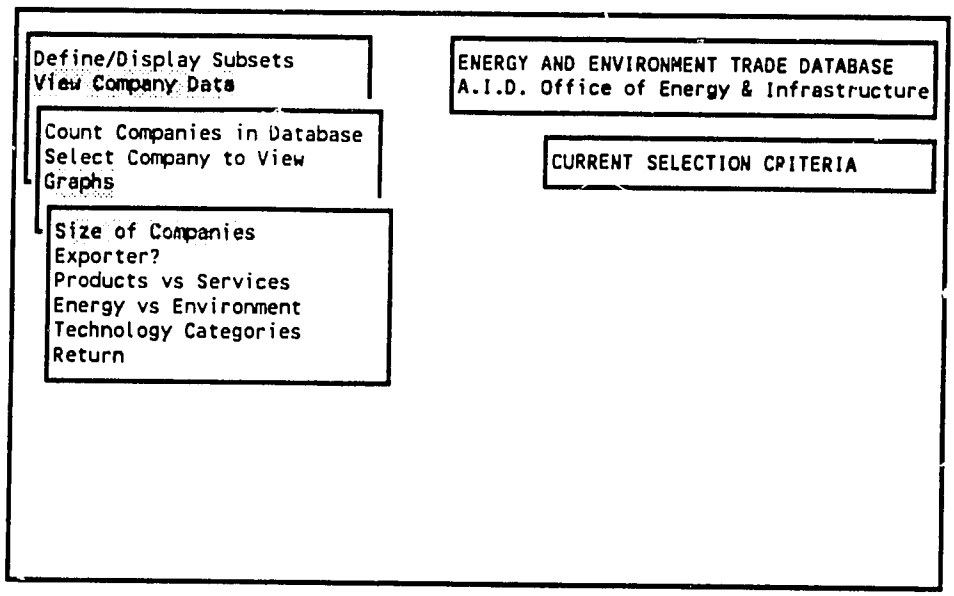
Exhibit 3-20

```
ENERGY AND ENVIRONMENT TRADE DATABASE
COMPANY DATA

134  GEA Power Cooling Systems Inc.

Are there other activities in which you would be interested?

What would you do with $100,000 for a study or report

Sources for this information:
```

{Graphs}

The user can automatically generate and display graphs of the distribution of five different types of database information by using the options in the **{Graphs}** selection under the **{View Company Data}** menu (Exhibit 3-21). The program is designed to display graphs on VGA and Hercules-compatible monitors. The **{Size of Companies}** graph option is shown in this example.

Exhibit 3-21



Show size of companies in the database

After choosing any of the options, the program will clear the screen and present a display indicating the status of the calculation as it proceeds, shown in Exhibit 3-22. The number opposite "Company:" will change as the calculation proceeds until it reaches the total number of companies in the database (1509).

Exhibit 3-22

Please wait, calculating.
Company: 28

The program will then automatically show a screen with the distribution of the companies in the database according to the main subcategories of the data category selected in the **{Graphs}** submenu. If the **{Size of Companies}** option is selected, the program will calculate the number of companies in each of the five sales ranges, as shown in Exhibit 3-23. If the "P" key is pressed, a pie chart of the data will be displayed. Pressing the "B" key will display a bar chart of the same data. If ESCAPE is pressed, the program will return to the Exhibit 3-21 menu. Pressing any key from the graph display will also return to the menu. Note: the graphs cannot be printed directly from the program.

Exhibit 3-23

```
Size of Companies
Number of Companies (Set/Total): 1509/1509

<=$10mm      =    852
$10-100mm    =    388
$100-500mm   =    167
$500-1000mm  =     38
>$1000mm     =     64


Hit P to see a PIE chart, B to see a BAR chart.
```

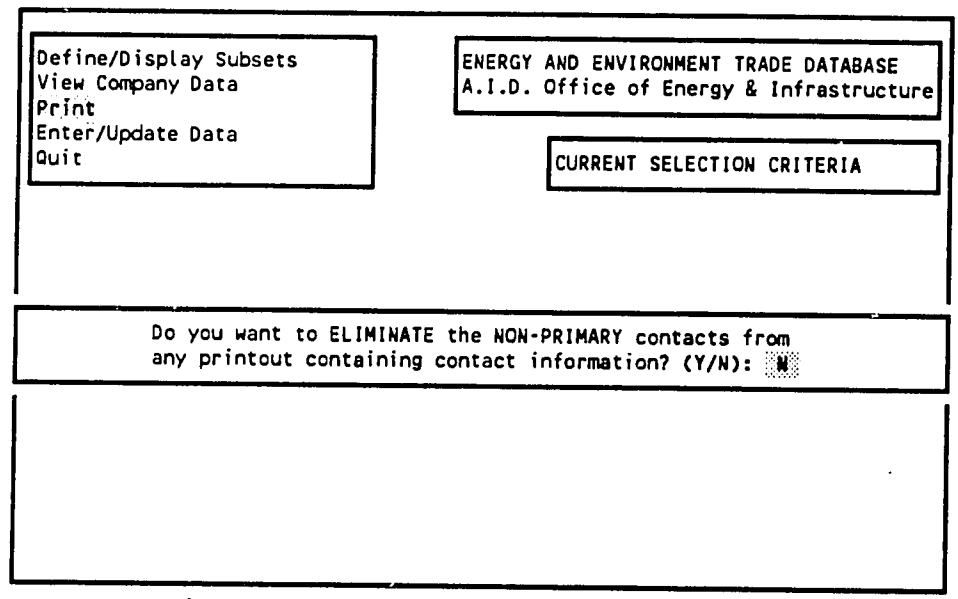
{Print} from the main menu

The **{Print}** menu in the main menu allows you to print of all or part of the data for all or part of the companies in the database. However, any subsets created from this menu are not selected in the same way as the subsets developed from the **{Define/Display Subsets}** menu, although the subsequent printing options are identical.

The first prompt after selecting the **{Print}** option is a question about "NON-PRIMARY CONTACTS" (Exhibit 3-24). For each company in the database, there may be several contacts -- trade representatives, officers, marketing representatives, etc. For each company, at least one person has been designated as the "primary" contact. This is the person whose name goes on mailing labels, for example. If a print option that includes contact information is chosen, the program can either print data only for the primary contact, or it can print data on all contacts.

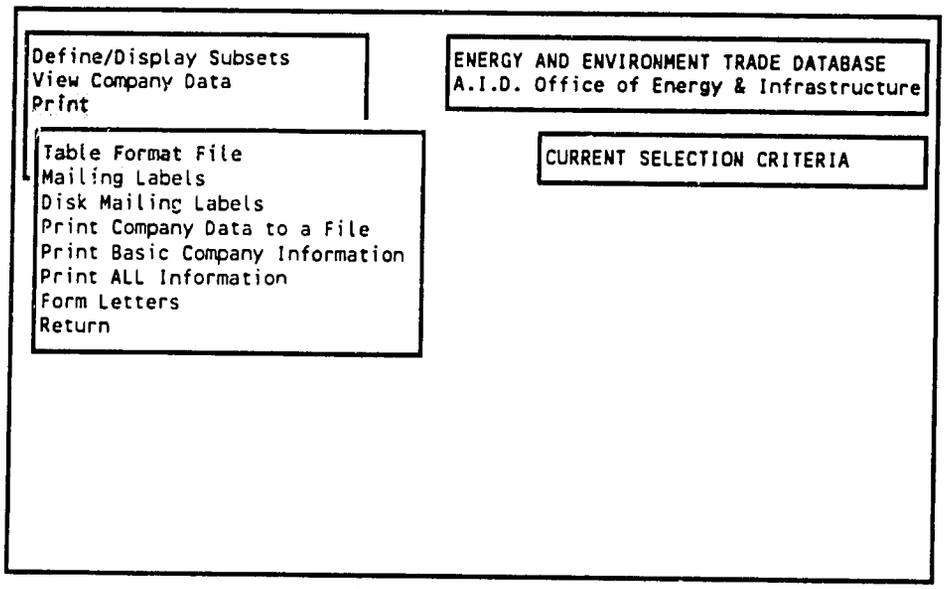
A "T" for True or "Y" for Yes should be selected if only primary contacts are to be printed. A "F"-False or "N"-No response will print all contacts in any relevant print option.

Exhibit 3-24



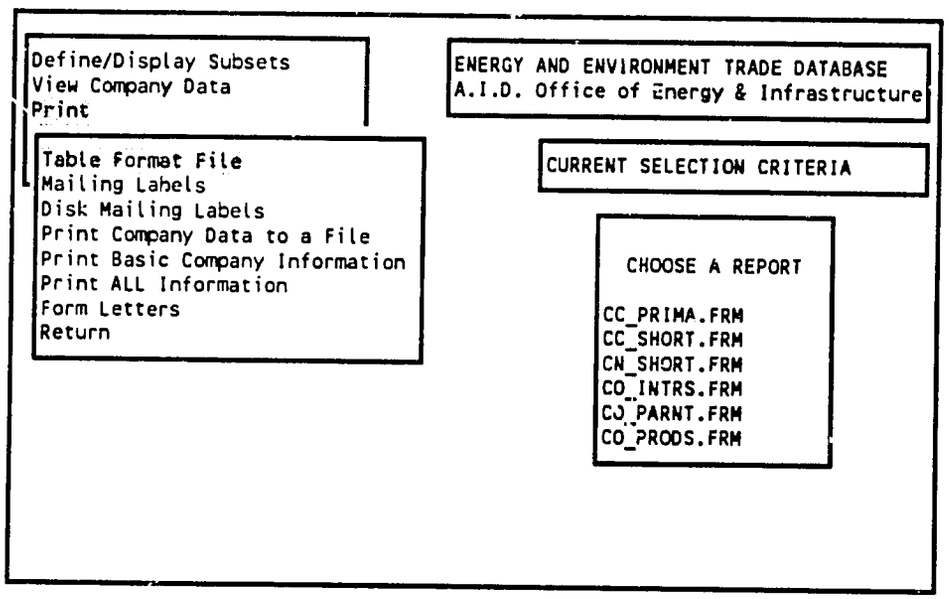
After the Non-Primary contacts choice is made, the menu shown in Exhibit 3-25 is presented. The **{Print}** submenu offers a wide variety of options. Selecting the **{Table Format File}** option offers another submenu of 10 column-oriented formats and data selections (Exhibit 3-26). Scroll down to see all of the formats. These are shown in Appendix D. The options available after **{Table Format File}** in the **{Print}** menu are the most commonly used print formats.

Exhibit 3-25



Choose Table Format File to Print

Exhibit 3-26



Choose Table Format File to Print

After selecting a **{Print}** option -- in this example **{Print Basic Company Information}** -- a series of additional screens are displayed. With the exception of the screen in Exhibit 3-27, all of the following print screens are common to most of the other **{Print}** menu selections.

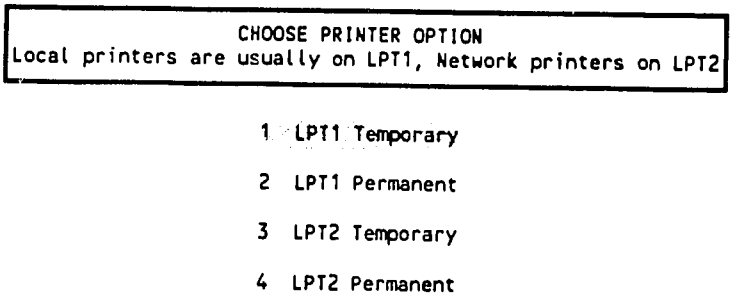
The program clears the screen and asks the user the question shown in Exhibit 3-27. A "Y" (Yes) response will instruct the program to print only one company on each page of the printout. With a "N" (No) response, the program will print as many companies as will fit on each page, and will split information on a company between two pages in order to fill the page.

Exhibit 3-27

```
PRINTING ALL COMPANY INFORMATION


Do you want to print ONE company per page? (Y/N): Y
```

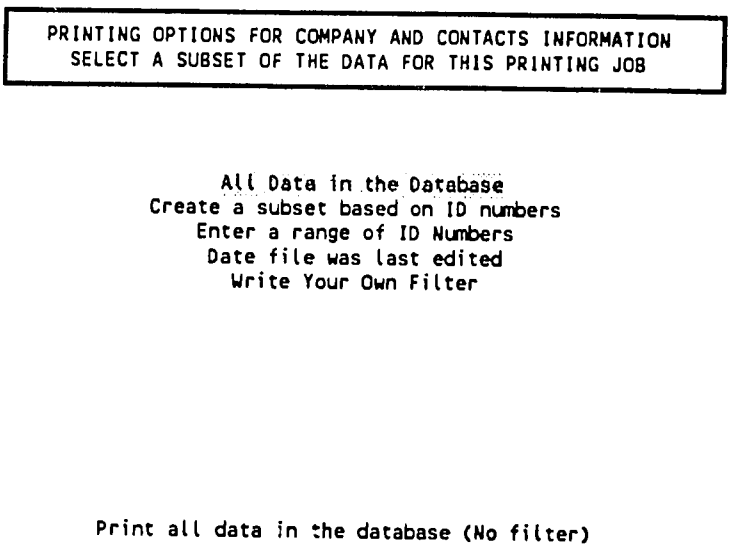
The next step is selecting a printer port (Exhibit 3-28). The example highlights "LPT1 Temporary." A "port" is the physical location of the cable from the computer to the printer, and will depend on the specific hardware setup of each user (see Appendix A). The program can print on ports LPT1 and LPT2. The "Temporary" options allow the user to specify a different printer port each time a printing routine is selected. The "Permanent" options allow the user to specify a port once, and have it apply to all printing selections made during the active session -- the program does not remember port selections after the user exits the program.

Exhibit 3-28



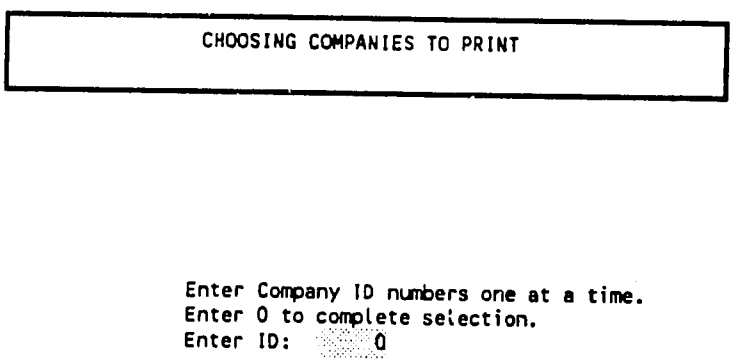
The next screen allows the user to specify which companies' data will be printed (Exhibit 3-29). The user can print the selected data for companies in the entire database -- "All Data in the Database"; print a selected set of companies as defined by their company database ID numbers -- "Create a subset based on ID numbers" or "Enter a range of ID numbers"; print those companies that have had data edits since a specified date -- "Date file was last edited"; or create a custom subset of the data using the "Write Your Own Filter" choice. The company database ID numbers can be identified through the **{View Company Data}** menus.

Exhibit 3-29



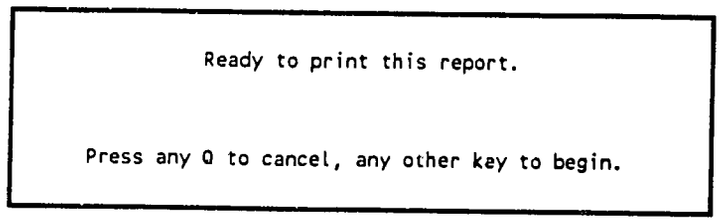
In the example shown in Exhibit 3-30, choosing the "Create a subset based on ID numbers" option presents a screen with a prompt to enter company ID numbers. The numbers should be entered one at a time, and are recorded by pressing the ENTER/RETURN key after each number. After all numbers are entered, entering zero (0) and pressing ENTER/RETURN completes the entry process.

Exhibit 3-30



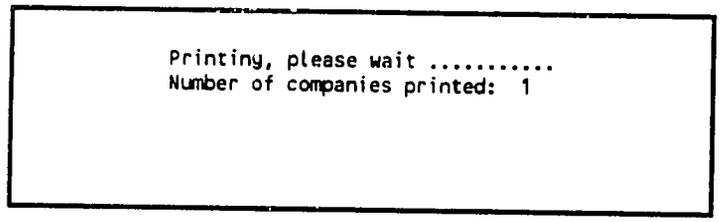
The program is now ready to print data on the selected companies. It clears the screen and presents the screen shown in Exhibit 3-31. Pressing "Q" (for Quit) returns the program to the menu; pressing any other key will instruct the program to continue printing the requested companies.

Exhibit 3-31



While the program is printing, it will display the message shown in Exhibit 3-32.

Exhibit 3-32



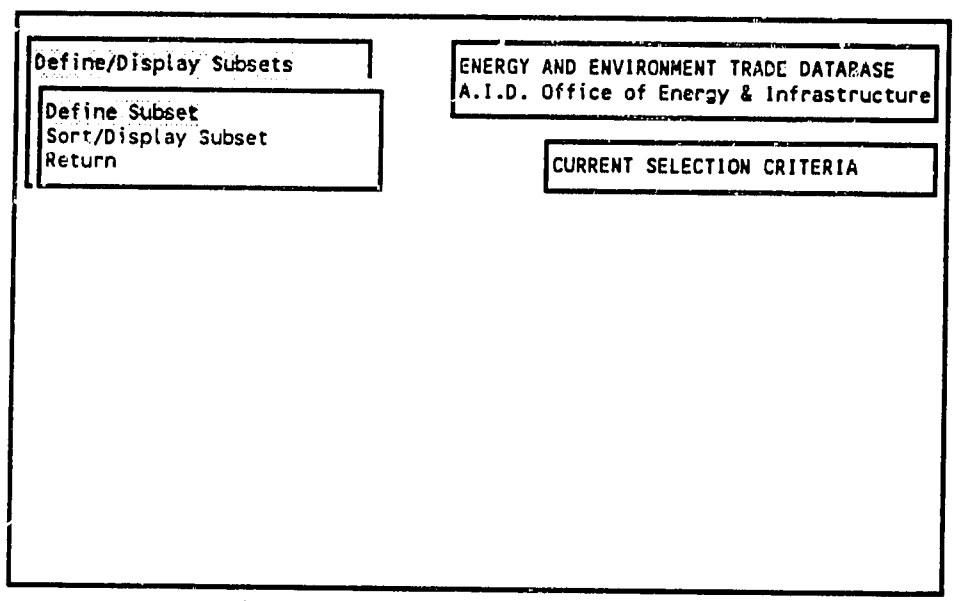
{Define/Display Subsets}

Upon choosing this option from the main menu, the screen shown in Exhibit 3-33 is presented. The **{Define/Display Subsets}** menu series allows the user to 1) define a subset of companies using certain types of criteria; 2) extract the set of companies that satisfy the defined criteria; and then 3) view, print and graph all or part of the information available for the selected subset of companies.

By making selections from a series of menus, any combination of criteria can be specified to make a selection of companies from the database. Once the criteria are defined and the subset created, the contents of the subset can be viewed on-screen, graphed in certain formats, and printed in a number of formats.

This section presents several examples of using these menus. The examples illustrate the most common applications of the define/display menus. Some of the examples also demonstrate certain types of operations that might be carried out when selecting criteria from any of the subset definition menus.

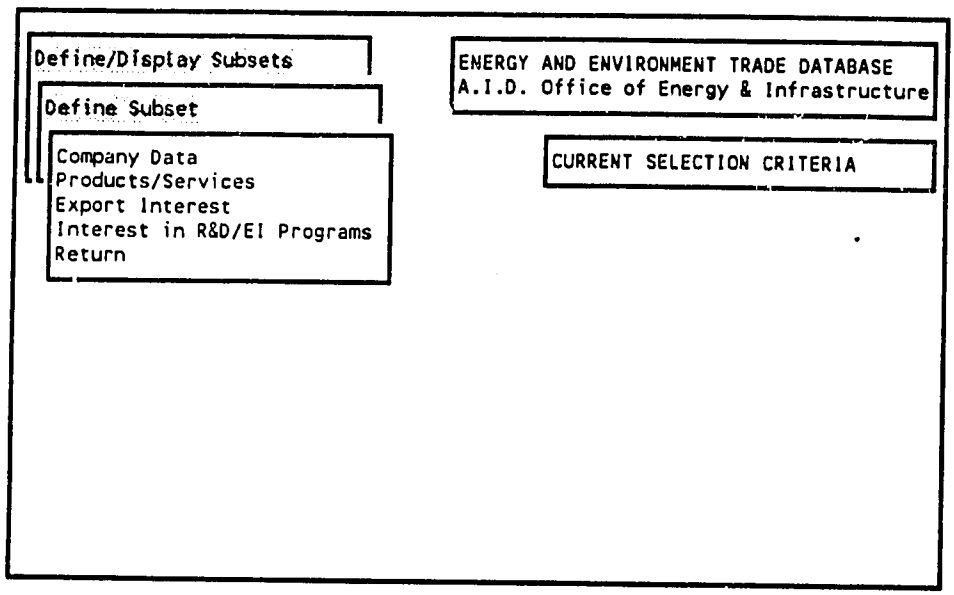
Exhibit 3-33



{Define Subset}

Selecting the **{Define Subset}** menu option leads to several submenus, which can be used for selecting criteria to define a subset (Exhibit 3-34). The **{Sort/Display Subset}** menu option (Exhibit 3-33) is used only after subset criteria have been defined through the **{Define Subset}** options.

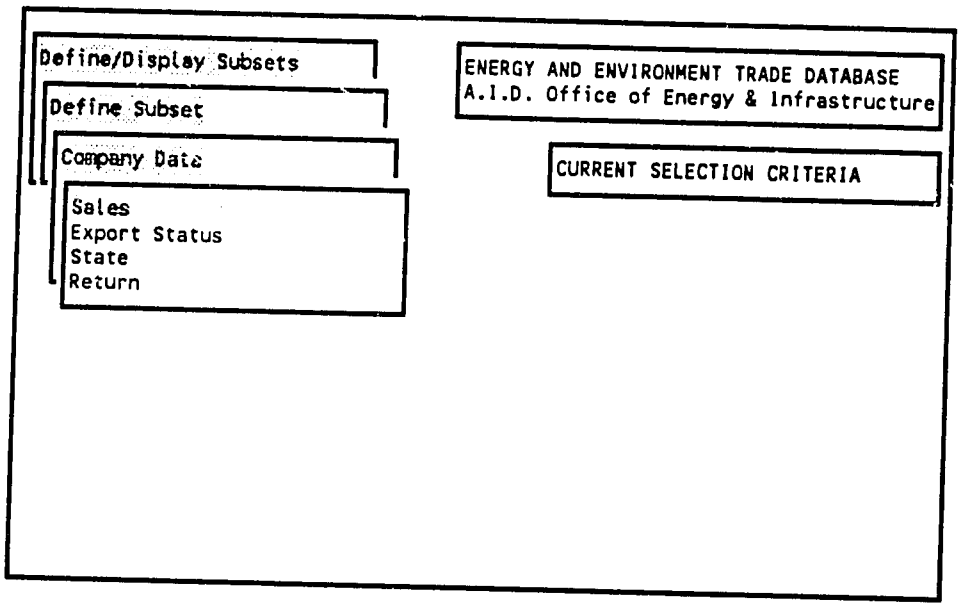
Exhibit 3-34



{Company Data}

Choose the **{Company Data}** option to display the new menu shown in Exhibit 3-35.

