PROJECT facts

U.S. DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY

Systems, Analyses and Planning

09/2007

NETL's 2007 Coal Power Plant Database

Background

The National Energy Technology Laboratory (NETL) Coal Power Plant Database (CPPDB) consolidates large quantities of information on coal-fired power plants in a single location. The database contains 191 fields and provides information on over 1,700 boilers and associated units. The database supports Fossil Energy (FE) and NETL project management and analysis studies and is available in both the Excel and Access formats.

The consolidated version of the CPPDB is a single Excel spreadsheet containing the collected information. This update of the CPPDB has been upgraded to include pivot table and Access versions. The pivot table and Access versions of the database provide the user with methods of viewing and searching the data that were unavailable in previous versions.

Data and Resources

The NETL CPPDB contains emissions, generation, location, and firing information for all coal power plants in the United States. The information is based off of the most recent release of the Annual Steam-Electric Plant Operation and Design data form, Energy Information Agency (EIA) form 767, available at the time of the update. The most current data available at the time of the update is from 2005. All information collected from resources other than EIA 767 was collected for the corresponding year. Along with EIA form 767, the other resources used include:

- EIA form 423
- National Emissions Inventory database
- Clean Air Markets Database

Excel Version

The Excel Spreadsheet version of the database is similar to previous version and is for those want to have full control of the data, manipulate the data within Excel, or/and may have existing tools or systems to use with the updated version. This version is structured in the same manner as the last version of the database. The columns are labeled using the identical color scheme and names as the previous version, created in 2005. Several additional few columns of data have been added including information regarding particulate data.

Pivot Table Version

The pivot table version of the database has been created for users already familiar with the use of pivot tables. Pivot tables allow users to easily create tables, restructure tables, and manipulate data. This version of the database contains nine separate Excel worksheets, each containing a unique default pivot table designed to provide a starting point for the user to create crosscuts of certain types of data. The main database, the source of the pivot table data, has been hidden to prevent users from unintentionally changing values.

CONTACTS

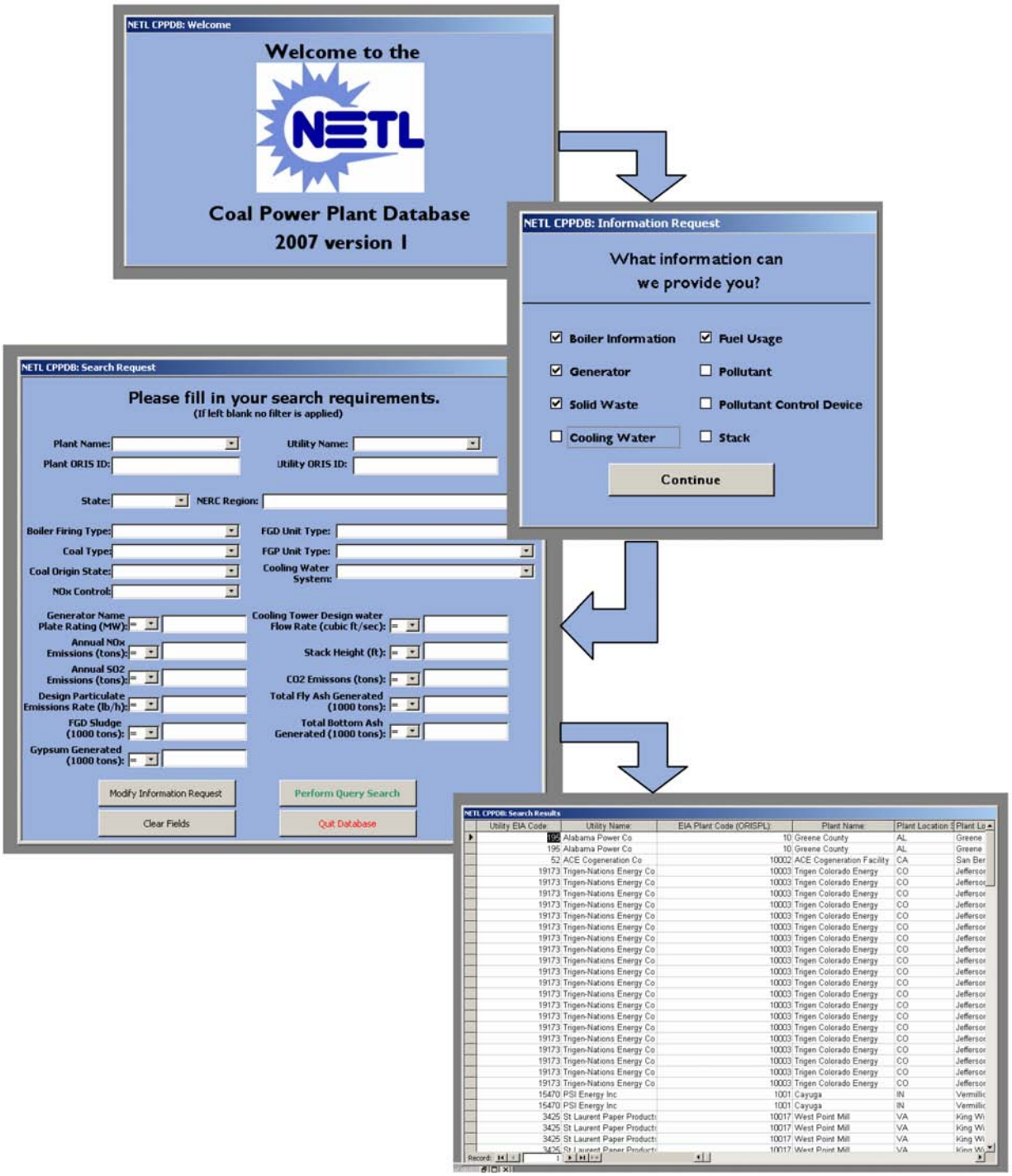
Erik Shuster
National Energy Technology Laboratory
626 Cochrans Mill Road
P.O. Box 10940
Pittsburgh, PA 15236
412-386-4104
erik.shuster@netl.doe.gov

Peter Herz
Technology & Management Services
18757 North Frederick Road
Gaithersburg, MD 20879
301-670-6390 x134
pherz@tms-hq.com

Access Version

An Access-compatible version of the database was created in order to allow quick searches of the substantial amount of data stored in the database, particularly for those users who are familiar with Access and prefer its functionality.