Exhibit 3-35



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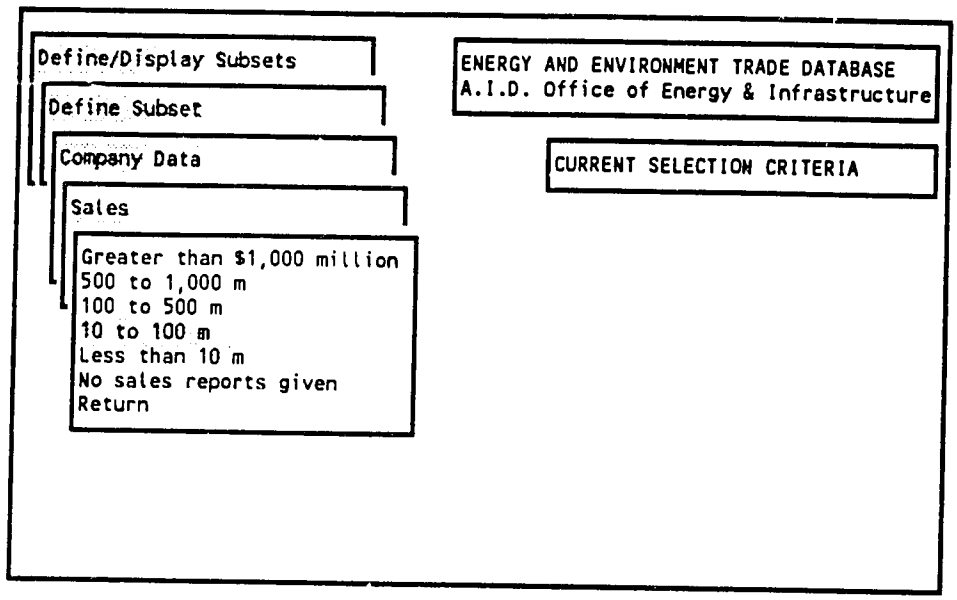
{Sales} and select single criterion example

Choose the {Sales} option to display the new menu shown in Exhibit 3-36. Descriptions of the sales data set are included in Chapter 1.

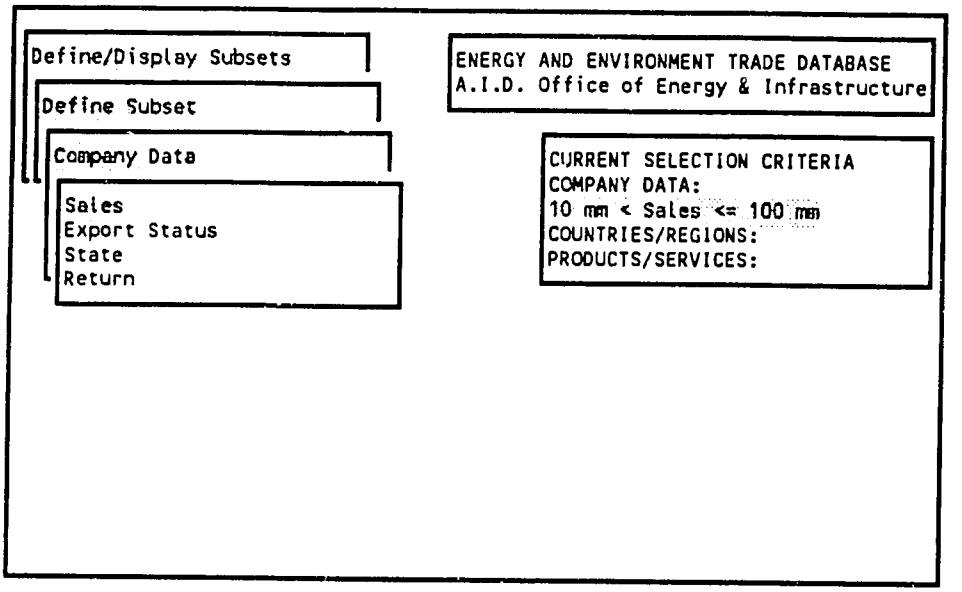
Exhibit 3-36



In this example, the category of "10 to 100 m" is selected, which specifies the companies whose sales are between $10 and $100 million. After making this selection, the CURRENT SELECTION CRITERIA box on the right side of the screen will expand to show the current choice, and the left-side menu will return to the previous menu, as shown in Exhibit 3-37.

If this is the only criterion for selecting a subset of companies, the user should return to the menu shown in Exhibit 3-33 and select **{Sort/Display Subset}**. See the **{Sort/Display Subset}** example (Exhibits 3-52 through 3-57) for descriptions of the various options under that menu.

Exhibit 3-37



Company sales by sales range

{Sales} and revise selection example

Once a selection has been made, it can be revised in several ways. The first step in making a revision is to enter the menu for the selection criteria to be changed and to make another selection. In this example, the sales range selection shown in Exhibits 3-36 and 3-37 is changed to "100 to 500 m," as shown in Exhibit 3-38. When a second option -- in this example, "100 to 500m" -- is chosen in the same criteria set, a new menu appears on the right side of the screen (Exhibit 3-38) that asks for a choice among adding the new selection to the existing one, replacing the existing selection with the new one {"Overwrite"}, erasing the old selection without making a new selection, or doing nothing (in case the new selection was made in error). In this example, the **{Overwrite}** (replace) option is selected and the new criteria appear in the CURRENT SELECTION CRITERIA box, as shown in Exhibit 3-39. See **{Sort/Display Subset}** for instructions on how to create a subset based on the selected criteria.

Note on erasing. A current selection may be erased by making another selection in the same criteria set -- as described above -- and then selecting the **{Erase}** option in the menu shown in Exhibit 3-38. In this case both the current and the new selection will be erased. Any selected criteria can also be erased by returning to the **{Define/Display Subsets}** menu level, which will eliminate any selections displayed in the CURRENT SELECTION CRITERIA box.

Exhibit 3-38

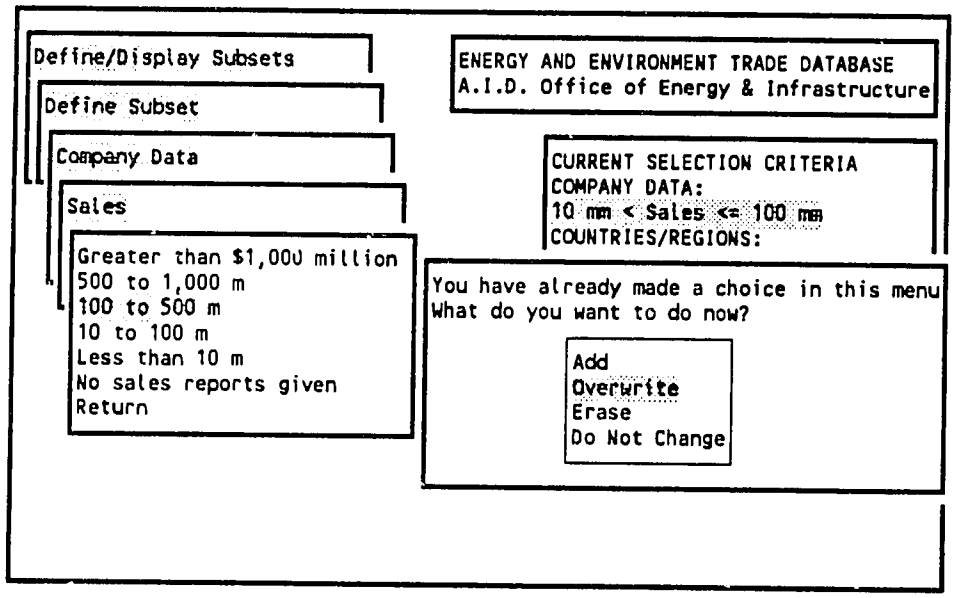
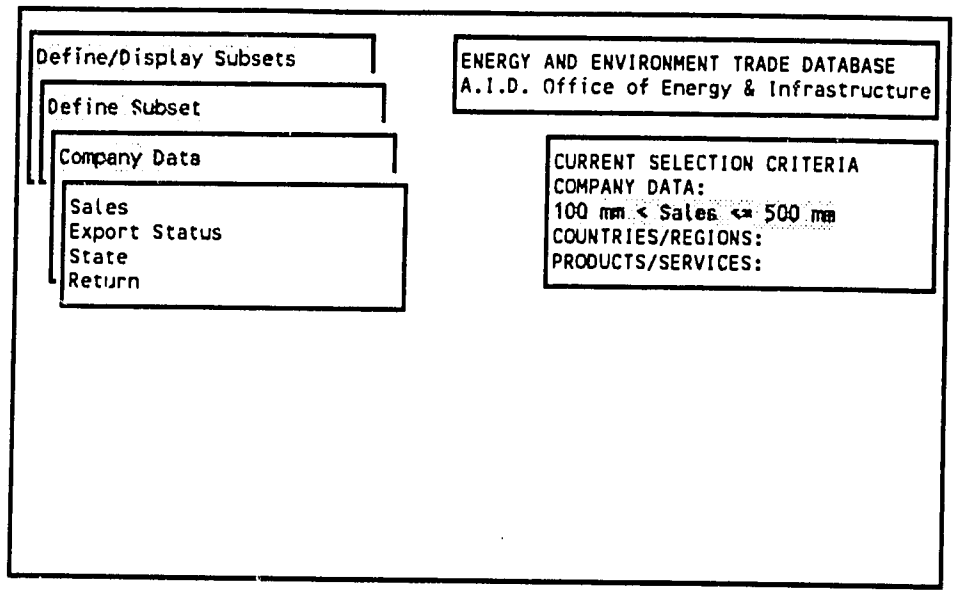


Exhibit 3-39

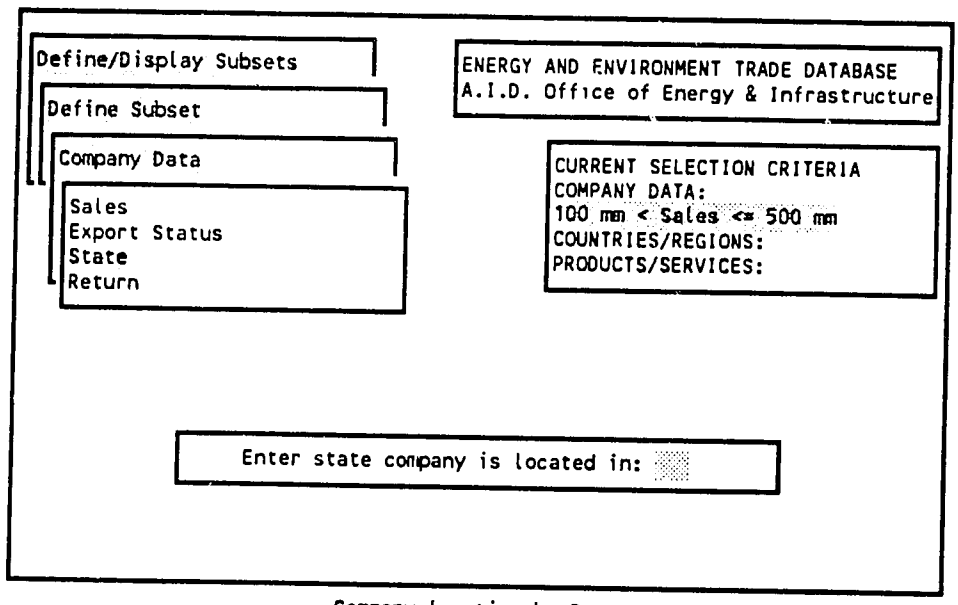


Company sales by sales range

{State} and select multiple criteria example

Almost any combination of criteria can be selected to define a subset. In this example, a location (state) criterion will be added to the sales criterion already selected in Exhibits 3-38 and 3-39. When the **{State}** option in the **{Company Data}** menu is selected, a prompt appears that asks for a state to be identified, as shown in Exhibit 3-40. At this point, the standard two-letter state abbreviation can be entered in the highlighted area, and the abbreviation for the selected state will appear in the CURRENT SELECTION CRITERIA box.

Exhibit 3-40



Company location by State

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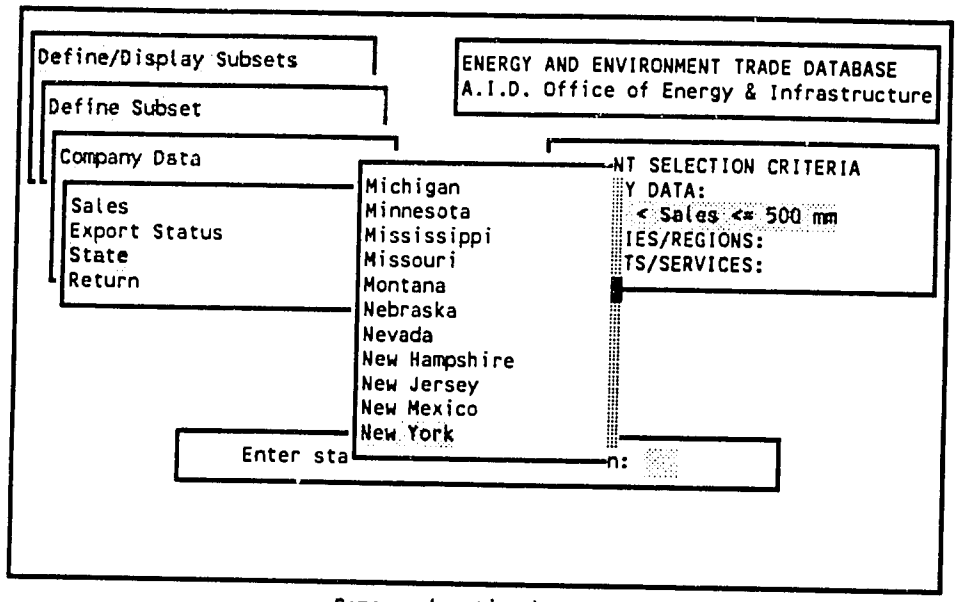
When the prompt in Exhibit 3-40 appears, the user can also press the ENTER/RETURN key instead of entering a state abbreviation. In this case, a menu of state names appears (Exhibit 3-41). The user can then scroll through the names using the arrow keys, highlight the state to be selected, and press the ENTER/RETURN key. The abbreviation for the selected state -- in this case NY -- will then appear in the CURRENT SELECTION CRITERIA box (Exhibit 3-42). There are now two company data criteria selected to define this subset.

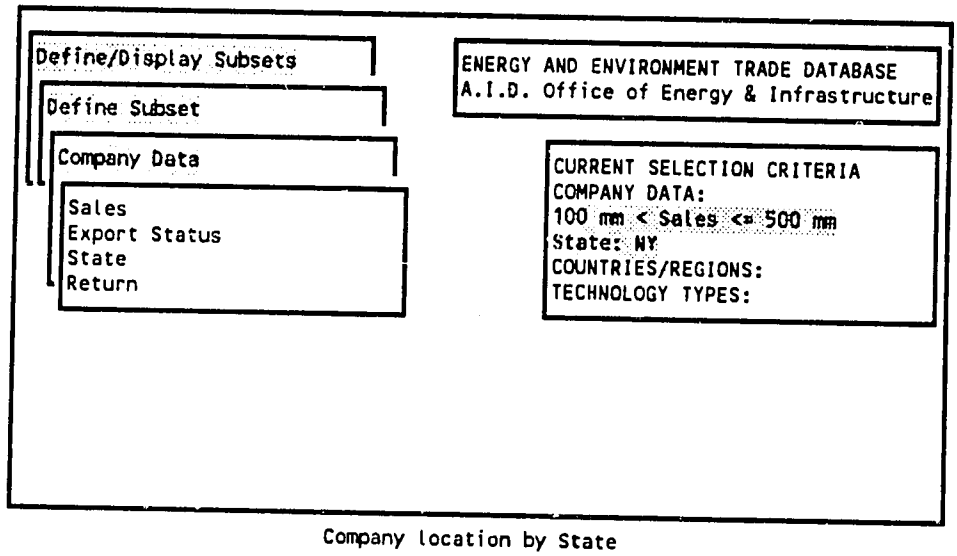
See {Sort/Display Subset} for instructions on how to create a subset based on the selected criteria.

Exhibit 3-41



Company location by State

Exhibit 3-42



Company location by State

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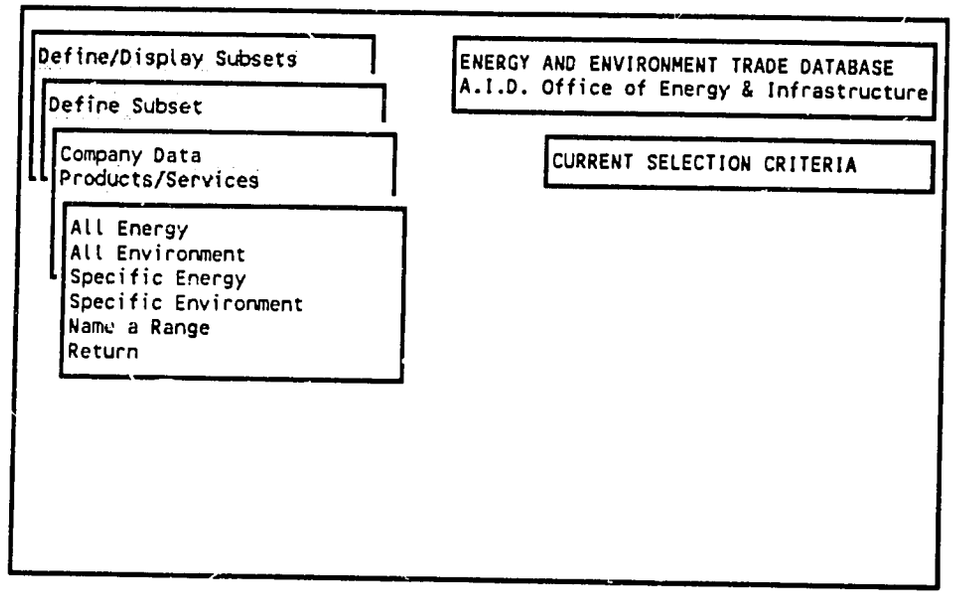
{Products/Services}

The **{Products/Services}** option in the **{Define Subset}** menu provides several ways to define subsets of companies based on the types of products and/or services that they provide. Each company in the database is coded for at least one product or service category.

When the **{Products/Services}** option is selected, the next menu shows the main selection options (Exhibit 3-43). This menu allows the user to select all energy or all environment product and service categories at once, or to select one or more specific product/service categories for defining the subset. It is also possible to define a specific range of product/service categories. Both the energy and environment categories can be selected for the same subset. See Appendix C for a complete listing of the products/services categories.

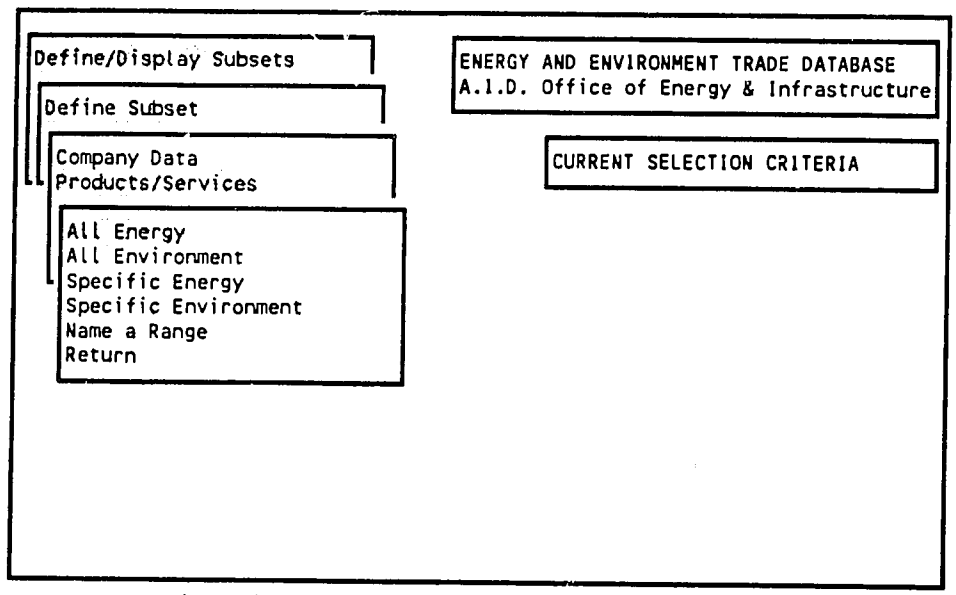
Exhibit 3-43



{All Energy}
{All Environment}

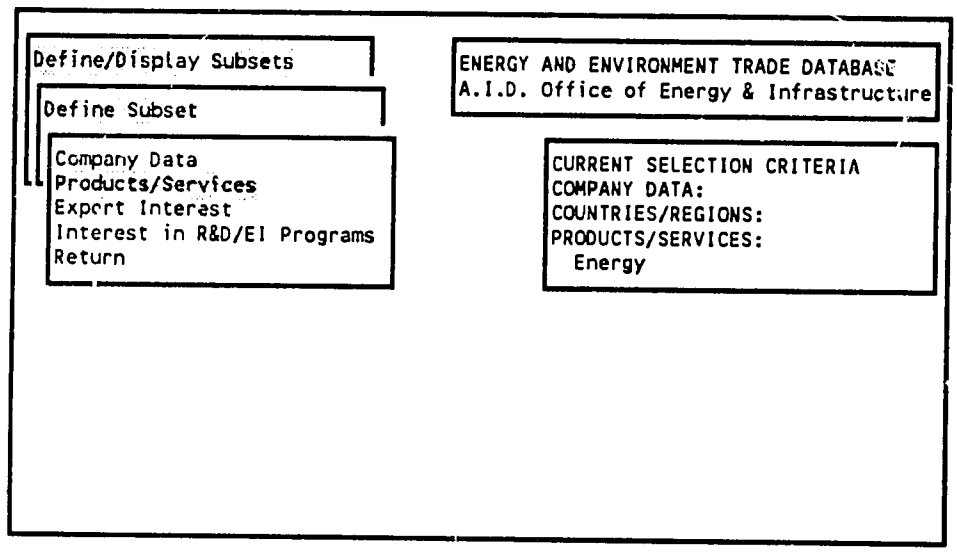
After entering the **{Products/Services}** menu, press **{All Energy}** or **{All Environment}** to automatically select all product/service categories in those areas. In the example shown in Exhibits 3-44 and 3-45, **{All Energy}** has been selected, which then appears in the CURRENT SELECTION CRITERIA box.

Exhibit 3-44



Select all energy-related product/service categories

Exhibit 3-45



{Specific Energy}
{Specific Environment}

This example illustrates the selection of one specific energy technology category. The same procedure would apply to choosing one or more environmental technology categories.

After entering the **{Products/Services}** menu, the **{Specific Energy}** option is selected. After selecting **{Specific Energy}**, the column-oriented screen shown in Exhibit 3-46 appears. This screen operates in the same way as the column-oriented display option shown in Exhibits 3-12 and 3-13, only the screen now displays technology categories rather than companies.

As shown in Exhibit 3-46, product and service technologies are categorized using an identification number (ID), an identification code (ID2), and three levels of category names, with each category name providing an additional level of detail. Pressing the right arrow key will scroll through the three category columns. For example, if "AGI1 POWER/STEAM SYSTEMS" is highlighted and the right arrow key is pressed twice, the additional subcategories will be shown (Exhibit 3-47). In this case, the code "AGI1" represents the General category of Renewable Power Systems, which is in turn part of the more general category POWER/STEAM SYSTEMS. This display also has the same column "freeze" and search features as described in the column-oriented display option (Exhibits 3-12 and 3-13).

Exhibit 3-46

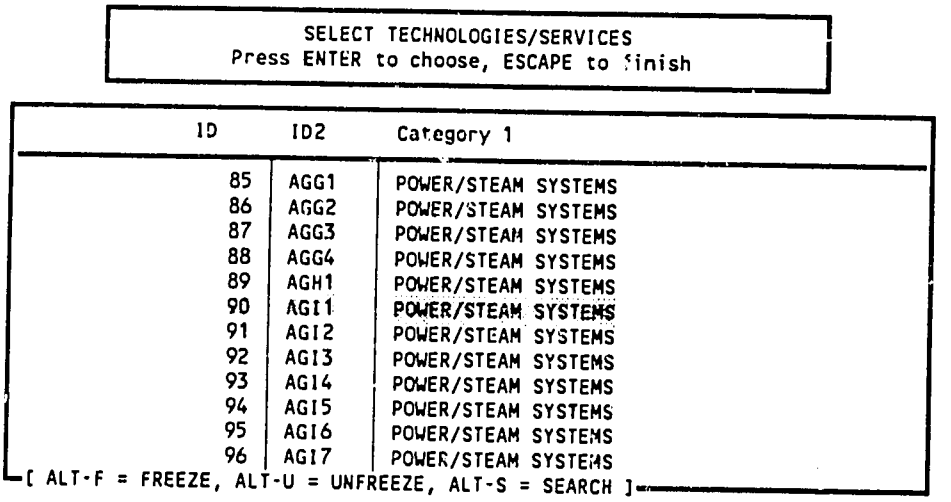
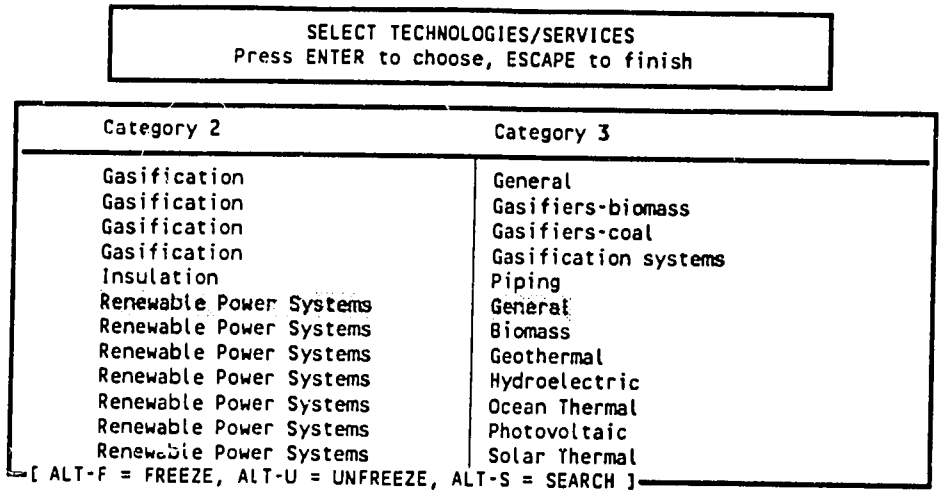


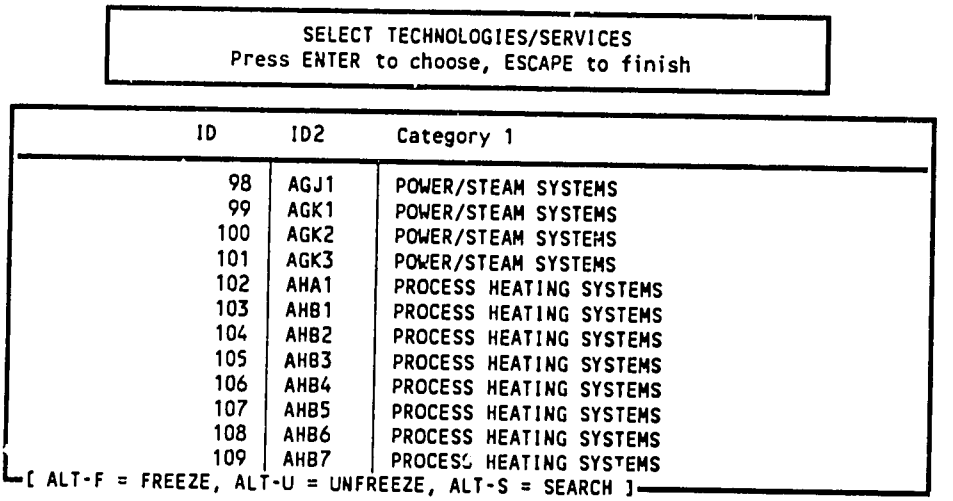
Exhibit 3-47



To designate a specific code as a selection criterion, the highlight is placed on that code line (in any column) and the ENTER/RETURN key is pressed. The selected code is then shown at the bottom of the screen after "Selection:" (Exhibit 3-48). To choose additional codes, the steps shown in Exhibits 3-46 and 3-47 should be repeated, and the additional codes will also be displayed at the bottom of the screen.

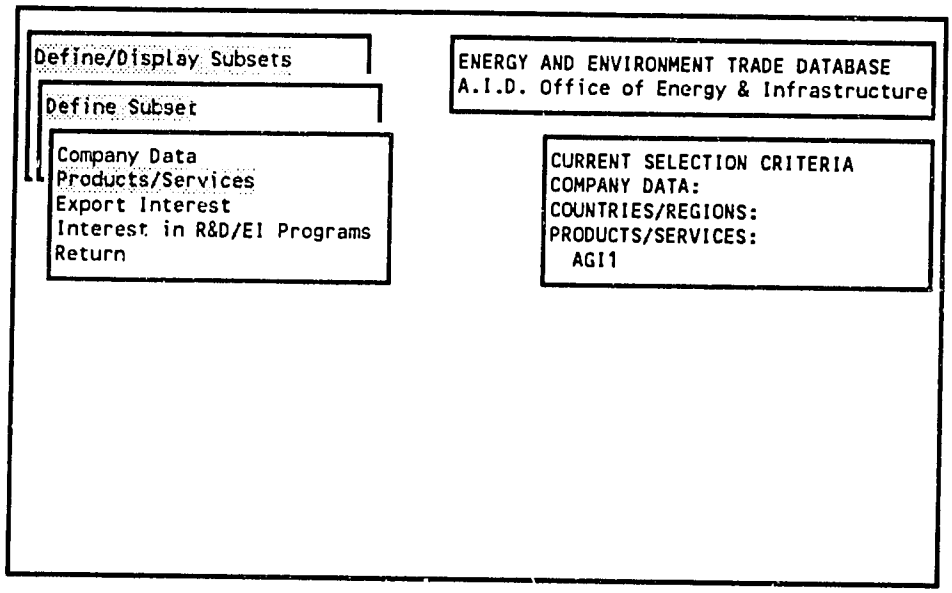
When all product/service technology code selections have been made, pressing the ESCAPE key will display the codes -- "AGI1" in the example-- under the "Technology Types:" heading in the CURRENT SELECTION CRITERIA box (Exhibit 3-49).

Exhibit 3-48



52

Exhibit 3-49

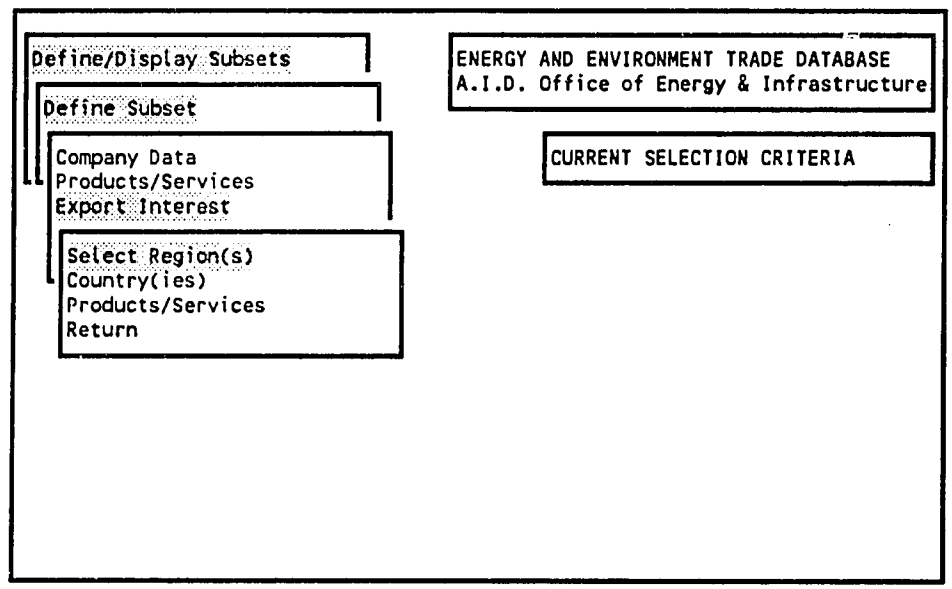

Define/Display Subsets
Define Subset
Company Data
Products/Services
Export Interest
Interest in R&D/EI Programs
Return
ENERGY AND ENVIRONMENT TRADE DATABASE
A.I.D. Office of Energy & Infrastructure
CURRENT SELECTION CRITERIA
COMPANY DATA:
COUNTRIES/REGIONS:
PRODUCTS/SERVICES:
AGI1

{Export Interest}

The database includes some information obtained from interviews with a small subset of the database companies (see Chapter 1). The **{Export Interest}** option of the **{Define Subset}** menu provides an option to define selection criteria based on information collected in these interviews, including the companies' expressed interest in exporting to a particular country or region, and products or services they want to export. However, these criteria apply only to the companies that were interviewed, not all companies in the database. This example will show the selection of a region of interest. The same general procedures would also apply to selecting specific countries of interest.

When the **{Export Interest}** option is selected, one of the choices in the next menu is **{Select Region(s)}** (Exhibit 3-50).

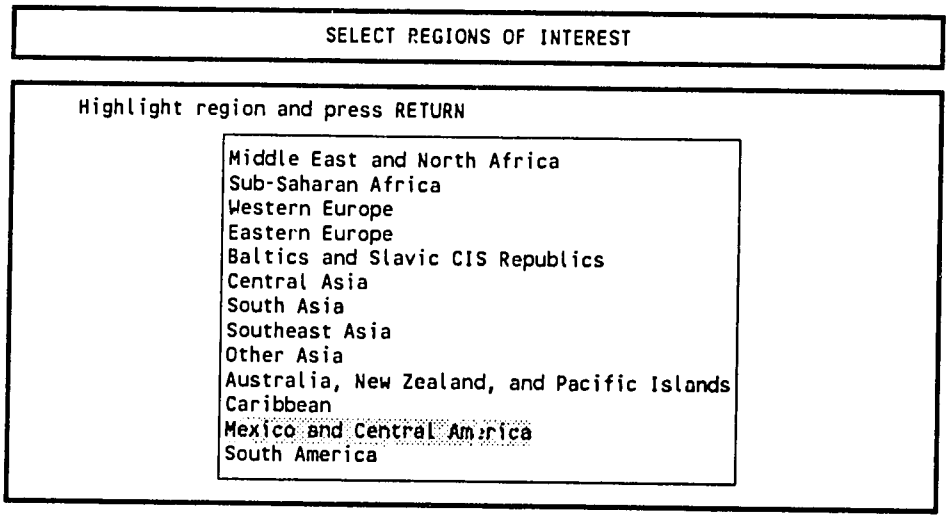
Exhibit 3-50



Company export interest by region

After **{Select Region(s)}** is chosen, the program presents a light-bar menu of the regions of the world, shown in Exhibit 3-51. Scroll down to see all regions. In this menu, the up and down arrow keys are used to highlight the region choice, the ESCAPE key is used to exit the menu, and the ENTER/RETURN key is used to select a region. Alternatively, typing the first letter of a region name will cause the highlight to move to that region, but the ENTER/RETURN key must still be used to select the region. In this example, the Mexico and Central America region is selected. To erase a selected region, the region should be highlighted a second time and the ENTER/RETURN key pressed. The countries assigned to each region are shown in Appendix F.

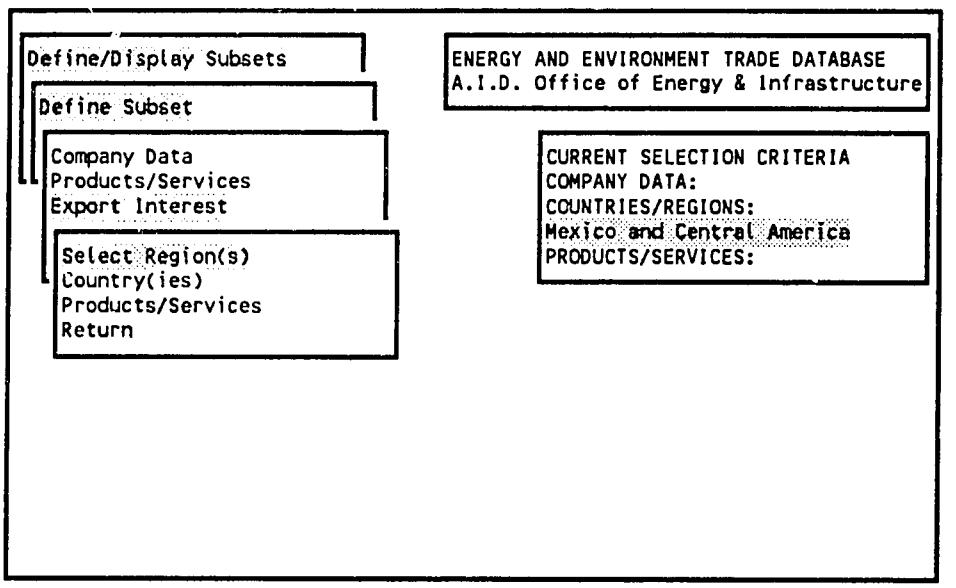
Exhibit 3-51



After a region is selected by pressing the ENTER/RETURN key, the screen returns to the **{Export Interest}** menu, and the name of the selected region appears under the "Countries/Regions:" heading of the CURRENT SELECTION CRITERIA box, as shown in Exhibit 3-52.

To select additional regions, the **{Select Region(s)}** option should be selected again. The query menu shown earlier in Exhibit 3-38 will appear, and the "Add" option should be chosen. The region list menu then appears with the current selection shown at the bottom of the screen. Another region can then be highlighted and, after pressing the ENTER/RETURN key, it will also appear in the CURRENT SELECTION CRITERIA box.

Exhibit 3-52



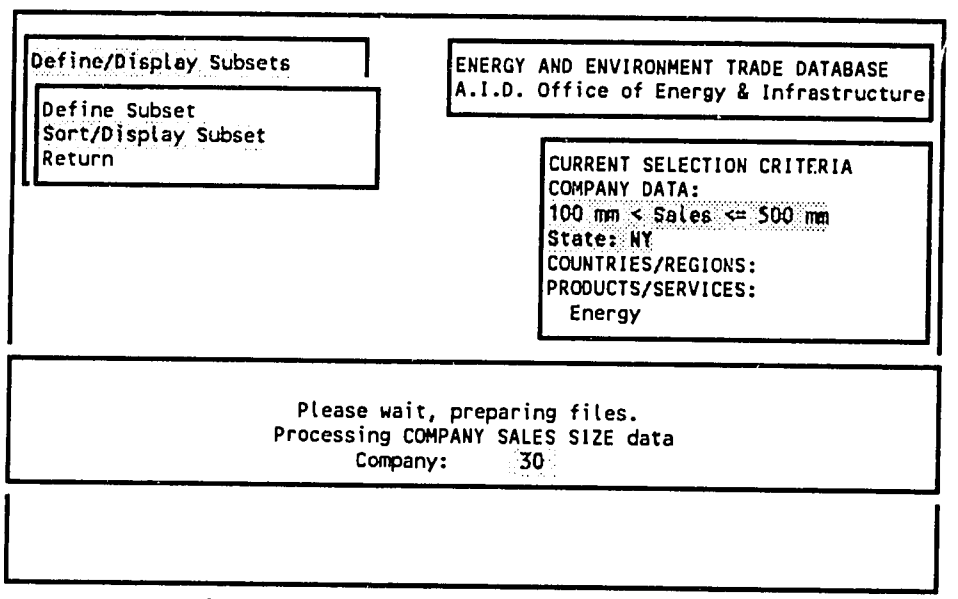
Company export interest by region

{Sort/Display Subset}

Note: the **{Sort/Display Subset}** menu can only be entered after a set of criteria have been selected through the **{Define Subset}** menus. After selecting the desired subset criteria, the process of sorting the database to extract the companies that meet the designated criteria is started by returning to the **{Define/Display Subsets}** menu and selecting the **{Sort/Display Subset}** option. For the following example, a set of three criteria that were used in previous examples has been chosen.

After selecting the **{Sort/Display Subset}** option, the program will search the data to find companies matching the subset specifications. While the search continues, several messages will appear in the middle of the screen, such as the one shown in Exhibit 3-53. These messages keep the user informed of the progress of the sort, which can take up to several minutes, depending on the number and type of criteria selected and the speed of the computer being used. The user can cancel the query and return to the menu by pressing the ESCAPE key.

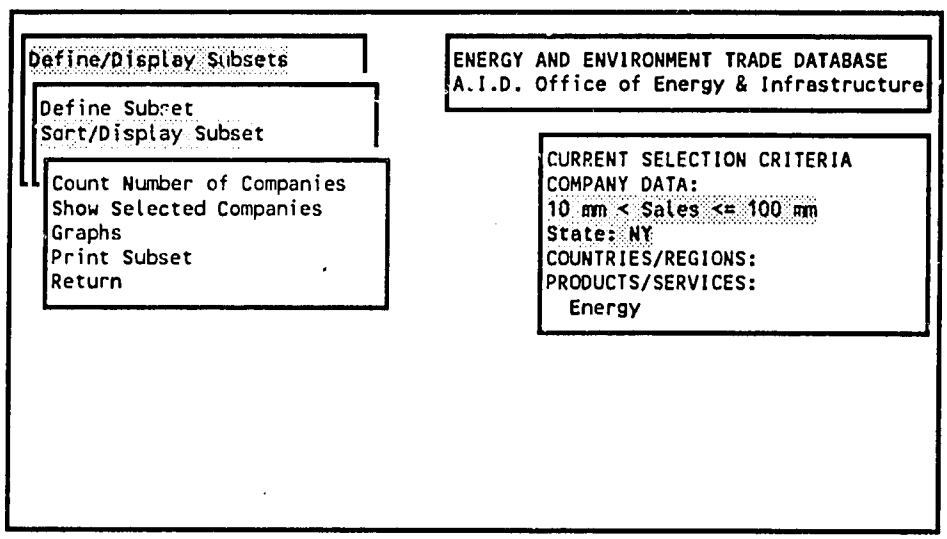
Exhibit 3-53



If the program finds companies that fit the criteria of the specified subset, the **{Sort/Display Subset}** submenu shown in Exhibit 3-54 will be displayed. If the program does not find any companies in the specified set, it will notify the user and return to the **{Define Subset}** menu.

The options available from this menu are similar to those described in the **{View Company Data}** option of the main menu.

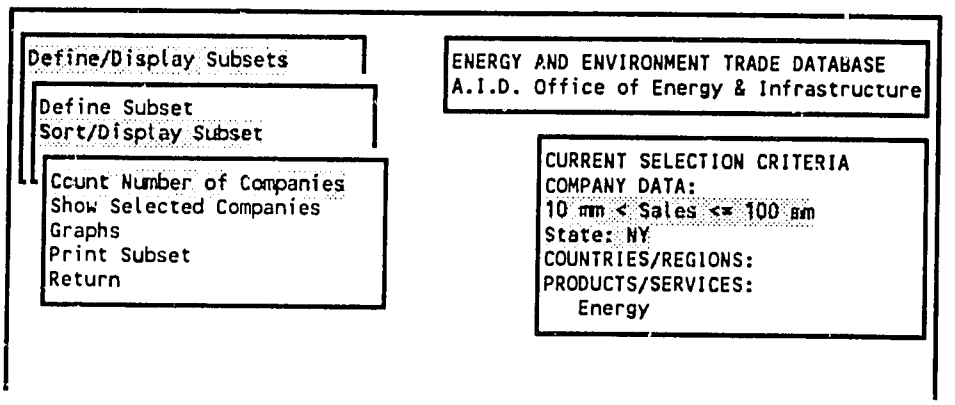
Exhibit 3-54



{Count Number of Companies}

The first option in the **{Sort/Display}** menu displays a count of the number of companies that meet the specified subset criteria, as shown in Exhibit 3-55).

Exhibit 3-55




```
Number of companies in current set: 20

Hit any key to continue.
```

{Show Selected Companies}

The second option in the **{Sort/Display Subset}** is **{Show Selected Companies}**, which presents company information in the same column-oriented or full-screen display formats illustrated in Exhibits 3-7 through 3-13). The procedures for selecting and moving around in those displays are also the same. However, in this sequence, there is an intermediate step regarding alphabetical order. When the **{Show Selected Companies}** option is selected, a prompt appears that asks if the data should be sorted alphabetically by company (see Exhibit 3-56). If "N" for No is selected, the data are presented in order of company database ID number. Selecting "Y" for Yes instructs the program to sort the data alphabetically by company name. This step is inserted in the program because alphabetical sorting of a subset of company names can significantly increase processing time. In the example, the Yes option was selected. The alphabetical sort is complete when the highlight cursor reappears on the screen shown in Exhibit 3-57.

Exhibit 3-56

```
Do you want to see the data sorted alphabetically by company? (Y/N)
(Warning: answering YES will significantly slow down the system): Y
```

After sorting the companies based on the answer to the question about alphabetizing (Exhibit 3-56), a column-oriented display screen appears showing the companies in the specified alphabetical or ID number order (Exhibit 3-57). (This screen has the same cursor movement and searching functions shown in Exhibits 3-12 and 3-13.) However, unlike the column-oriented display available through the **{View Company Data}** menus, only three columns are available for viewing in this option: ID Number, Company Name, and Division Name.

Pressing ESCAPE when in this screen will return the user to the **{Show Selected Companies}** menu; pressing the ENTER key will select the highlighted company to show its data in the full-screen display option.

Exhibit 3-57

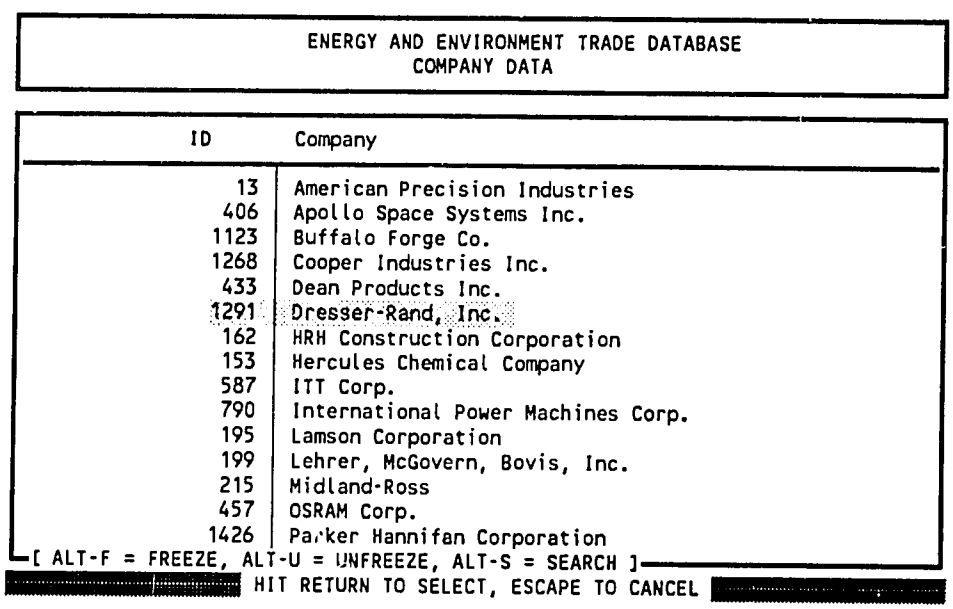


Exhibit 3-58 shows the first screen of the full-screen display for one of the subset companies. The data available for viewing and the procedures for moving through this full-screen display format are the same as those described for Exhibits 3-7 through 3-11 and 3-17 through 3-20.

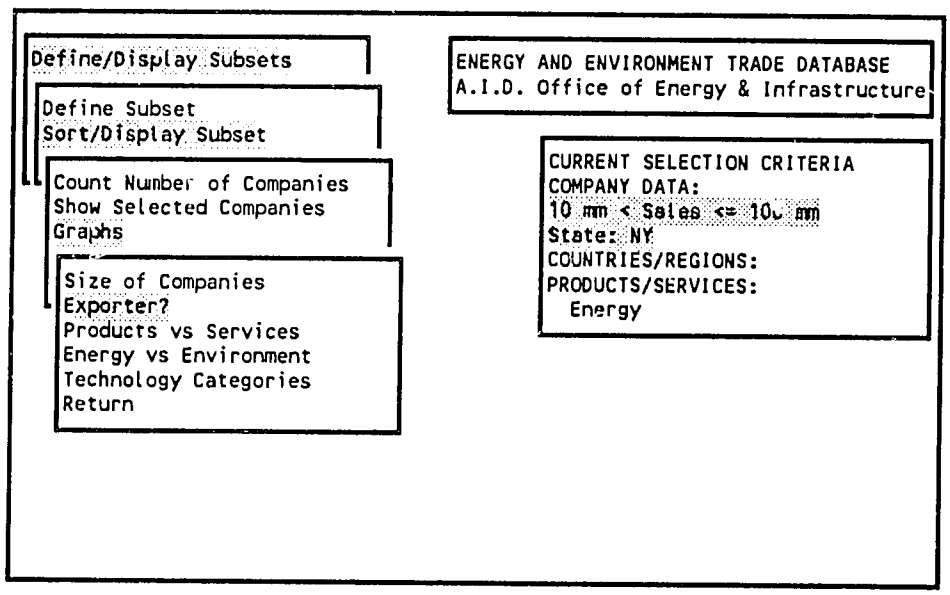
Exhibit 3-58

```
ENERGY AND ENVIRONMENT TRADE DATABASE
COMPANY DATA

1291     Dresser-Rand, Inc.

Division Steam Turbine Motor and Generator Div.
 Address 37 Coats St.

    City Wellsville              State NY  Zipcode 14895

   Phone 716-593-1234          Fax

   Date this record last edited 03/10/92

   Temporary field: N

   Was this company surveyed? (Y/N)
```

{Graphs}

The **{Sort/Display Subset}** menu has its own graph and print menus (see Exhibit 3-59). The **{Graph}** options under this menu are similar but not identical to the **{Graphs}** menu that is accessed through the **{View Company Data}** menu. This **{Graphs}** option will only use data for the subset companies as the basis for all calculations (the graph options from the main menu use the entire database for calculations). Also, only some of the **{Graphs}** options will be relevant, depending on the selection criteria used. For example, since "All Energy" was one of the selection criteria in the example, the **{Graphs}** menu option **{Energy vs Environment}** would likely not provide much useful information, since companies that only provided environmental products or services were excluded from the subset by one of the selection criteria. Note: the graphs cannot be printed directly from the TTD program.

Exhibit 3-59



If the {**Exporter?**} option is selected from the menu, the program calculates the number of companies in the set that export products or services. Exhibit 3-60 shows the results of the calculation. If the user presses "P," a pie chart will be drawn on-screen using the data shown; pressing "B" displays a bar chart of the same data. If the user presses ESCAPE, the program will return to the menu. Pressing any key from the graph display will erase the graph and return to the menu.

Exhibit 3-60

```
Export Status
Number of Companies (Set/Total): 20/1508

Export        =     16
Do not export =      4




Hit P to see a PIE chart, B to see a BAR chart.
```

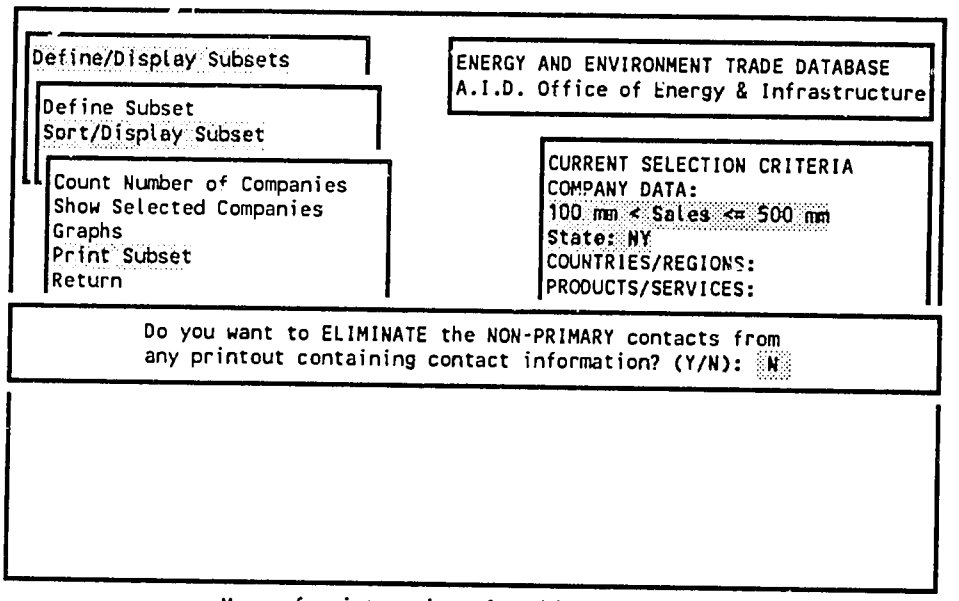
{Print Subset} and Mailing Labels Option

The **{Print Subset}** menu from the **{Sort/Display Subset}** menu allows a variety of formats to be printed. Most of the menu options and procedures under this menu are the same as for the **{Print}** menu that is accessed through the **{View Company Data}** option of the main menu (Exhibits 3-24 through 3-32), except that the **{Print Subset}** menu only prints information for the companies in the selected subset.

The first prompt after selecting the **{Print}** option is a question about "Non-primary contacts" (Exhibit 3-61). For each company in the database, there may be several contacts -- trade representatives, officers, marketing representatives, etc. For each company, at least one person has been designated as the "primary" contact. This is the person whose name goes on mailing labels, for example. If a print option that includes contact information is chosen, the program can either print data only for the primary contact, or it can print data on all contacts.

A "T" for True or "Y" for Yes should be selected if only primary contacts are to be printed. A "F"-False or "N"-No response will print all contacts in any relevant print option.

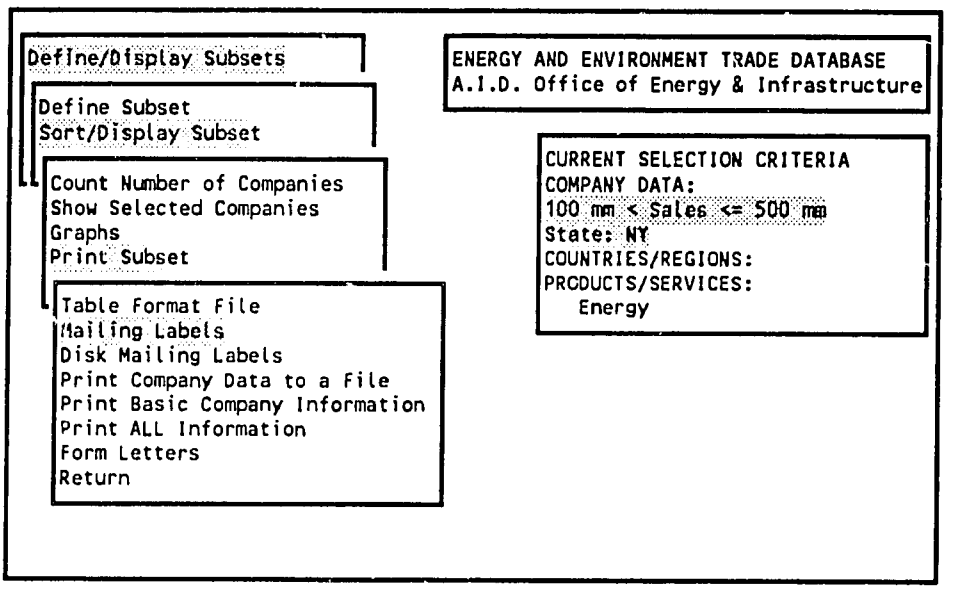
Exhibit 3-61



Menu of print options for this selection

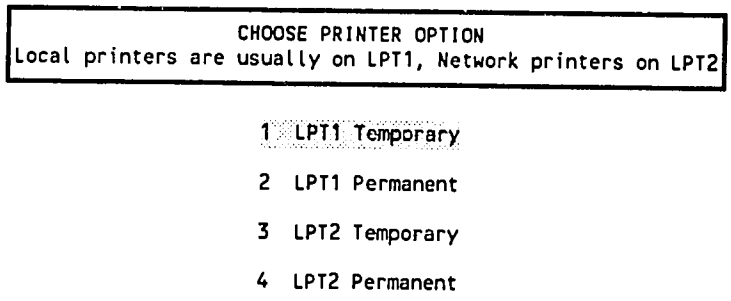
The print menu under the **{Sort/Display Subset}** menu (Exhibit 3-62) looks the same as the print menu under the **{View Company Data}**. This example will use the **{Mailing Labels}** option.

Exhibit 3-62



After choosing the **{Mailing Labels}** option from the **{Print}** menu, a printer port must be selected (Exhibit 3-63). The example highlights {LPT1 Temporary}. A "port" is the physical location of the cable from the computer to the printer, and will depend on the specific hardware setup of each user. The program can print on ports LPT1 and LPT2. The "Temporary" options allow the user to specify a different printer port each time a printing routine is selected. The "Permanent" options allow the user to specify a port once, and have it apply to all printing selections made during the active session -- the program does not remember port selections after the user exits the program.

Exhibit 3-63



Since the set of companies to be printed has already been defined by the subset criteria, after specifying the printer port, the program is ready to print the report (Exhibit 3-64). If the user presses "Q" (for Quit), the program will return to the menu. Pressing any other key will instruct the program to continue with printing the mailing label information on the subset companies.

Exhibit 3-64

```
Ready to print this report.

Press any Q to cancel, any other key to begin.
```

When printing labels, as selected in the example, the program will print one or more test labels followed by a pause to allow the user to align the label paper in the printer. Exhibit 3-65 shows the screen output and prompts for these test labels. Answering "N" to the "Do you want more samples?" question will instruct the program to commence printing the labels using the selected subset of companies.

Exhibit 3-65

```
                Printing, please wait .....
****************************************
****************************************
****************************************
****************************************
****************************************
****************************************
****************************************
****************************************

Do you want more samples? (Y/N)
****************************************
****************************************
```

ENERGY AND ENVIRONMENT TRADE DATABASE USER MANUAL

APPENDIX A

PROGRAM INSTALLATION AND SETUP

APPENDIX A: PROGRAM INSTALLATION AND SETUP

The Energy and Environment Trade Database will automatically run on most newer IBM-compatible personal computers with no changes. The following sections provide a guide for evaluating the suitability of the computer equipment for running the database, instructions for configuring the computer, and instructions for installing and starting the database.

Computer Requirements

A minimum of 640,000 bytes of random access memory (RAM) is recommended, with 520,000 available for running the program.[1] The program will take advantage of any available expanded memory to speed up its operations. If the database is installed on a single computer (as opposed to a network installation), a hard disk with at least 5 megabytes (MB) of free space[2] is needed. As of the writing of this manual, the database takes approximately 5 MB of space on a hard disk; as the program grows, it will require more space. The vast majority of the database operates in character-mode -- meaning that it can be displayed on any standard personal computer screen. In order to display graphs, a VGA or Hercules-compatible graphics screen driver is required.[3] The database program will automatically configure itself to run on a color or black and white screen.

Printer Requirements

The current database program is set up to support HP Laserjet printers or any laser printers that can emulate an HP Laserjet. The mailing labels print option can work with any dot matrix printer.

Installation and Setup

From a software standpoint, the database is self-sufficient, assuming that the computer has been set up according to commonly-used standards. The CONFIG.SYS and AUTOEXEC.BAT files[4] contain information that the disk operating system (DOS) uses to configure itself. Both files are read by DOS when the computer is turned on. Many programs, including the database, need DOS to be able to open a certain number of buffers and files; the CONFIG.SYS file usually contains instructions to tell DOS how many of each to allow. The database program needs a minimum of 20 buffers and 25 files. To accomplish this, the following two lines should be included in the CONFIG.SYS file:[5]

---

[1] Most computers are configured with a minimum of 640,000 bytes of RAM. The program may function adequately on a computer with less memory; it will present the user with an error message if it does not find enough memory to operate.

[2] If the database is installed on a network, a hard disk is not required.

[3] CGA screens have not been tested with the database's graphics program.

[4] These files are unique to each computer and are not included with the database files.

[5] If these lines already exist in the CONFIG.SYS file, and they allocate a larger number of files and buffers, no changes need to be made.

BUFFERS=20
FILES=25

The database is a free-standing program created with Clipper 5.01, a database language compiler. In order to tell the database program that the FILES line has been modified in the CONFIG.SYS file, the following line needs to be added to the AUTOEXEC.BAT file:

SET CLIPPER=F25

This command sets an environment variable that the database program can read. The SET CLIPPER=F25 command can also be entered directly at a DOS prompt before starting the database program.

Finally, the database program will operate much faster if a disk caching program is installed through either the AUTOEXEC.BAT or CONFIG.SYS. Since cache programs are commercial software, they must be purchased and installed using their own unique instructions.

It is advisable to install the database program and data files in a directory of their own on the hard disk. To create a directory, type the following (substituting any appropriate drive and directory for the underlined text):

MD C:\TRADE

To install the database, copy the database files from a floppy disk to this new directory with the following command (again substituting the appropriate drives and directories):[6]

COPY A:*.* C:\TRADE

[6] If the files are compressed, refer to the instructions that accompany the diskette(s) with the database.

ENERGY AND ENVIRONMENT TRADE DATABASE USER MANUAL

APPENDIX B

DATABASE PROGRAM FILE STRUCTURE

APPENDIX B: DATABASE PROGRAM FILE STRUCTURE

The Energy and Environment Trade Database is composed of several files, including data files, indexes, label files, report formats, and the program itself (see Exhibit B-2 for a complete list of files).

Program: The vast majority of the database program is contained in one file, TRADE.EXE, and was created using Clipper 5.01, a database programming language and compiler Two additional program files are used to draw pie charts (MAKE_PIE.EXE) and bar charts (MAKEBARK.EXE). These programs were written in C.

Data: The database data are contained in six dBase-compatible data files; these are shown on the left side of Exhibit B-1 (and have "DBF" extensions). COMPANY.DBF contains the primary data that define each company in the database, such as the company name, address, and parent company. (Appendix E lists the data contained in COMPANY.DBF.) CONTACTS.DBF contains the name, title, and phone and fax numbers (among other things) of all of the contacts for each of the companies. The other data files are simple in structure, each containing ID numbers of companies in the COMPANY.DBF file and ID numbers of reference data in the "reference files" shown on the right side of Exhibit B-1. These "linking" files are used to connect one company with many different technologies, countries, and regions to indicate what technologies they produce and which countries and regions they are interested in exporting to. The "Reference" files contain fixed sets of data used by the program to provide descriptive names to the ID numbers contained in these linking data files, as explained below.

COUNTRY.DBF contains a list of all the countries in the world and associated country ID numbers. INTRST_C.DBF contains company ID numbers and country ID numbers to provide the link between a company and the countries it is interested in exporting to.

Similarly, REGION.DBF contains a list of all the regions in the world and associated region ID numbers. INTRST_R.DBF contains company ID numbers and region ID numbers to provide the link between a company and the regions it is interested in exporting to.

PROD_CAT.DBF (for PRODuct CATegories) contains the products and services taxonomy shown in Appendix C. Each product or service is assigned a unique ID code. PRODUCE.DBF contains company ID numbers and technology codes to provide the link between a company and the products it produces. INTRST_P.DBF contains company ID numbers and technology codes to provide the link between a company and the products it is interested in exporting (data gathered from interviews).

Indices: Each of the database data files has one or more index files associated with it. These files all end in "NTX." The index files are used to sort the data, with each file representing a different type of sort -- alphabetical, numeric, date, etc.

Report Formats: The database uses three distinct methods of printing data: 1) format files (ending in FRM), 2) labels files (ending in LBL), and 3) program modules incorporated in TRADE.EXE. The format files are used by the database program to print column-oriented reports. The labels files are used to print mailing labels. The instructions for all other reports are contained in TRADE.EXE.

Exhibit B-1 - Technology & Trade Database

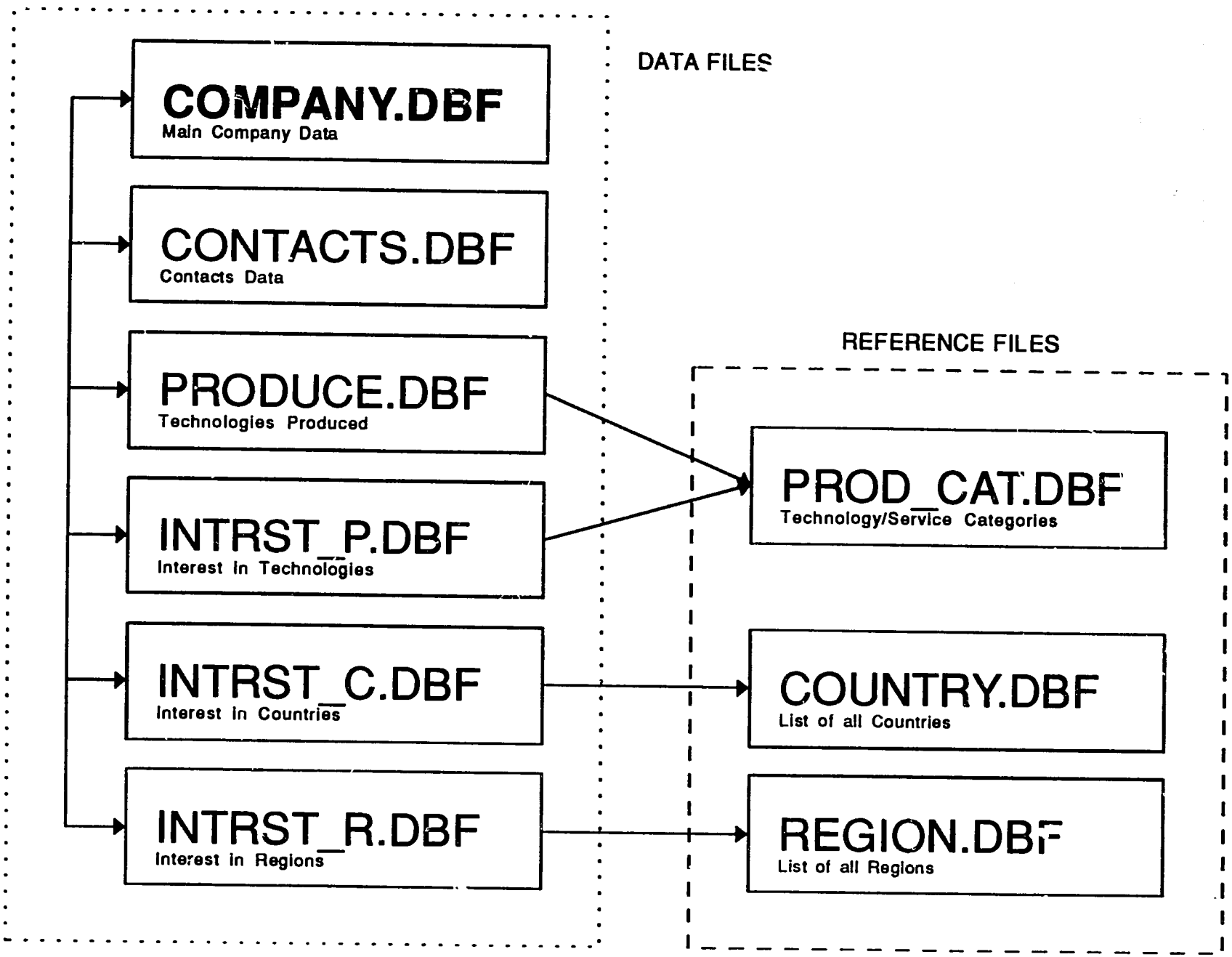


EXHIBIT B-2

TRADE DATABASE FILES

DATA FILES

COMPANY DBF
CONTACTS DBF
COUNTRY DBF
EXPORT_C DBF
EXPORT_R DBF
IDNUMBRS DBF
INTRST_C DBF
INTRST_P DBF
INTRST_R DBF
LOCKFILE DBF
PROD_CAT DBF
PRODUCE DBF
PRODUCTS DBF
REGION DBF
TECHS DBF

PROGRAM FILES

MAKE_PIE EXE
MAKEBARK EXE
TRADE EXE

REPORT FORMAT FILES

CC_PRIMA FRM
CC_SHORT FRM
CN_SHORT FRM
CO_INTRS FRM
CO_PARNT FRM
CO_PRODS FRM
CO_SHORT FRM
NOCONTAC FRM
PROD_CAT FRM
PRODCODE FRM

LABELS FILE

CONTACT LBL

INDEX FILES

C_ID NTX
C_LAST NTX
CN_ID NTX
CN_RID NTX
CO_DATE NTX
CO_ID NTX
CO_NAME NTX
CO_STATE NTX
CONT_ID NTX
COUNTRY NTX
EC_CID NTX
EC_ID NTX
ER_ID NTX
ER_RID NTX
IC_CID NTX
IC_ID NTX
IP_ID NTX
IP_PID NTX
IP_PIDC NTX
IR_ID NTX
IR_RID NTX
P_ID NTX
P_IDC NTX
P_IDCV NTX
PRDS_PID NTX
PROD_ID NTX
PROD_P NTX
PROD_PC NTX
PRODS_ID NTX
R_ID NTX
R_REGION NTX
T_CAT NTX
T_ID NTX

ENERGY AND ENVIRONMENT TRADE DATABASE USER MANUAL

APPENDIX C

PRODUCT/SERVICE CATEGORIES AND CODES

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID Code	Category 1	Category 2	Category 3
1 AAA1	ELECTRICAL SYSTEMS	General	General
2 AAB1	ELECTRICAL SYSTEMS	Induction generators	General
3 AAC1	ELECTRICAL SYSTEMS	Power factor correction devices	General
4 AAD1	ELECTRICAL SYSTEMS	Power line conditioning	General
5 AAE1	ELECTRICAL SYSTEMS	Synchronous drives	General
6 AAF1	ELECTRICAL SYSTEMS	Transformers	General
7 ABA1	ENERGY STORAGE SYSTEMS	General	General
8 ABB1	ENERGY STORAGE SYSTEMS	Battery storage	General
9 ABC1	ENERGY STORAGE SYSTEMS	Compressed air energy storage	General
10 ABD1	ENERGY STORAGE SYSTEMS	Pumped storage hydro	General
11 ABE1	ENERGY STORAGE SYSTEMS	Thermal storage	General
12 ACA1	HVAC/REFRIGERATION SYSTEMS	General	General
13 ACB1	HVAC/REFRIGERATION SYSTEMS	Air Conditioners	General
14 ACB2	HVAC/REFRIGERATION SYSTEMS	Air Conditioners	General
15 ACB3	HVAC/REFRIGERATION SYSTEMS	Air Conditioners	Central
16 ACC1	HVAC/REFRIGERATION SYSTEMS	Building insulation	Room
17 ACD1	HVAC/REFRIGERATION SYSTEMS	Chillers	General
18 ACD2	HVAC/REFRIGERATION SYSTEMS	Chillers	General
19 ACD3	HVAC/REFRIGERATION SYSTEMS	Chillers	Absorption
20 ACE1	HVAC/REFRIGERATION SYSTEMS	Dessicant/dehumidification	Compression/Engine
21 ACF1	HVAC/REFRIGERATION SYSTEMS	Heat rejection systems	General
22 ACF2	HVAC/REFRIGERATION SYSTEMS	Heat rejection systems	General
23 ACF3	HVAC/REFRIGERATION SYSTEMS	Heat rejection systems	Cooling Towers
24 ACG1	HVAC/REFRIGERATION SYSTEMS	Refrigeration systems	Condensers
25 ACH1	HVAC/REFRIGERATION SYSTEMS	Space Heating	General
26 ACH2	HVAC/REFRIGERATION SYSTEMS	Space Heating	Conventional
27 ACH3	HVAC/REFRIGERATION SYSTEMS	Space Heating	Solar
28 ACI1	HVAC/REFRIGERATION SYSTEMS	Ventilation	General
29 ACJ1	HVAC/REFRIGERATION SYSTEMS	Water Heating	General
30 ACJ2	HVAC/REFRIGERATION SYSTEMS	Water Heating	Conventional
31 ACJ3	HVAC/REFRIGERATION SYSTEMS	Water Heating	Solar
32 ACK1	HVAC/REFRIGERATION SYSTEMS	Window/Window Coatings	General
33 ACK2	HVAC/REFRIGERATION SYSTEMS	Window/Window Coatings	Low-emissivity coatings
34 ACK3	HVAC/REFRIGERATION SYSTEMS	Window/Window Coatings	Other
35 ADA1	LIGHTING	General	General
36 ADB1	LIGHTING	Fluorescent Ballasts	General
37 ADC1	LIGHTING	Fluorescent Lamps	General
38 ADD1	LIGHTING	Incandescent/Halogen Lamps	General

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID Code	Category 1	Category 2	Category 3
39 ADE1	LIGHTING	HID Lamps	General
40 ADF1	LIGHTING	Fixtures/Reflectors	General
41 ADG1	LIGHTING	Solar	General
42 AEA1	LIQUID, GAS, AIR HANDLING/PROCESSING	General	General
43 AEB1	LIQUID, GAS, AIR HANDLING/PROCESSING	Compressors	General
44 AEB2	LIQUID, GAS, AIR HANDLING/PROCESSING	Compressors	Centrifugal
45 AEB3	LIQUID, GAS, AIR HANDLING/PROCESSING	Compressors	Reciprocating
46 AEB4	LIQUID, GAS, AIR HANDLING/PROCESSING	Compressors	Screw
47 AEC1	LIQUID, GAS, AIR HANDLING/PROCESSING	Distillation	General
48 AED1	LIQUID, GAS, AIR HANDLING/PROCESSING	Evaporation	General
49 AEE1	LIQUID, GAS, AIR HANDLING/PROCESSING	Fans/Blowers	General
50 AEE2	LIQUID, GAS, AIR HANDLING/PROCESSING	Fans/Blowers	Fans
51 AEE3	LIQUID, GAS, AIR HANDLING/PROCESSING	Fans/Blowers	Blowers
52 AEF1	LIQUID, GAS, AIR HANDLING/PROCESSING	Pumps	General
53 AEG1	LIQUID, GAS, AIR HANDLING/PROCESSING	Water Pumping	General
54 AEG2	LIQUID, GAS, AIR HANDLING/PROCESSING	Water Pumping	Conventional
55 AEG3	LIQUID, GAS, AIR HANDLING/PROCESSING	Water Pumping	Wind/Photovoltaic
56 AFA1	MOTORS/DRIVES	General	General
57 AFB1	MOTORS/DRIVES	Engine Generators	General
58 AFB2	MOTORS/DRIVES	Engine Generators	High speed diesel/gas
59 AFB3	MOTORS/DRIVES	Engine Generators	Low speed diesel
60 AFC1	MOTORS/DRIVES	Motor Drives	General
61 AFC2	MOTORS/DRIVES	Motor Drives	High-efficiency electric motors
62 AFC3	MOTORS/DRIVES	Motor Drives	Variable speed drives
63 AFC4	MOTORS/DRIVES	Motor Drives	Synchronous drives
64 AFC5	MOTORS/DRIVES	Motor Drives	Other drives
65 AGA1	POWER/STEAM SYSTEMS	General	General
66 AGB1	POWER/STEAM SYSTEMS	Boilers	General
67 AGB2	POWER/STEAM SYSTEMS	Boilers	Gas/oil-field erected
68 AGB3	POWER/STEAM SYSTEMS	Boilers	Gas/oil-packaged
69 AGB4	POWER/STEAM SYSTEMS	Boilers	Coal
70 AGB5	POWER/STEAM SYSTEMS	Boilers	Fluid bed
71 AGB6	POWER/STEAM SYSTEMS	Boilers	Multifuel
72 AGB7	POWER/STEAM SYSTEMS	Boilers	Wood/biomass
73 AGB8	POWER/STEAM SYSTEMS	Boilers	Boiler additives
74 AGC1	POWER/STEAM SYSTEMS	Cogeneration	General
75 AGC2	POWER/STEAM SYSTEMS	Cogeneration	Combustion turbine
76 AGC3	POWER/STEAM SYSTEMS	Cogeneration	Boiler/steam turbine

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID Code	Category 1	Category 2	Category 3
77 AGC4	POWER/STEAM SYSTEMS	Cogeneration	Engine/packaged
78 AGD1	POWER/STEAM SYSTEMS	Condensate Return Systems	General
79 AGE1	POWER/STEAM SYSTEMS	Cooling Towers	General
80 AGE2	POWER/STEAM SYSTEMS	Cooling Towers	Wet
81 AGE3	POWER/STEAM SYSTEMS	Cooling Towers	Dry
82 AGF1	POWER/STEAM SYSTEMS	Fuel Additives	General
83 AGF2	POWER/STEAM SYSTEMS	Fuel Additives	Coal
84 AGF3	POWER/STEAM SYSTEMS	Fuel Additives	Oil
85 AGG1	POWER/STEAM SYSTEMS	Gasification	General
86 AGG2	POWER/STEAM SYSTEMS	Gasification	Gasifiers-biomass
87 AGG3	POWER/STEAM SYSTEMS	Gasification	Gasifiers-coal
88 AGG4	POWER/STEAM SYSTEMS	Gasification	Gasification systems
89 AGH1	POWER/STEAM SYSTEMS	Insulation	Piping
90 AGI1	POWER/STEAM SYSTEMS	Renewable Power Systems	General
91 AGI2	POWER/STEAM SYSTEMS	Renewable Power Systems	Biomass
92 AGI3	POWER/STEAM SYSTEMS	Renewable Power Systems	Geothermal
93 AGI4	POWER/STEAM SYSTEMS	Renewable Power Systems	Hydroelectric
94 AGI5	POWER/STEAM SYSTEMS	Renewable Power Systems	Ocean Thermal
95 AGI6	POWER/STEAM SYSTEMS	Renewable Power Systems	Photovoltaic
96 AGI7	POWER/STEAM SYSTEMS	Renewable Power Systems	Solar Thermal
97 AGI8	POWER/STEAM SYSTEMS	Renewable Power Systems	Wind
98 AGJ1	POWER/STEAM SYSTEMS	Steam Traps	General
99 AGK1	POWER/STEAM SYSTEMS	Turbines	General
100 AGK2	POWER/STEAM SYSTEMS	Turbines	Gas
101 AGK3	POWER/STEAM SYSTEMS	Turbines	Steam
102 AHA1	PROCESS HEATING SYSTEMS	General	General
103 AHB1	PROCESS HEATING SYSTEMS	Burners/Heating Devices	General
104 AHB2	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Gas/oil
105 AHB3	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Coal
106 AHB4	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Electric resistance
107 AHB5	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Electric infrared
108 AHB6	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Gas infrared
109 AHB7	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Radiant
110 AHB8	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Pulse combustion
111 AHB9	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Oxyfuel
112 AHB10	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Plasma
113 AHB11	PROCESS HEATING SYSTEMS	Burners/Heating Devices	Regenerative/recuperative
114 AHC1	PROCESS HEATING SYSTEMS	Curing Systems	General

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID Code	Category 1	Category 2	Category 3
115 AHC2	PROCESS HEATING SYSTEMS	Curing Systems	Fossil
116 AHC3	PROCESS HEATING SYSTEMS	Curing Systems	Electric
117 AHD1	PROCESS HEATING SYSTEMS	Dryers	General
118 AHD2	PROCESS HEATING SYSTEMS	Dryers	Compressed air
119 AHD3	PROCESS HEATING SYSTEMS	Dryers	Dessicant
120 AHD4	PROCESS HEATING SYSTEMS	Dryers	Direct heat
121 AHD5	PROCESS HEATING SYSTEMS	Dryers	Electric-infrared
122 AHD6	PROCESS HEATING SYSTEMS	Dryers	Electric-microwave/dielectric
123 AHD7	PROCESS HEATING SYSTEMS	Dryers	Indirect heat/steam
124 AHD8	PROCESS HEATING SYSTEMS	Dryers	Fluid bed
125 AHE1	PROCESS HEATING SYSTEMS	Furnaces/Kilns	General
126 AHE2	PROCESS HEATING SYSTEMS	Furnaces/Kilns	Fossil
127 AHE3	PROCESS HEATING SYSTEMS	Furnaces/Kilns	Electric
128 AHF1	PROCESS HEATING SYSTEMS	Immersion Heaters	General
129 AHG1	PROCESS HEATING SYSTEMS	Incinerators	General
130 AHH1	PROCESS HEATING SYSTEMS	Insulation/Refractories	General
131 AHH2	PROCESS HEATING SYSTEMS	Insulation/Refractories	High-temperature
132 AHH3	PROCESS HEATING SYSTEMS	Insulation/Refractories	Low-temperature
133 AHI1	PROCESS HEATING SYSTEMS	Thermal Fluids	General
134 AHJ1	PROCESS HEATING SYSTEMS	Thermal Fluid Heaters	General
135 AIA1	ENERGY/HEAT RECOVERY SYSTEMS	General	General
136 AIB1	ENERGY/HEAT RECOVERY SYSTEMS	Bottoming Cycle Systems	General
137 AIC1	ENERGY/HEAT RECOVERY SYSTEMS	Heat Exchangers	General
138 AIC2	ENERGY/HEAT RECOVERY SYSTEMS	Heat Exchangers	Shell and tube
139 AIC3	ENERGY/HEAT RECOVERY SYSTEMS	Heat Exchangers	Plate
140 AIC4	ENERGY/HEAT RECOVERY SYSTEMS	Heat Exchangers	Condensing
141 AIC5	ENERGY/HEAT RECOVERY SYSTEMS	Heat Exchangers	Submerged
142 AIC6	ENERGY/HEAT RECOVERY SYSTEMS	Heat Exchangers	Economizers
143 AIC7	ENERGY/HEAT RECOVERY SYSTEMS	Heat Exchangers	Heat pipes
144 AIC8	ENERGY/HEAT RECOVERY SYSTEMS	Heat Exchangers	Recuperators/regenerators
145 AID1	ENERGY/HEAT RECOVERY SYSTEMS	Heat Pumps	General
146 AID2	ENERGY/HEAT RECOVERY SYSTEMS	Heat Pumps	Open-cycle/vapor recompression
147 AID3	ENERGY/HEAT RECOVERY SYSTEMS	Heat Pumps	Closed cycle
148 AID4	ENERGY/HEAT RECOVERY SYSTEMS	Heat Pumps	Chemical
149 AIE1	ENERGY/HEAT RECOVERY SYSTEMS	Waste Heat Recovery Boilers/HRSGs	General
150 AJA1	MEASUREMENT & ANALYSIS SYSTEMS	General	General
151 AJB1	MEASUREMENT & ANALYSIS SYSTEMS	Analyzers-Exhaust Gas	General
152 AJB2	MEASUREMENT & ANALYSIS SYSTEMS	Analyzers-Exhaust Gas	Opacity

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID Code	Category 1	Category 2	Category 3
153 AJB3	MEASUREMENT & ANALYSIS SYSTEMS	Analyzers-Exhaust Gas	Oxygen
154 AJB4	MEASUREMENT & ANALYSIS SYSTEMS	Analyzers-Exhaust Gas	CO/combustibles
155 AJB5	MEASUREMENT & ANALYSIS SYSTEMS	Analyzers-Exhaust Gas	Portable combustion analyzers
156 AJC1	MEASUREMENT & ANALYSIS SYSTEMS	Metering	General
157 AJC2	MEASUREMENT & ANALYSIS SYSTEMS	Metering	Electrical
158 AJC3	MEASUREMENT & ANALYSIS SYSTEMS	Metering	Fuel
159 AJC4	MEASUREMENT & ANALYSIS SYSTEMS	Metering	Steam
160 AJC5	MEASUREMENT & ANALYSIS SYSTEMS	Metering	Pressure
161 AJC6	MEASUREMENT & ANALYSIS SYSTEMS	Metering	Temperature
162 AJC7	MEASUREMENT & ANALYSIS SYSTEMS	Metering	Water
163 AJC8	MEASUREMENT & ANALYSIS SYSTEMS	Metering	Portable power/demand analyzers
164 AKA1	CONTROL SYSTEMS	General	General
165 AKB1	CONTROL SYSTEMS	Process/Equipment Controls	General
166 AKB2	CONTROL SYSTEMS	Process/Equipment Controls	Temperature/thermostats-electric
167 AKB3	CONTROL SYSTEMS	Process/Equipment Controls	Temperature/thermostats-pneumatic
168 AKB4	CONTROL SYSTEMS	Process/Equipment Controls	Combustion
169 AKB5	CONTROL SYSTEMS	Process/Equipment Controls	Flow
170 AKB6	CONTROL SYSTEMS	Process/Equipment Controls	HVAC
171 AKB7	CONTROL SYSTEMS	Process/Equipment Controls	Pressure
172 AKB8	CONTROL SYSTEMS	Process/Equipment Controls	Industrial Process
173 AKB9	CONTROL SYSTEMS	Process/Equipment Controls	Motor/drive
174 AKC1	CONTROL SYSTEMS	Data Logging/Recording	General
175 AKD1	CONTROL SYSTEMS	Energy Analysis Software	General
176 AKE1	CONTROL SYSTEMS	Energy Management Systems	General
177 AKE2	CONTROL SYSTEMS	Energy Management Systems	General EMS
178 AKE3	CONTROL SYSTEMS	Energy Management Systems	Demand controllers
179 AKE4	CONTROL SYSTEMS	Energy Management Systems	Lighting controllers
180 AKE5	CONTROL SYSTEMS	Energy Management Systems	Load management
181 AKE6	CONTROL SYSTEMS	Energy Management Systems	Time-of-day
182 ALA1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	General	General
183 ALB1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Food	General
184 ALC1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Textiles	General
185 ALD1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Lumber/Wood	General
186 ALE1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Pulp and Paper	General
187 ALF1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Chemicals/Petrochemicals	General
188 ALG1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Petroleum Refining	General
189 ALH1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Rubber/Plastics	General
190 ALI1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Stone/Clay/Glass	General

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID Code	Category 1	Category 2	Category 3
191 ALJ1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Primary Metals	General
192 ALK1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Fabricated Metals	General
193 ALL1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Oil/Gas Processing/Equipment	General
335 ALM1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Coal Mining	General
336 ALN1	ENERGY EFFICIENT INDUSTRIAL PROCESSES	Others	General
194 AMA1	ENERGY EFFICIENCY SERVICES	General	General
195 AMB1	ENERGY EFFICIENCY SERVICES	Building Design	General
196 AMC1	ENERGY EFFICIENCY SERVICES	DSM/Load Management/Resource Planning	General
197 AMD1	ENERGY EFFICIENCY SERVICES	Equipment/System Design	General
198 AMD2	ENERGY EFFICIENCY SERVICES	Equipment/System Design	HVAC
199 AMD3	ENERGY EFFICIENCY SERVICES	Equipment/System Design	Electrical systems
200 AMD4	ENERGY EFFICIENCY SERVICES	Equipment/System Design	Mechanical systems
201 AMD5	ENERGY EFFICIENCY SERVICES	Equipment/System Design	Power systems-conventional
202 AMD6	ENERGY EFFICIENCY SERVICES	Equipment/System Design	Power systems-renewable
203 AMD7	ENERGY EFFICIENCY SERVICES	Equipment/System Design	Process heating/steam systems
204 AMD8	ENERGY EFFICIENCY SERVICES	Equipment/System Design	Lighting
205 AME1	ENERGY EFFICIENCY SERVICES	Energy Auditing	General
206 AMF1	ENERGY EFFICIENCY SERVICES	Performance Monitoring	General
207 AMG1	ENERGY EFFICIENCY SERVICES	Private Power Project Development	General
337 AMG2	ENERGY EFFICIENCY SERVICES	Private Power Project Development	Fossil Fuels
338 AMG3	ENERGY EFFICIENCY SERVICES	Private Power Project Development	Renewables
208 AMH1	ENERGY EFFICIENCY SERVICES	Project Management	General
209 AMI1	ENERGY EFFICIENCY SERVICES	System Installation	General
210 AMJ1	ENERGY EFFICIENCY SERVICES	Vehicle/Fleet Maintenance & Driver Training	General
339 AMK1	ENERGY EFFICIENCY SERVICES	Training	General
340 AMK2	ENERGY EFFICIENCY SERVICES	Training	Simulation
211 BAA1	AIR/GASEOUS POLLUTION CONTROLS	General	General
212 BAB1	AIR/GASEOUS POLLUTION CONTROLS	Acid Gas/SOx Controls	General
213 BAB2	AIR/GASEOUS POLLUTION CONTROLS	Acid Gas/SOx Controls	Wet Flue Gas Desulfurization
214 BAB3	AIR/GASEOUS POLLUTION CONTROLS	Acid Gas/SOx Controls	Spray Flue Gas Desulfurization
215 BAB4	AIR/GASEOUS POLLUTION CONTROLS	Acid Gas/SOx Controls	Dry Injection
216 BAB5	AIR/GASEOUS POLLUTION CONTROLS	Acid Gas/SOx Controls	Venturi Scrubbers
217 BAB6	AIR/GASEOUS POLLUTION CONTROLS	Acid Gas/SOx Controls	Other
218 BAC1	AIR/GASEOUS POLLUTION CONTROLS	Aerators	General
219 BAD1	AIR/GASEOUS POLLUTION CONTROLS	Coal Cleaning	General
220 BAD2	AIR/GASEOUS POLLUTION CONTROLS	Coal Cleaning	Coal Washing
221 BAD3	AIR/GASEOUS POLLUTION CONTROLS	Coal Cleaning	Chemical/Biological Cleaning
222 BAE1	AIR/GASEOUS POLLUTION CONTROLS	Combined NOx/SOx Controls	General

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID Code	Category 1	Category 2	Category 3
223 BAE2	AIR/GASEOUS POLLUTION CONTROLS	Combined NOx/SOx Controls	Slagging Combustors
224 BAE3	AIR/GASEOUS POLLUTION CONTROLS	Combined NOx/SOx Controls	In-Furnace
225 BAE4	AIR/GASEOUS POLLUTION CONTROLS	Combined NOx/SOx Controls	Post-Combustion
226 BAE5	AIR/GASEOUS POLLUTION CONTROLS	Combined NOx/SOx Controls	Other
227 BAF1	AIR/GASEOUS POLLUTION CONTROLS	Filters	General
228 BAG1	AIR/GASEOUS POLLUTION CONTROLS	Fume Abatement	General
229 BAH1	AIR/GASEOUS POLLUTION CONTROLS	Indoor Air Pollution Abatement	General
230 BAI1	AIR/GASEOUS POLLUTION CONTROLS	NOx Controls	General
231 BAI2	AIR/GASEOUS POLLUTION CONTROLS	NOx Controls	Low-NOx Burners
232 BAI3	AIR/GASEOUS POLLUTION CONTROLS	NOx Controls	Flue Gas Recirculation
233 BAI4	AIR/GASEOUS POLLUTION CONTROLS	NOx Controls	Selective Catalytic Reduction
234 BAI5	AIR/GASEOUS POLLUTION CONTROLS	NOx Controls	Selective Non-Catalytic Reduction
235 BAI6	AIR/GASEOUS POLLUTION CONTROLS	NOx Controls	Non-Selective Catalytic Reduction
236 BAI7	AIR/GASEOUS POLLUTION CONTROLS	NOx Controls	Other
237 BAJ1	AIR/GASEOUS POLLUTION CONTROLS	Particulate Controls	General
238 BAJ2	AIR/GASEOUS POLLUTION CONTROLS	Particulate Controls	Electrostatic Precipitators
239 BAJ3	AIR/GASEOUS POLLUTION CONTROLS	Particulate Controls	Febric Filters
240 BAJ4	AIR/GASEOUS POLLUTION CONTROLS	Particulate Controls	Mechanical Collectors/Cyclones
241 BAK1	AIR/GASEOUS POLLUTION CONTROLS	Soot Blowers	General
242 BAL1	AIR/GASEOUS POLLUTION CONTROLS	Vehicles (Advanced)	General
243 BAL2	AIR/GASEOUS POLLUTION CONTROLS	Vehicles (Advanced)	Electric
244 BAL3	AIR/GASEOUS POLLUTION CONTROLS	Vehicles (Advanced)	Compressed natural gas
245 BAL4	AIR/GASEOUS POLLUTION CONTROLS	Vehicles (Advanced)	Other vehicles
246 BAL5	AIR/GASEOUS POLLUTION CONTROLS	Vehicles (Advanced)	Batteries
247 BBA1	WATER/LIQUID POLLUTION CONTROLS	General	General
248 BBB1	WATER/LIQUID POLLUTION CONTROLS	Acid Handling/Recovery	General
249 BBC1	WATER/LIQUID POLLUTION CONTROLS	Drinking Water Treatment	General
250 BBD1	WATER/LIQUID POLLUTION CONTROLS	Filtration	General
251 BBE1	WATER/LIQUID POLLUTION CONTROLS	Hazardous Waste Disposal	General
252 BBF1	WATER/LIQUID POLLUTION CONTROLS	Industrial Water Treatment	General
253 BBF2	WATER/LIQUID POLLUTION CONTROLS	Industrial Water Treatment	Air Stripping
254 BBF3	WATER/LIQUID POLLUTION CONTROLS	Industrial Water Treatment	Wet Air Oxidation
255 BBF4	WATER/LIQUID POLLUTION CONTROLS	Industrial Water Treatment	Clarification
256 BBF5	WATER/LIQUID POLLUTION CONTROLS	Industrial Water Treatment	Reverse Osmosis
257 BBF6	WATER/LIQUID POLLUTION CONTROLS	Industrial Water Treatment	Activated Carbon
258 BBF7	WATER/LIQUID POLLUTION CONTROLS	Industrial Water Treatment	Steam Stripping
259 BBF8	WATER/LIQUID POLLUTION CONTROLS	Industrial Water Treatment	Chemical Coagulation
260 BBG1	WATER/LIQUID POLLUTION CONTROLS	Municipal Water Treatment	General

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID	Code	Category 1	Category 2	Category 3
261	BBG2	WATER/LIQUID POLLUTION CONTROLS	Municipal Water Treatment	Primary treatment
262	BBG3	WATER/LIQUID POLLUTION CONTROLS	Municipal Water Treatment	Secondary treatment
263	BBG4	WATER/LIQUID POLLUTION CONTROLS	Municipal Water Treatment	Biological/chemical treatment
264	BBG5	WATER/LIQUID POLLUTION CONTROLS	Municipal Water Treatment	Aerobic/Anaerobic digestion
265	BBH1	WATER/LIQUID POLLUTION CONTROLS	Purification	General
266	BBI1	WATER/LIQUID POLLUTION CONTROLS	Sewer Systems	General
267	BBJ1	WATER/LIQUID POLLUTION CONTROLS	Solvent Recovery	General
268	BBK1	WATER/LIQUID POLLUTION CONTROLS	Water Conditioning	General
269	BBL1	WATER/LIQUID POLLUTION CONTROLS	Water Treatment	General
270	BBL2	WATER/LIQUID POLLUTION CONTROLS	Water Treatment	Industrial
271	BBL3	WATER/LIQUID POLLUTION CONTROLS	Water Treatment	Municipal
272	BCA1	SOLID WASTE POLLUTION CONTROLS	General	General
273	BCB1	SOLID WASTE POLLUTION CONTROLS	Ash Handling	General
274	BCC1	SOLID WASTE POLLUTION CONTROLS	Hazardous Waste Treatment/Disposal	General
275	BCC2	SOLID WASTE POLLUTION CONTROLS	Hazardous Waste Treatment/Disposal	Biological Treatment
276	BCC3	SOLID WASTE POLLUTION CONTROLS	Hazardous Waste Treatment/Disposal	Carbon Adsorption
277	BCC4	SOLID WASTE POLLUTION CONTROLS	Hazardous Waste Treatment/Disposal	Oxidation
278	BCC5	SOLID WASTE POLLUTION CONTROLS	Hazardous Waste Treatment/Disposal	Incineration
279	BCC6	SOLID WASTE POLLUTION CONTROLS	Hazardous Waste Treatment/Disposal	Irradiation
280	BCC7	SOLID WASTE POLLUTION CONTROLS	Hazardous Waste Treatment/Disposal	Other
281	BCD1	SOLID WASTE POLLUTION CONTROLS	Recycling Systems	General
282	BCE1	SOLID WASTE POLLUTION CONTROLS	Sludge Treatment	General
283	BCE2	SOLID WASTE POLLUTION CONTROLS	Sludge Treatment	Mechanical Dewatering
284	BCE3	SOLID WASTE POLLUTION CONTROLS	Sludge Treatment	Composting
285	BCE4	SOLID WASTE POLLUTION CONTROLS	Sludge Treatment	Landfilling
286	BCE5	SOLID WASTE POLLUTION CONTROLS	Sludge Treatment	Incineration
287	BCF1	SOLID WASTE POLLUTION CONTROLS	Solid Waste Incinerators	General
288	BCF2	SOLID WASTE POLLUTION CONTROLS	Solid Waste Incinerators	Industrial
289	BCF3	SOLID WASTE POLLUTION CONTROLS	Solid Waste Incinerators	MSW-Mass Burn
290	BCF4	SOLID WASTE POLLUTION CONTROLS	Solid Waste Incinerators	MSW-Modular
291	BCF5	SOLID WASTE POLLUTION CONTROLS	Solid Waste Incinerators	Refuse-Derived Fuel
292	BDA1	OTHER POLLUTION CONTROLS	General	General
293	BDB1	OTHER POLLUTION CONTROLS	Analyzers	General
294	BDC1	OTHER POLLUTION CONTROLS	Boiler Feedwater Treatment	General
295	BDD1	OTHER POLLUTION CONTROLS	Decontamination Equipment	General
296	BDE1	OTHER POLLUTION CONTROLS	Leak Detectors	General
297	BDF1	OTHER POLLUTION CONTROLS	Monitoring Equipment	General
298	BDF2	OTHER POLLUTION CONTROLS	Monitoring Equipment	Radiation

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID Code	Category 1	Category 2	Category 3
299 BDF3	OTHER POLLUTION CONTROLS	Monitoring Equipment	Other
300 BDG1	OTHER POLLUTION CONTROLS	Noise Abatement	General
301 BDH1	OTHER POLLUTION CONTROLS	Sampling Equipment	General
302 BDI1	OTHER POLLUTION CONTROLS	Stacks/Stackers	General
303 BEA1	ENVIRONMENTAL SERVICES	General	General
304 BEB1	ENVIRONMENTAL SERVICES	Air Pollution Management	General
305 BEC1	ENVIRONMENTAL SERVICES	Analytical Testing	General
306 BED1	ENVIRONMENTAL SERVICES	Bioassessments	General
307 BEE1	ENVIRONMENTAL SERVICES	Climate/Atmospheric Assessments	General
308 BEF1	ENVIRONMENTAL SERVICES	Composting	General
309 BEG1	ENVIRONMENTAL SERVICES	Combustion/Incineration Systems Design	General
310 BEH1	ENVIRONMENTAL SERVICES	Decontamination/Site Clean-Up	General
311 BEH2	ENVIRONMENTAL SERVICES	Decontamination/Site Clean-Up	Nuclear
312 BEH3	ENVIRONMENTAL SERVICES	Decontamination/Site Clean-Up	Asbestos
313 BEH4	ENVIRONMENTAL SERVICES	Decontamination/Site Clean-Up	PCB
314 BEH5	ENVIRONMENTAL SERVICES	Decontamination/Site Clean-Up	Other
315 BEI1	ENVIRONMENTAL SERVICES	Design Services	General
316 BEJ1	ENVIRONMENTAL SERVICES	Ecosystem Assessments	General
317 BEK1	ENVIRONMENTAL SERVICES	Effluent/Water Characterization/Monitoring	General
318 BEL1	ENVIRONMENTAL SERVICES	Emissions Characterization/Monitoring	General
319 BEM1	ENVIRONMENTAL SERVICES	Environmental Auditing	General
320 BEN1	ENVIRONMENTAL SERVICES	Environmental Impact Assessments	General
321 BEO1	ENVIRONMENTAL SERVICES	Environmental Training	General
322 BEP1	ENVIRONMENTAL SERVICES	Groundwater Monitoring	General
323 BEQ1	ENVIRONMENTAL SERVICES	Hazardous Waste Management	General
324 BER1	ENVIRONMENTAL SERVICES	Indoor Air Quality	General
325 BES1	ENVIRONMENTAL SERVICES	Permitting	General
326 BET1	ENVIRONMENTAL SERVICES	Project Management	General
327 BEU1	ENVIRONMENTAL SERVICES	Radon Abatement	General
328 BEV1	ENVIRONMENTAL SERVICES	Recycling System Design	General
329 BEW1	ENVIRONMENTAL SERVICES	Solid Waste/Sludge/Ash Management	General
330 BEX1	ENVIRONMENTAL SERVICES	Testing	General
331 BEX2	ENVIRONMENTAL SERVICES	Testing	Toxic substances
332 BEX3	ENVIRONMENTAL SERVICES	Testing	Other
333 BEY1	ENVIRONMENTAL SERVICES	Waste-to-Energy/Resource Recovery Plant Design	General
334 BEZ1	ENVIRONMENTAL SERVICES	Water Pollution Management/Treatment	General

ENERGY AND ENVIRONMENT TRADE DATABASE USER MANUAL

APPENDIX D

PRINT REPORT FORMATS

Table Format File: CC_SHORT.FRM

TECHNOLOGY AND TRADE DATABASE
COMPANIES AND THEIR CONTACTS

Company ID	Company	Contact ID	Last Name	First Name	Contact Phone
2	ABCO Industries, Inc.	2	Carter	Mike	915-677-2011
2	ABCO Industries, Inc.	323	Nash	Doyle J.	915-677-2011
3	AC Compressor Corporation	3	York	George	713-522-1081
4	Acurex Corporation	4	Byars	William	415-964-5700
4	Acurex Corporation	324	Whittlesey	Stuart	415-964-5700
5	Aerojet-General Corp	5	Rohrer	Bill	916-355-4463
5	Aerojet-General Corp	325	Leisz	G.	916-355-4463
6	Ahlstrom Pyropower	6	Lestyk	Joe	619-458-3000
6	Ahlstrom Pyropower	1310	Landry	Ed	619-458-3000
7	Alfa-Laval, Inc.	7	Higgins	Pat	215-443-4000
7	Alfa-Laval, Inc.	327	Nichols	D.	215-443-4000
8	Joy Environmental Equipment Co.	8	Scott	Jim	215-647-8756
8	Joy Environmental Equipment Co.	328	Kelly	L.P.	215-647-8756
9	Allen-Bradley Company, Inc.	9	Jarzembinski	Ed	414-382-2000
9	Allen-Bradley Company, Inc.	329	O'Rourke	J.T.	414-382-2000

Table Format File: CC_PRIMA.FRM

TECHNOLOGY AND TRADE DATABASE
COMPANIES AND THEIR CONTACTS

Company ID	Company	Contact ID	Last Name	First Name	Primary Contact
1	Abar Ipsen Industries	1	Fromkin	Don	YES
1	Abar Ipsen Industries	322	Mullins	B.	NO
1	Abar Ipsen Industries	881	McGarry	M.J.	NO
1	Abar Ipsen Industries	882	Cole	B.	NO
1	Abar Ipsen Industries	1322			YES
1	Abar Ipsen Industries	1324			YES
2	ABCO Industries, Inc.	2	Carter	Mike	YES
2	ABCO Industries, Inc.	323	Nash	Doyle J.	NO
3	AC Compressor Corporation	3	York	George	YES
4	Acurex Corporation	4	Byars	William	NO
4	Acurex Corporation	324	Whittlesey	Stuart	NO
5	Aerojet-General Corp	5	Rohrer	Bill	YES
5	Aerojet-General Corp	325	Leisz	G.	NO
6	Ahlstrom Pyropower	6	Lestyk	Joe	NO
6	Ahlstrom Pyropower	1310	Landry	Ed	YES
7	Alfa-Laval, Inc.	7	Higgins	Pat	YES
7	Alfa-Laval, Inc.	327	Nichols	D.	NO
8	Joy Environmental Equipment Co.	8	Scott	Jim	YES
8	Joy Environmental Equipment Co.	328	Kelly	L.P.	NO
9	Allen-Bradley Company, Inc.	9	Jarzembinski	Ed	YES
9	Allen-Bradley Company, Inc.	329	O'Rourke	J.T.	NO

Table Format File: CN_SHORT.FRM

TECHNOLOGY AND TRADE DATABASE
CONTACTS INFORMATION

Company ID	Contact ID	Name	Title	Phone
2	2	Mr. Mike Carter	Package Boiler Sales Manager	915-677-2011
3	3	Mr. George York	Head, International Operations	713-522-1081
4	4	Mr. W.E. Dean	Chief Executive Officer	415-964-3200
5	5	Mr. Bill Rohrer	Director of International Operations	916-355-4463
6	6	Mr. Joe Lestyk	General Council	619-458-3000
7	7	Ms. Pat Higgins	Director, Import-Export	215-443-4000
8	8	Mr. Jim Scott	Sales Manager	215-647-8756
9	9	Mr. Ed Jarzembinski	International Traffic	414-382-2000
11	10	Mr. Dan Mishkal	President	305-937-0610
12	11	Mr. Burt Gromin	Vice President - General Mang. Asia & LA	502-637-0011
13	12	Mr. Craig Van Tine	Sales Manager	716-684-9700
14	13	Mr. Lyle Hanna	Market Manager	713-531-4233
15	14	Mr. Greg Homoki	Managar, Marketing & Business Developm	412-935-5725
16	15	Mr. B.M. Gordon	CEO	508-246-0300
17	16	Mr. Lyle Henson	Applications Engineer	404-997-2000
18	17	Mr. Robert Bohn	Area Manager, Europe	312-693-4000
19	18	Mr. Peter Hammond	Sino-Asia Regional Manager	414-962-0100
20	19	Mr. Robert Eaton	Marketing Manager	708-359-7810
21	20	Mr. David Worth	Vice President, Business Development	207-775-5400
22	21	Mr. Bill Witkewiez	Vice President - Sales & Marketing	413-536-0600
23	22	Mr. Djoerd Hoekstra	Vice President of Planning	215-587-7185
24	23	Mr. Steve Borsani	Manager, Proposals and Projects	216-860-6384
25	24	Mr. David Simerly	Director of International Product Sales	216-776-6278
26	25	Mr. James Cample	International Sales Manager	501-646-4711
27	26	Mr. Ed Higginbottom	Export Manager	301-799-6200
28	27	Mr. David Boxall	Export Manager	815-877-0241
29	28	Mr. Ron, G. Surma	Sales Manager	205-699-2191
30	29	Mr. Michael Bobker	Vice President	718-596-8073
31	30	Mr. Fred Schnieder	Project Manager	908-730-4000
32	31	Mr. Dave Meyer	Sales Manager	718-338-3311
33	32	Ms. Jean Koetke	Director, Advertising and Marketing	412-658-3551
34	33	Ms. Carol Charles	Vice President of Sales	914-647-6700
35	34	Mr. Jim Brazukas	Export Manager	215-355-3300
36	35	Mr. Paul Gorden	Vice President, Sales and Marketing	205-969-3600
37	36	Mr. John Orphanos	Vice President, Sales & Marketing	508-668-0400
38	37	Mr. Rolf Stamm	President	913-339-2000
39	38	Mr. John Norris	Project Engineer	205-272-8020
40	39	Mr. Scott Bogot	Chief Executive Officer	312-637-6037
41	40	Mr. Jerry Monson	Vice President of Accounting	801-363-2520
42	41	Mr. Michael Whittmore	Manager of Cooling Products	215-374-5109
43	42	Mr. John Spagnoletti	Director of International Sales	203-575-3000
44	43	Ms. Christine Larson	International Sales Coordinator	708-851-7330

Table Format File: CO_INTRS.FRM

TECHNOLOGY AND TRADE DATABASE
INTEREST IN A.I.D. PROGRAMS

ID	COMPANY	TSEM	JV	TMIS	INFO	MSTU	FINA	POLR	DEMO	PROG	FORM
1	Abar Ipsen Industries	H	M	L	H		L	H	M	1	1
3	AC Compressor Corporation	m	m			m	m		m	2	1
4	Acurex Corporation									0	
5	Aerojet-General Corp	l	m	l	l	l	m	l	l	1	1
6	Ahlstrom Pyro Power	M	H	M	H	H	H	H	H	4	3
7	Alfa-Laval, Inc.									1	0
8	Allan Sherman Hoff	m	h	m	h	m	h	m	m	2	
9	Allen-Bradley Company, Inc.										

Trade Format File: CO_PARNT.FRM

TECHNOLOGY AND TRADE DATABASE
PARENT INFORMATION

ID	Company	Division	Parent ID	Parent
1	Abar Ipsen Industries		0	TI Group Plc
3	AC Compressor Corporation	Formerly part of Allis Chalmers	0	
4	Acurex Corporation		0	
5	Aerojet-General Corp		1234	Gencorp
6	Ahlstrom Pyro Power		0	Ahlstrom A Osakeyhtio
7	Alfa-Laval, Inc.		0	Alfa-Laval Ab
8	Allan Sherman Hoff		0	Joy Technologies Inc
9	Allen-Bradley Company, Inc.		0	Rockwell International
10	Allis-Chalmers Corporation		0	
11	Ameribrom Inc.	Ambient Technologies	0	
12	American Air Filter Company		0	Allis-Chalmers Corporation
13	American Precision Industries		0	
14	American Ref-Fuel Company		0	
15	American Shack Company, Inc.		0	Rekuperator
16	Analogic Corporation		0	
17	Anderson 2000, Inc.		0	Crown Anderson Inc.
18	APV Consolidated Inc.		0	APV-PLC
19	Aqua-Chem Inc.		0	Lyonnaise Des Eaux
20	ARI Technologies Inc.		0	
21	Asea Brown Boveri Inc.	ABB Environmental	0	
22	Atlas Copco Industrial		0	Atlas Copco Group
23	Atochem North America	Corrosion Engineering Department	0	Atochem SA
24	Babcock & Wilcox Company		0	McDermott International Inc
25	Bailey Controls Company		0	McDermott Inc.
26	Baldor Electric Company		0	
27	Baltimore Aircoil Company		0	Amsted Industries Inc.
28	Barber-Colman Company		0	Siebe Pic
29	Barron Industries Inc.		0	New York Blower Company
30	BEI Energy Corporation		0	
31	Power Systems		0	Foster Wheeler Corp
32	Beltran		0	
33	Berner International Corporation		0	
34	Besicorp Group Inc (Besicorp/Kamine)	Bio-Energy Company	0	
35	Betz Laboratories Inc.	Betz Mining Chemicals	0	
36	BE&K Inc.		0	
37	Bird Machine Company		0	Bird Inc.
38	Black & Veatch, International		0	
39	Blount International, Ltd.		0	Blount Inc.

Table Format File: CO_PRODS.FRM

TECHNOLOGY AND TRADE DATABASE
COMPANIES AND THEIR PRODUCTS

ID	Company	Products
1	Abar Ipsen Industries	burners
2	ABCO Industries, Inc.	boilers, burners, heat exchangers, oil/gas equipment
3	AC Compressor Corporation	
4	Acurex Corporation	combustion control systems
5	Aerojet-General Corp	heat exchangers
6	Ahlstrom Pyro Power	boilers, project developer
7	Alfa-Laval, Inc.	heat exchangers
8	Allan Sherman Hoff	ash handling systems
9	Allen-Bradley Company, Inc.	process controls
10	Allis-Chalmers Corporation	coal cleaning
11	Ameribrom Inc.	evaporators
12	American Air Filter Company	heat exchangers, ESPs, flue-gas desuph, filters
13	American Precision Industries	heat exchangers
14	American Ref-Fuel Company	incin
15	American Shack Company, Inc.	heat exchangers, incin

Table Format File: CO_SHORT.FRM

TECHNOLOGY AND TRADE DATABASE
SUMMARY INFORMATION

ID	Company	Division	Edited
1	Abar Ipsen Industries		10/23/91
2	ABCO Industries, Inc.		08/12/91
3	AC Compressor Corporation	Formerly part of Allis Chalmers	02/01/91
4	Acurex Corporation		08/12/91
5	Aerojet-General Corp		/ /
6	Ahlstrom Pyro Power		08/09/91
7	Alfa-Laval, Inc.		08/12/91
8	Allan Sherman Hoff		08/09/91
9	Allen-Bradley Company, Inc.		08/12/91
10	Allis-Chalmers Corporation		08/12/91
11	Ameribrom Inc.	Ambient Technologies	08/12/91
12	American Air Filter Company		08/12/91
13	American Precision Industries		08/12/91
14	American Ref-Fuel Company		08/12/91
15	American Shack Company, Inc.		08/12/91
16	Analogic Corporation		03/14/91
17	Anderson 2000, Inc.		08/12/91
18	APV Consolidated Inc.		03/12/91
19	Aqua-Chem Inc.		08/12/91
20	ARI Technologies Inc.		08/12/91
21	Asea Brown Boveri Inc.	ABB Environmental	08/14/91
22	Atlas Copco Industrial		08/12/91
23	Atochem North America	Corrosion Engineering Department	08/12/91
24	Babcock & Wilcox Company		08/14/91
25	Bailey Controls Company		08/14/91
26	Baldor Electric Company		08/14/91
27	Baltimore Aircoil Company		08/12/91
28	Barber-Colman Company		08/12/91
29	Barron Industries Inc.		08/12/91
30	BEI Energy Corporation		08/12/91
31	Power Systems		08/12/91
32	Beltran		08/14/91
33	Berner International Corporation		08/12/91
34	Besicorp Group Inc (Besicorp/Kamine)	Bio-Energy Company	08/12/91
35	Betz Laboratories Inc.	Betz Mining Chemicals	02/01/91
36	BE&K Inc.		08/12/91
37	Bird Machine Company		08/12/91
38	Black & Veatch, International		08/12/91
39	Blount International, Ltd.		08/12/91
40	Bogot Herman & Company		08/12/91
41	Bonneville Pacific/Portland General		08/12/91
42	Brentwood Industries Inc.		08/12/91
43	Bristol Babcock Inc.		08/12/91
44	BRK Electronics		08/12/91
45	Brookside Group Inc.	Torin Blower Division	08/12/91
46	Brown Fintube Co		08/12/91
47	Brown & Root Inc.		08/12/91
48	Buffalo Forge Company		08/12/91
49	Buhler-Miag Inc.		08/12/91
50	Burns & McDonnell Engineering Company		08/12/91
51	Burns & Roe Enterprises Inc.		08/14/91
52	C & H Manufacturing, Inc.		08/12/91
53	Calgon Carbon Corp		08/12/91
54	Camp Dresser & Mckee Inc.		08/12/91

Table Format File: NOCONTAC.FRM

TECHNOLOGY AND TRADE DATABASE
COMPANIES WITHOUT CONTACTS

ID	Company	Division	Edited
1	Abar Ipsen Industries		12/02/91
3	AC Compressor Corporation	Formerly part of Allis Chalmers	02/01/91

Table Format File: PRODCODE.FRM

Technology and Trade Database
Technologies Produced

ID	Division	State	Technology Codes
**	Abar Ipsen Industries		
	1	PA	AHB1
	1	PA	ALJ1
	1	PA	ALK1
**	ABCO Industries, Inc.		
	2	TX	AHB2
	2	TX	AGB1
	2	TX	AIC1
	2	TX	AMD7
**	AC Compressor Corporation		
	3 Formerly part of Allis Chalmers	TX	
**	Acurex Corporation		
	4	CA	AKB4
**	Aerojet-General Corp		
	5	CA	AIC1
**	Ahlstrom Pyro Power		
	6	CA	AGB1
	6	CA	AMH1
**	Alfa-Laval, Inc.		
	7	PA	AIC1
**	Allan Sherman Hoff		
	8	PA	BCB1
	8	PA	BEW1
**	Allen-Bradley Company, Inc.		
	9	WI	AKB1
**	Allis-Chalmers Corporation		
	10	WI	BAD1
	10	WI	BAD1
**	Ameribrom Inc.		
	11 Ambient Technologies	FL	AED1
**	American Air Filter Company		
	12	KY	AIC1
	12	KY	BAJ2
	12	KY	BAB2
	12	KY	BAB3
	12	KY	BAF1
**	American Precision Industries		
	13	NY	AIC1
**	American Ref-Fuel Company		
	14	TX	AHG1
	14	TX	BEG1

Table Format File: PROD_CAT.FRM

TECHNOLOGY AND TRADE DATABASE
TECHNOLOGY CATEGORIES

ID	Code	Category 1	Category 2	Category 3
1	AAA1	ELECTRICAL SYSTEMS	General	General
2	AAB1	ELECTRICAL SYSTEMS	Induction generators	General
3	AAC1	ELECTRICAL SYSTEMS	Power factor correction devices	General
4	AAD1	ELECTRICAL SYSTEMS	Power line conditioning	General
5	AAE1	ELECTRICAL SYSTEMS	Synchronous drives	General
6	AAF1	ELECTRICAL SYSTEMS	Transformers	General
7	ABA1	ENERGY STORAGE SYSTEMS	General	General
8	ABB1	ENERGY STORAGE SYSTEMS	Battery storage	General
9	ABC1	ENERGY STORAGE SYSTEMS	Compressed air energy storage	General
10	ABD1	ENERGY STORAGE SYSTEMS	Pumped storage hydro	General
11	ABE1	ENERGY STORAGE SYSTEMS	Thermal storage	General
12	ACA1	HVAC/REFRIGERATION SYSTEMS	General	General
13	ACB1	HVAC/REFRIGERATION SYSTEMS	Air Conditioners	General
14	ACB2	HVAC/REFRIGERATION SYSTEMS	Air Conditioners	Central
15	ACB3	HVAC/REFRIGERATION SYSTEMS	Air Conditioners	Room
16	ACC1	HVAC/REFRIGERATION SYSTEMS	Building insulation	General
17	ACD1	HVAC/REFRIGERATION SYSTEMS	Chillers	General
18	ACD2	HVAC/REFRIGERATION SYSTEMS	Chillers	Absorption
19	ACD3	HVAC/REFRIGERATION SYSTEMS	Chillers	Compression/Engine
20	ACE1	HVAC/REFRIGERATION SYSTEMS	Dessicant/dehumidification	General
21	ACF1	HVAC/REFRIGERATION SYSTEMS	Heat rejection systems	General
22	ACF2	HVAC/REFRIGERATION SYSTEMS	Heat rejection systems	Cooling Towers
23	ACF3	HVAC/REFRIGERATION SYSTEMS	Heat rejection systems	Condensers
24	ACG1	HVAC/REFRIGERATION SYSTEMS	Refrigeration systems	General
25	ACH1	HVAC/REFRIGERATION SYSTEMS	Space Heating	General
26	ACH2	HVAC/REFRIGERATION SYSTEMS	Space Heating	Conventional
27	ACH3	HVAC/REFRIGERATION SYSTEMS	Space Heating	Solar
28	ACI1	HVAC/REFRIGERATION SYSTEMS	Ventilation	General
29	ACJ1	HVAC/REFRIGERATION SYSTEMS	Water Heating	General
30	ACJ2	HVAC/REFRIGERATION SYSTEMS	Water Heating	Conventional
31	ACJ3	HVAC/REFRIGERATION SYSTEMS	Water Heating	Solar
32	ACK1	HVAC/REFRIGERATION SYSTEMS	Window/Window Coatings	General
33	ACK2	HVAC/REFRIGERATION SYSTEMS	Window/Window Coatings	Low-emissivity coatings
34	ACK3	HVAC/REFRIGERATION SYSTEMS	Window/Window Coatings	Other
35	ADA1	LIGHTING	General	General
36	ADB1	LIGHTING	Fluorescent Ballasts	General
37	ADC1	LIGHTING	Fluorescent Lamps	General
38	AD[redacted]	LIGHTING	Incandesce[redacted]logen Lamps	General

Print Basic Company Information

Technology and Trade Database
Basic Company Information

AC Compressor Corporation

Division: Formerly part of Allis Chalmers
Address:
3701 Kirby Drive
Houston, TX 77098
Company ID: 3
Phone: 713-522-1081
DESCRIPTION:
Sales in million $: 34,556

No CONTACTS Found

TECHNOLOGIES PRODUCED Category 2	Code Category 3
AIR/GASEOUS POLLUTION CONTROLS General	BAA1 General

Acurex Corporation

Address:
P.O. Box 7042
Mountain View, CA 94039
Company ID: 4
Phone: 415-964-3200
DESCRIPTION:
Company exports products
Sales in million $: 60

CONTACTS	Title	Phone/Fax
Mr. W.E. Dean	Chief Executive Officer	415-964-3200/

TECHNOLOGIES PRODUCED Category 2	Code Category 3
CONTROL SYSTEMS Process/Equipment Controls	AKB4 Combustion
ELECTRICAL SYSTEMS General	AAA1 General

Alfa-Laval, Inc.

Address:
955 Mearns
Warminister, CA 18974-0556
Company ID: 7
Phone: 215-443-4000
DESCRIPTION:
Company exports products
Sales in million $: 210
Parent Company: Alfa-Laval Ab

CONTACTS	Title	Phone/Fax
Ms. Pat Higgins	Director, Import-Export	215-443-4000/
D. Nichols		215-443-4000/

Date Printed: 04/14/92

Print ALL Information

Technology and Trade Database
All Company Information

Acme USA

Division: Boilers and Burners
Company ID: 200
Address:
1234 Hubbard Street
Chicago, IL 60612
Phone: 414-123-4567
DESCRIPTION:
SIC Code: ABC1
Type of Company : Energy
Company produces PRODUCTS, not services
Company does export products
Sales in million $: 1,760
Parent Company: ACME International
Country: USA Sales in million $: 1,760
Products produced:
incinerators
Date this file last edited: 04/14/92

CONTACTS

Name	Title	Phone/Fax
Mr. Sam Smith	International Marketing Manager	414-123-3456/
Mr. Jerry Jones	Chairman of the Board/CEO	414-234-7576/

COUNTRIES INTERESTED IN EXPORTING TO
Denmark Dominican Republic El Salvador Equatorial Guinea

REGIONS INTERESTED IN EXPORTING TO
Western Europe

TECHNOLOGIES INTERESTED IN EXPORTING

Category 1 / Category 2	Code / Category 3
ELECTRICAL SYSTEMS	AAA1
General	General
ELECTRICAL SYSTEMS	AAB1
Induction generators	General

TECHNOLOGIES PRODUCED

Category 1 / Category 2	Code / Category 3
PROCESS HEATING SYSTEMS	AHG1
Incinerators	General
PROCESS HEATING SYSTEMS	AHE1
Furnaces/Kilns	General
ENERGY EFFICIENT INDUSTRIAL PROCESSES	ALA1
General	General

Print ALL Information-Tech Only

Technology and Trade Database
All Company Information

AC Compressor Corporation

Division: Formerly part of Allis Chalmers — Company ID: 3

TECHNOLOGIES PRODUCED

Category 1 / Category 2	Code / Category 3
AIR/GASEOUS POLLUTION CONTROLS	BAA1
General	General

Acurex Corporation

Company ID: 4

TECHNOLOGIES PRODUCED

Category 1 / Category 2	Code / Category 3
CONTROL SYSTEMS	AKB4
Process/Equipment Controls	Combustion
ELECTRICAL SYSTEMS	AAA1
General	General

Allis-Chalmers Corporation

Company ID: 10

TECHNOLOGIES PRODUCED

Category 1 / Category 2	Code / Category 3
AIR/GASEOUS POLLUTION CONTROLS	BAD1
Coal Cleaning	General

Date Printed: 04/14/92

ENERGY AND ENVIRONMENT TRADE DATABASE USER MANUAL

APPENDIX E

KEY TO COLUMN HEADING ABBREVIATIONS

APPENDIX E: KEY TO COLUMN HEADING ABBREVIATIONS

FIELD CATEGORY FIELD NAME	OPTIONS	DESCRIPTION
NAME AND ADDRESS		
ID		Identification number
COMPANY		Company name
DIVISION		Company division
ADDRESS1		
ADDRESS2		
CITY		
STATE		
ZIPCODE		
PHONE		
FAX		
CHARACTERISTICS AND VIP		
DATEEDIT		Date last edited
SIC		SIC Code
SALESMM		Sales in million $
SALESKNOWN		T=Precise sales figures, F=Range
SOURCE		Source of the information
COMPTYPE		EGY=Energy,ENV=Environment,BOTH
PRODSERV		P=Products,S=Services,PS=Both
SURVEYED		Was the company surveyed? (Y/N)
PARENT INFORMATION		
PARENTID		Identification number of parent company
PARENT		Parent company name
PARCNTRY		Parent company's country
PARSLSMM		Parent's sales in million $
SURVEY INFORMATION		
	Level of interest: H=High,M=Medium,L=Low	
TSEM		Trade Seminars and conferences
JV		Joint venture promotion projects
TMISS		Trade and reverse trade missions
INFO		Information dissemination
MSTUD		Technology-specific market studies
FINAST		Financing assistance
POLREF		Policy reform activities
DEMO		Demonstration programs: applied technology
OTH		Are there other activities in which you would be interested?

Level of interest: 0=Uninterested,1=Slight,
2=Moderate,3=Interested,4=Very Interested

PROGINT ..... Your interest level in this type of program
FORMINT ..... Interested in joining with other companies to form an export forum?

STUDQ ..... If you had $100k for a study or report, what would you commission?
EXPORTER ..... Does the company export? (Yes/No)
PUB_PRIV ..... 1=Public, 2=Private, 0=Unknown

MISCELLANY

ASSOC ..... Membership in associations
PRODUCTS ..... Description of products
TEMPFIELD ..... Temporary field

ENERGY AND ENVIRONMENT TRADE DATABASE USER MANUAL

APPENDIX F

COUNTRIES AND REGIONS

APPENDIX F: COUNTRIES AND REGIONS

REGION	COUNTRY ID	COUNTRY
1. Middle East and North Africa (including Iran)		
	3	Algeria
	27	Chad
	43	Egypt
	66	Iran
	67	Iraq
	69	Israel
	73	Jordan
	78	Kuwait
	80	Lebanon
	83	Libya
	93	Morocco
	102	Oman
	114	Saudi Arabia
	132	Syria
	138	Tunisia
	139	Turkey
	141	United Arab Emirates
	150	Yemen
	157	Dubai
	158	Bahrain
	160	Qatar
2. Sub-Saharan Africa		
	4	Angola
	14	Benin
	17	Botswana
	20	Burkina Faso
	22	Burundi
	23	Cameroon
	25	Cape Verde
	26	Central African Rep.
	32	Congo
	34	Ivory Coast
	39	Djibouti
	45	Equatorial Guinea
	46	Ethiopia
	50	Gabon
	51	Gambia
	53	Ghana
	57	Guinea
	58	Guinea-Bissau

75	Kenya
81	Lesotho
82	Liberia
84	Madagascar
85	Malawi
87	Mali
89	Mauritania
90	Mauritius
94	Mozambique
99	Niger
100	Nigeria
112	Rwanda
113	Sao Tome
115	Senegal
117	Sierra Leone
120	Somalia
121	South Africa
127	Sudan
129	Swaziland
133	Tanzania
135	Togo
140	Uganda
152	Zaire
153	Zambia
154	Zimbabwe

3. Western Europe

8	Austria
12	Belgium
36	Cyprus
38	Denmark
48	Finland
49	France
52	Germany
54	Greece
68	Ireland
70	Italy
88	Malta
96	Netherlands
101	Norway
110	Portugal
122	Spain
130	Sweden
131	Switzerland
142	United Kingdom

4. Eastern Europe (former "satellites" incl. Romania, Albania, and old Yugoslavia)

2	Albania
19	Bulgaria
37	Czechoslovakia
63	Hungary
109	Poland
111	Romania
151	Yugoslavia
178	Slovenia
179	Croatia
180	Serbia

5. Baltics and Slavic CIS Republics (including Armenia, Georgia)

145	Russia
164	Lithuania
165	Latvia
166	Estonia
167	Belarus
168	Moldavia
169	Armenia
170	Georgia
171	Ukraine

6. Central Asia (non-Slavic CIS Republics and Afghanistan)

1	Afghanistan
92	Mongolia
172	Azerbaijan
173	Kazakhstan
174	Uzbekistan
175	Tajikstan
176	Kirghiz
177	Turkmen

7. South Asia

10	Bangladesh
15	Bhutan
31	Comoros
64	India
95	Nepal
103	Pakistan
116	Seychelles
123	Sri Lanka
146	Vanuatu

8. Southeast Asia

21	Myanmar
65	Indonesia
74	Kampuchea, Dem.
79	Lao PDR
86	Malaysia

108 Philippines
118 Singapore
134 Thailand
148 Vietnam
159 Brunei

9. Other Asia (China/Japan/Korea(s))

29 China
62 Hong Kong
72 Japan
76 Korea, Dem. Rep.
77 Korea, Rep. of
162 Taiwan

10. Australia, New Zealand, and Pacific Islands

7 Australia
47 Fiji
97 New Zealand
105 Papua New Guinea
119 Solomon Islands
136 Tonga
149 Western Samoa
156 Guam

11. Caribbean

5 Antigua & Barbuda
9 Bahamas
11 Barbados
35 Cuba
40 Dominica
41 Dominican Republic
55 Grenada
60 Haiti
61 Honduras
71 Jamaica
124 St. Christopher/Nevis
125 St. Lucia
126 St. Vincent/Grenadine
137 Trinidad & Tobago
155 Aruba
161 Puerto Rico
163 Virgin Islands

12. Mexico and Central America

13 Belize
33 Costa Rica
44 El Salvador
56 Guatemala
91 Mexico

	98	Nicaragua
	104	Panama
13. South America		
	6	Argentina
	16	Bolivia
	18	Brazil
	28	Chile
	30	Colombia
	42	Ecuador
	59	Guyana
	106	Paraguay
	107	Peru
	128	Suriname
	144	Uruguay
	147	Venezuela
14. North America		
	24	Canada
	143	United States

REGIONS

1. Middle East and North Africa (including Iran)
2. Sub-Saharan Africa
3. Western Europe
4. Eastern Europe (former "satellites" incl. Romania, Albania, and old Yugoslavia)
5. Baltics and Slavic CIS Republics (Armenia, Georgia)
6. Central Asia (non-Slavic CIS Republics and Afghanistan)
7. South Asia
8. Southeast Asia
9. Other Asia (China/Japan/Korea(s))
10. Australia, New Zealand, and Pacific Islands
11. Caribbean
12. Mexico and Central America
13. South America
14. North America

ID	COUNTRY	REGION
1	Afghanistan	6
2	Albania	4
3	Algeria	1
4	Angola	2
5	Antigua & Barbuda	11
6	Argentina	13
169	Armenia	5
155	Aruba	11
7	Australia	10
8	Austria	3
172	Azerbaijan	6
9	Bahamas	11
158	Bahrain	1
10	Bangladesh	7
11	Barbados	11
167	Belarus	5
12	Belgium	3
13	Belize	12
14	Benin	2
15	Bhutan	7
16	Bolivia	13
17	Botswana	2
18	Brazil	13
159	Brunei	8
19	Bulgaria	4

20	Burkina Faso	2
22	Burundi	2
23	Cameroon	2
24	Canada	14
25	Cape Verde	2
26	Central African Rep.	2
27	Chad	1
28	Chile	13
29	China	9
30	Colombia	13
31	Comoros	7
32	Congo	2
33	Costa Rica	12
179	Croatia	4
35	Cuba	11
36	Cyprus	3
37	Czechoslovakia	4
38	Denmark	3
39	Djibouti	2
40	Dominica	11
41	Dominican Republic	11
157	Dubai	1
42	Ecuador	13
43	Egypt	1
44	El Salvador	12
45	Equatorial Guinea	2
166	Estonia	5
46	Ethiopia	2
47	Fiji	10
48	Finland	3
49	France	3
50	Gabon	2
51	Gambia	2
170	Georgia	5
52	Germany	3
53	Ghana	2
54	Greece	3
55	Grenada	11
156	Guam	10
56	Guatemala	12
57	Guinea	2
58	Guinea-Bissau	2
59	Guyana	13
60	Haiti	11
61	Honduras	11

62	Hong Kong	9
63	Hungary	4
64	India	7
65	Indonesia	8
66	Iran	1
67	Iraq	1
68	Ireland	3
69	Israel	1
70	Italy	3
34	Ivory Coast	2
71	Jamaica	11
72	Japan	9
73	Jordan	1
74	Kampuchea, Dem.	8
173	Kazakhstan	6
75	Kenya	2
176	Kirghiz	6
76	Korea, Dem. Rep.	9
77	Korea, Rep. of	9
78	Kuwait	1
79	Lao PDR	8
165	Latvia	5
80	Lebanon	1
81	Lesotho	2
82	Liberia	2
83	Libya	1
164	Lithuania	5
84	Madagascar	2
85	Malawi	2
86	Malaysia	8
87	Mali	2
88	Malta	3
89	Mauritania	2
90	Mauritius	2
91	Mexico	12
168	Moldavia	5
92	Mongolia	6
93	Morocco	1
94	Mozambique	2
21	Myanmar	8
95	Nepal	7
96	Netherlands	3
97	New Zealand	10
98	Nicaragua	12
99	Niger	2

100	Nigeria	2
101	Norway	3
102	Oman	1
103	Pakistan	7
104	Panama	12
105	Papua New Guinea	10
106	Paraguay	13
107	Peru	13
108	Philippines	8
109	Poland	4
110	Portugal	3
161	Puerto Rico	11
160	Qatar	1
111	Romania	4
145	Russia	5
112	Rwanda	2
113	Sao Tome	2
114	Saudi Arabia	1
115	Senegal	2
180	Serbia	4
116	Seychelles	7
117	Sierra Leone	2
118	Singapore	8
178	Slovenia	4
119	Solomon Islands	10
120	Somalia	2
121	South Africa	2
122	Spain	3
123	Sri Lanka	7
124	St. Christopher/Nevis	11
125	St. Lucia	11
126	St. Vincent/Grenadine	11
127	Sudan	2
128	Suriname	13
129	Swaziland	2
130	Sweden	3
131	Switzerland	3
132	Syria	1
162	Taiwan	9
175	Tajikstan	6
133	Tanzania	2
134	Thailand	8
135	Togo	2
136	Tonga	10
137	Trinidad & Tobago	11

138	Tunisia	1
139	Turkey	1
177	Turkmen	6
140	Uganda	2
171	Ukraine	5
141	United Arab Emirates	1
142	United Kingdom	3
143	United States	14
144	Uruguay	13
174	Uzbekistan	6
146	Vanuatu	7
147	Venezuela	13
148	Vietnam	8
163	Virgin Islands	11
149	Western Samoa	10
150	Yemen	1
151	Yugoslavia	4
152	Zaire	2
153	Zambia	2
154	Zimbabwe	2

ENERGY AND ENVIRONMENT TRADE DATABASE USER MANUAL

APPENDIX G

DATA EDITING

APPENDIX G: DATA EDITING

This appendix presents the general rules and procedures for data entry and editing, and an overview of the data entry and editing menus for company data and contact data. It also discusses the Maintenance menu.

The data in the Energy and Environment Trade Database are contained in six discrete data files corresponding to the following categories (see Appendix B for additional information):

- Main company data
- Contacts
- Products or services offered
- Export interests:
  - Products or services
  - Countries
  - Regions

The structure of the data editing menus is based on this internal program file organization, rather than the menus in the other parts of the database, since the editing function requires separately entering and modifying information in one or more of the program files.

As a general rule, data entry and editing are done through separate menu selections for each of these data files. For example, entering new contacts and editing existing contacts are accomplished through the menu option **{Contacts Enter/Edit}**, while entering or editing products or services offered are done through the menu option **{Products}**.

Data Entry and Editing Rules

Several general rules govern data entry and editing:

- For the most part, the cursor keys, INSERT, DELETE, and BACKSPACE, behave as they do in some standard word processing programs. The INSERT key toggles between the overwrite and insert modes.

- When prompted to enter a two-letter state abbreviation, pressing ENTER/RETURN on a blank field or entering an incorrect abbreviation will cause a menu to pop up with a list of all U.S. states and Canadian provinces. Select a state or province using the arrow keys and press ENTER/RETURN.

- In some text fields, the data options have been pre-defined. When the cursor enters these fields, a message at the bottom of the screen will inform the user that by pressing the space bar, the allowable options will be shown in the data entry field. Continue to press the space bar until the correct option appears, then press ENTER/RETURN.

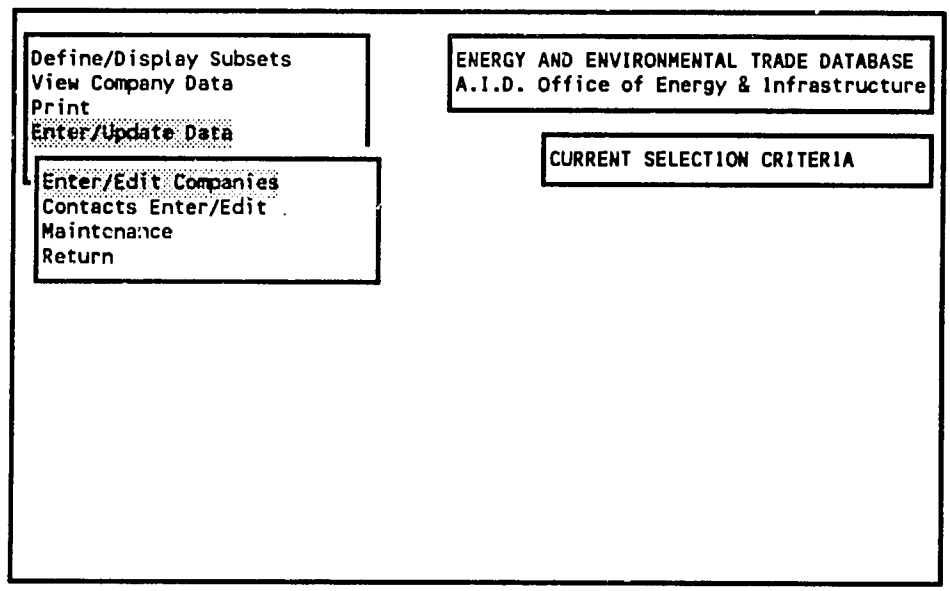
- In some numeric fields, the range of numbers allowed has been pre-defined; for example, only numbers between 0 and 3, inclusive, may be allowed. The cursor cannot exit such a field until a number has been entered that falls within the allowable range.

- In some long text fields, the user must enter text in a box drawn on-screen. Although the text in the box can scroll as the user enters text, the user should only type as much text as will fit in the box without scrolling. If too much text is entered, the program will issue a warning and not allow the user to exit from the box until the text is reduced to the correct length. In some cases, spaces at the end of the text may need to be deleted in order to exit the box.

Data Entry and Editing Menus for Company Information

If the user has entered the correct password, choosing **{Enter/Update Data}** from the main menu will produce the menu shown in Exhibit G-1.

Exhibit G-1



Choose **{Enter/Edit Companies}** to work with all data except contacts, producing the menu shown in Exhibit G-2.

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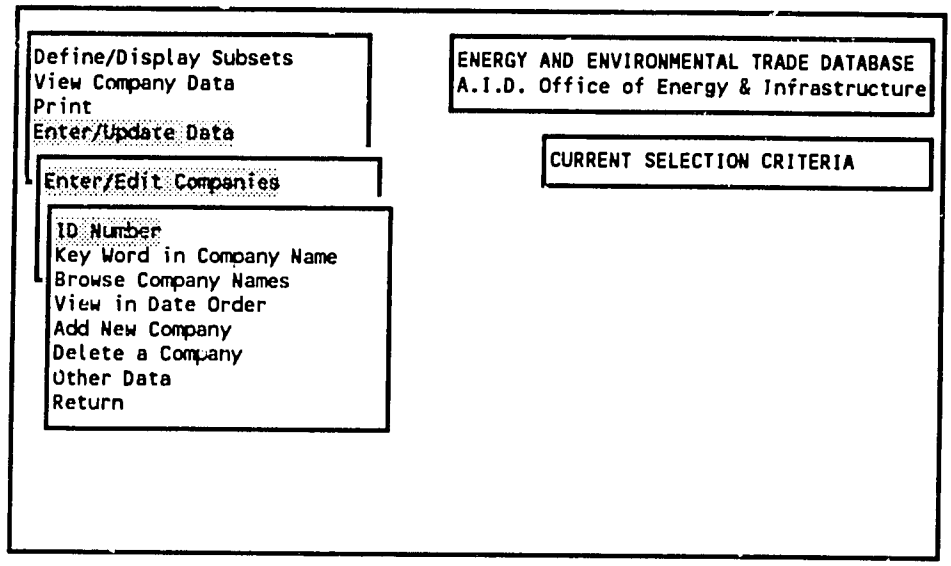
Exhibit G-2

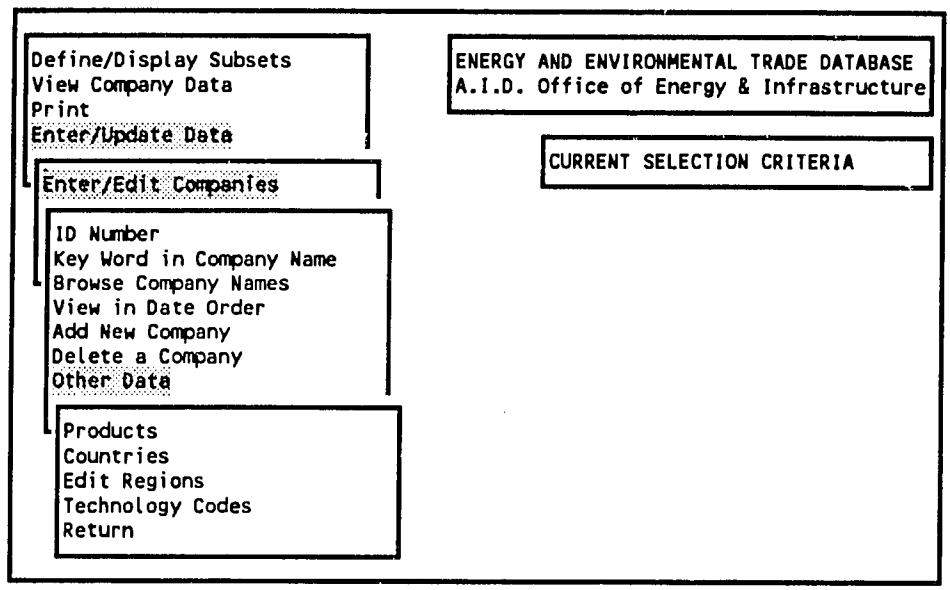


The first four options in this menu are used to locate companies to edit information. The first three options are essentially identical to those seen in the **{View Company Data}** option from the main menu. Once a company has been selected using one of these options, the same data screens as those used in the **{View Company Data}** and **{Display Subsets}** menus are presented. However, the information presented in the screens can be now be edited.

The **{Add New Company}** option presents the user with empty data entry screens in the same formats as the data editing screens. A company ID number will be automatically generated by the program when the new company is entered. The **{Delete a Company}** option deletes all company information, all associated contacts, and all links to products and services and countries and regions of interest.

The **{Other Data}** option produces the menu shown in Exhibit G-3.

Exhibit G-3



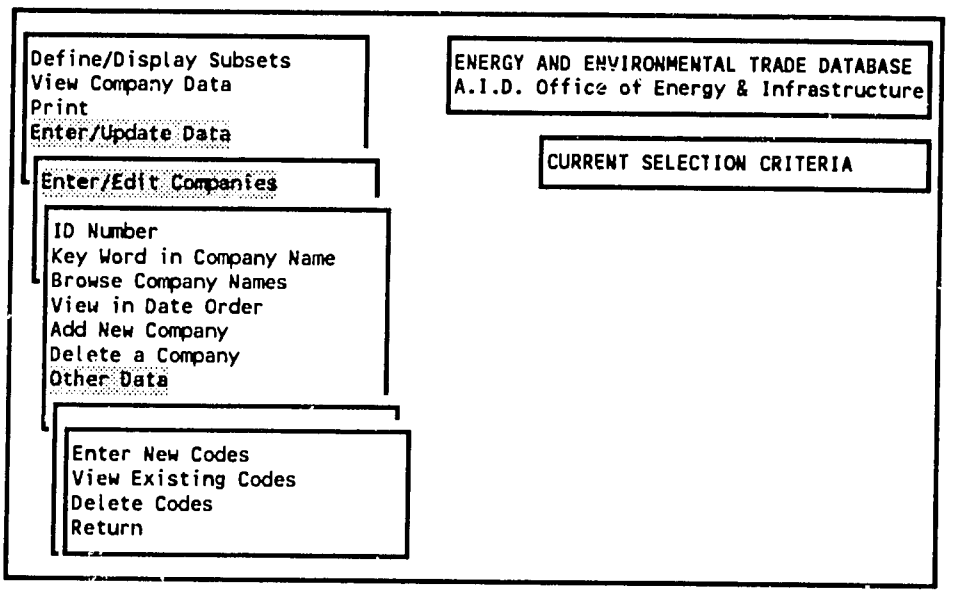
From this menu, the **{Technology Codes}** option allows entering, editing, and deleting products and services that a company either produces or is interested in exporting. The **{Countries}** and **{Edit Regions}** options allow entering, editing, or deleting countries or regions of export interest to a company. Under each of these options, the relevant company is first identified. Then the program presents a column-oriented screen for choosing appropriate products/services, countries, or regions.

The **{Products}** option allows the entering, editing, or deleting of product-specific information[1] Entering, editing, and deleting company and region data are all performed from the same column-oriented screen. These actions are separate for the **{Technology Codes}** option and its submenu, shown in Exhibit G-4.

[1] These data are not visible from the data viewing options at this point, it was included in an earlier version of the database. The data editing module is kept here to preserve this option for potential future use.

Exhibit G-4 shows the submenu that is displayed when the **{Technology Codes}** option is chosen (the submenu covers the entire preceding menu due screen size limits).

Exhibit G-4



After choosing one of the options from the bottom menu, one option from the menu shown in Exhibit G-5 must be chosen.

Exhibit G-5

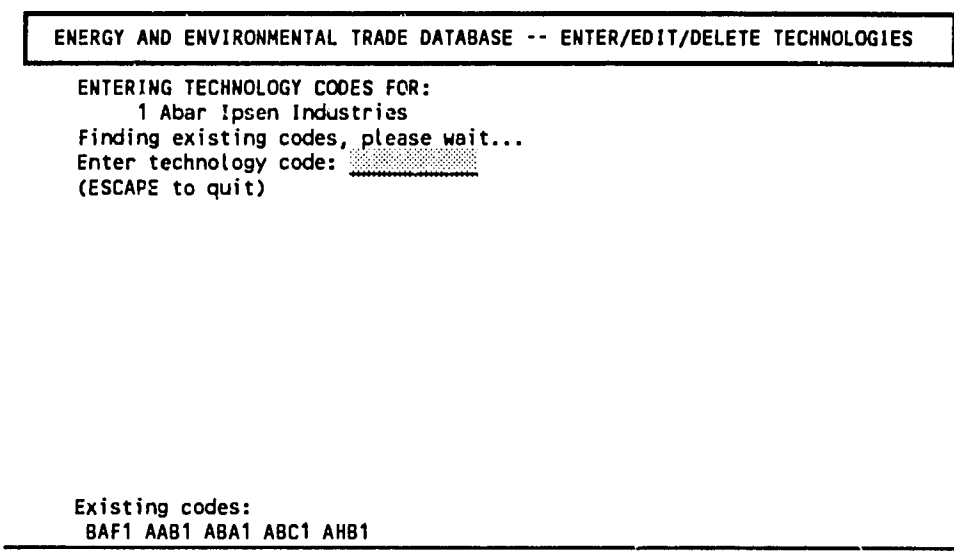
```
      TECHNOLOGY AND TRADE DATABASE -- ENTER/EDIT/DELETE TECHNOLOGIES


   Do you want to ENTER technologies for:
       (1)  Interest In Technologies
       (2)  Produce Technologies
       (0)  Return
   Choice:  0
```

Option 1 is for products and services that a company is interested in exporting -- information gathered from interviews with a subset of some of the companies in the database. Option 2 is for products and services that a company actually offers.

Once a selection is made from this menu, the relevant technology (product)/service codes are entered to either enter as new data or delete, as shown in Exhibit G-6.

Exhibit G-6

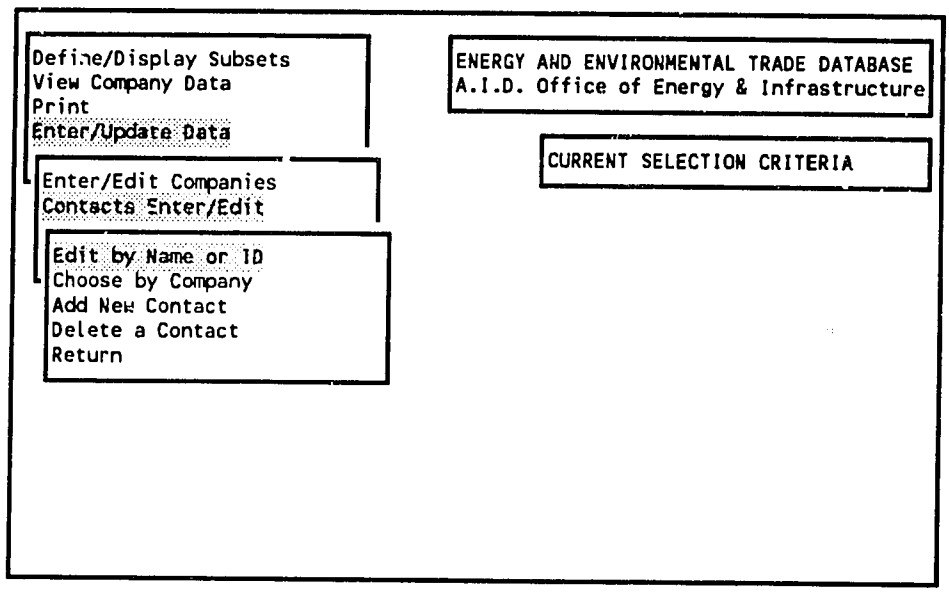


The codes already entered (or available for deletion) are shown in the last line of the screen.

Data Entry and Editing Menus for Contact Information

Choosing the **{Contacts Enter/Edit}** option from the menu shown in Exhibit G-1 will bring up the menu shown in Exhibit G-7.

Exhibit G-7



The first two options are used for locating a contact to edit. The first option **{Edit by Name or ID}** produces the screen shown in Exhibit G-8 and should be used if the name or ID number of the contact is already known.

Exhibit G-8

```
Select CONTACT

Enter letter of alphabet as lower bound for browsing
or Contact ID number:
```

Enter the ID number of a contact to directly retrieve that contact's information for editing in a full-screen format, as shown in Exhibit G-9.

Exhibit G-9

```
                    TRADE DATABASE
                 CONTACTS AT COMPANIES

              Contact ID:     185
              Company ID:     186


     Lastname    Schott
     First name  William
     Honorific   Mr.
     Title       Marketing & Sales Manager
     Phone       305-233-4249
     Fax
     Primary Contact for this company? (Y/N):  Y

     Date this file was last edited  08/13/91
```

To locate a contact by their name, enter the first few letters of the contact's last name in the prompt in Exhibit G-8 and press ENTER/RETURN to bring up the column-oriented screen seen in Exhibit G-10, with the cursor placed on the row of the first person whose last name begins with the letters entered.

Exhibit G-10

CHOOSE CONTACT

ID	CONT_ID	LASTNAME	FIRSTNAME
291	290	Sarthou	Tito
76	75	Scear	George
78	391	Scharp	A.
47	46	Schgramm	Roger
192	191	Schlepp	Doug
31	30	Schnieder	Fred
186	185	Schott	William
264	263	Schriver	Susan
8	8	Scott	Jim
317	316	Scowden	James
77	76	Sebastian	Michael
240	239	Seevers	Karen
287	286	Seymour	Richard
150	149	Shay	Mike
91	90	Siemer	Barbara
91	403	Siemer	A.B.
25	24	Simerly	David

[ALT-F = FREEZE, ALT-U = UNFREEZE, ALT-S = SEARCH]

Use the arrow keys to highlight the correct contact, then press RETURN to edit that contact's information in a full-screen format, as shown in Exhibit G-9.

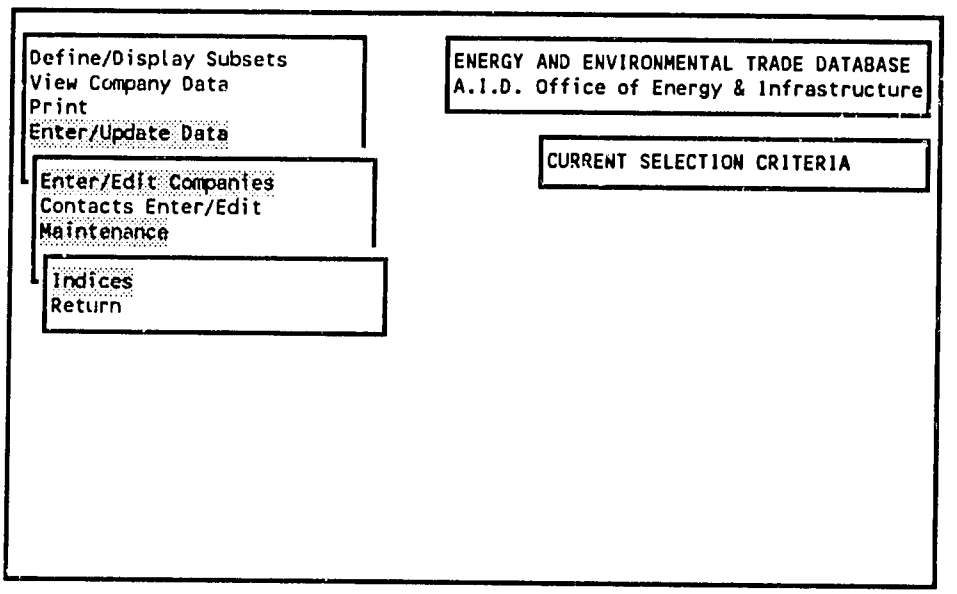
The **{Delete a Contact}** option operates in similar fashion. The contact is first identified, either by entering the contact ID number or locating the contact in the column-oriented screen shown in Exhibit G-10. Once a contact is located, the program asks for a confirmation of the delete instruction.

The **{Add New Contact}** option first asks for the new contact's company name, then presents the data entry screen seen in Exhibit G-9, but with blank fields. After all the available data have been entered, the program requests a confirmation that the data are correct before the program accepts the data.

Maintenance Menu

The "Maintenance" menu consists of one option **{Indices}**, as seen in Exhibit G-11.

Exhibit G-11



Choose this option to re-create all the indices that are used to maintain the order of the data in all of the database files. In rare instances, if a power outage is experienced during data entry, the index files may be damaged. If the data browsing screens seem to present data in an unusual order or if known records do not appear in the database, the problem is usually in the index files, not in the data files. This option may be able to correct the problem by re-building the indices.

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The Office of Energy and Infrastructure

The Agency for International Development's Office of Energy and Infrastructure plays an increasingly important role in providing innovative approaches to solving the continuing energy crisis in developing countries. Three problems drive the Office's assistance programs: high rates of energy use and economic growth accompanied by a lack of energy, especially power in rural areas; severe financial problems, including a lack of investment capital, especially in the electricity sector; and growing energy-related environmental threats, including global climate change, acid rain and urban pollution.

To address these problems, the Office of Energy and Infrastructure leverages financial resources of multilateral development banks such as The World Bank and the InterAmerican Development Bank, the private sector and bilateral donors to increase energy efficiency and expand energy supplies, enhance the role of private power, and implement novel approaches through research, adaption and innovation. These approaches include improving power sector investment planning ("least-cost " planning) and encouraging the application of cleaner technologies that use both conventional fossil fuels and renewable energy sources. Promotion of greater private sector participation in the power sector and a wide-ranging training program also help to build the institutional infrastructure necessary to sustain cost-effective, reliable and environmentally sound energy systems integral to broad-based economic growth.

Much of the Office's strategic focus has anticipated and supports recently enacted congressional legislation directing the Office and A.I.D. to undertake a "Global Warming Initiative" to mitigate the increasing contribution of key developing countries to greenhouse gas emissions. This strategy includes expanding least-cost planning activities to incorporate additional countries and environmental concerns, increasing support for feasibility studies in renewable and cleaner fossil energy technologies that focus on site-specific commercial applications, launching a multilateral global energy efficiency initiative and improving the training of host country nationals and overseas A.I.D. staff in areas of energy that can help reduce expected global warming and other environmental problems.

The Office also helps developing countries speed their economic development through promoting technology cooperation between U.S. suppliers and developing country companies, institutions and governments. This effort involves Business Opportunity Identification to define and analyze the range of commercially viable trade and investment opportunities, technologies and services that have a positive impact on the environment and are appropriate for developing countries; Venture Promotion to encourage the involvement of the U.S. private sector; Innovative Finance; and Policy Development assistance to developing counties as they pursue policy and regulatory changes to provide market incentives for environmentally beneficial technologies.

To pursue these activities, the Office of Energy and Infrastructure implements the following six projects: (1) Biomass Energy Systems and Technology Project (BEST); (2) The Renewable Energy Applications and Training Project (REAT); (3) The Private Sector Energy Development Project (PSED); (4) The Energy Training Project (ETP); (5) The Energy Technology Innovation Project (ETIP); and (6) The Energy Efficiency Project (EEP).

The Office of Energy and Infrastructure helps set energy policy direction for the Agency, making its projects available to meet generic needs (such as training), and responding to short-term needs of A.I.D.'s field offices in assisted countries.

Further information regarding the Office of Energy and Infrastructure projects and activities is available in our Program Plan, which can be requested by contacting:

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