Multiple forms are used to govern the user's flow through the Access controls and to determine the user's needs. These forms were created to allow the user to select various categories of information to view and to enter specific search criteria that will hasten the search process. The results of the query are displayed in an output form. This form can be exported to Excel or other applications if the user wishes to work further with the data.



Access Version Form Flow

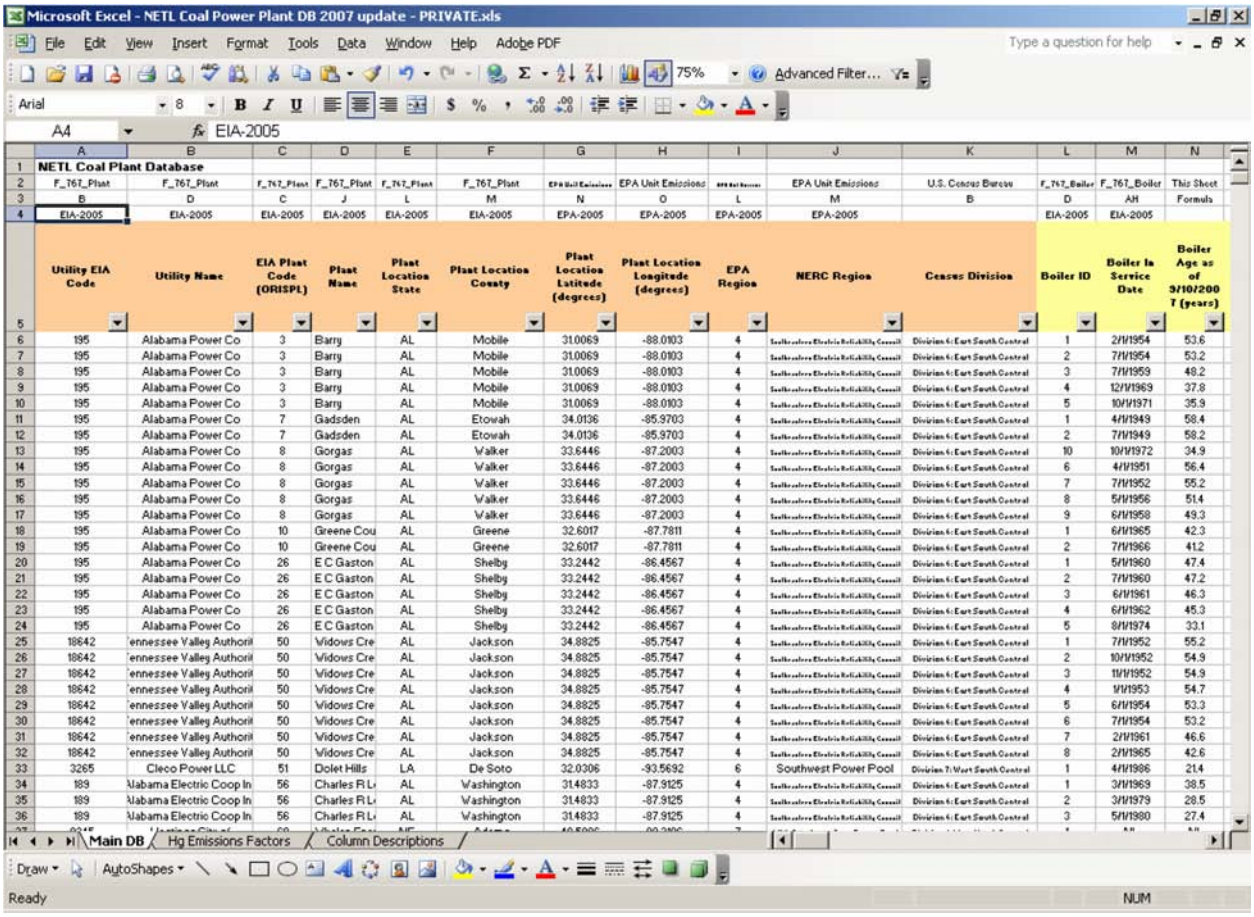
Objectives

- Update the 2003 data maintained in the CPPDB with 2005 data.
- Provide QA and QC checks of the updated database.
- Develop a spreadsheet that can be queried with pivot tables.
- Expand the available particulate matter data available in the CPPDB.
- Create a user-friendly Access version of the database.

Accomplishments

The CPPDB has been updated with the 2005 data available from each of the utilized resources. The database is available on the following web address: **http://www.netl.doe.gov/energy-analyses/technology.html.** The three versions of the database have been created and all the data maintained in these versions have been through an extensive QA/QC process. The QA/QC process involved a random spot check of over 350 individual data points to ensure the correct information was transferred from the resource to the database. Along with the spot check, all equations used in the database were analyzed to determine if they were appropriately applied.

Not only has the information maintained in the database been certified, both the pivot table and Access version have been through an extensive QA/QC process as well. All calculations and various functions of the pivot table version have been checked to ensure the correct values are displayed in the tables. The Access version of the database has been tested to ensure no bugs are found in the code and the data is displayed correctly.



Excel Version

CUSTOMER SERVICE

1-800-553-7681

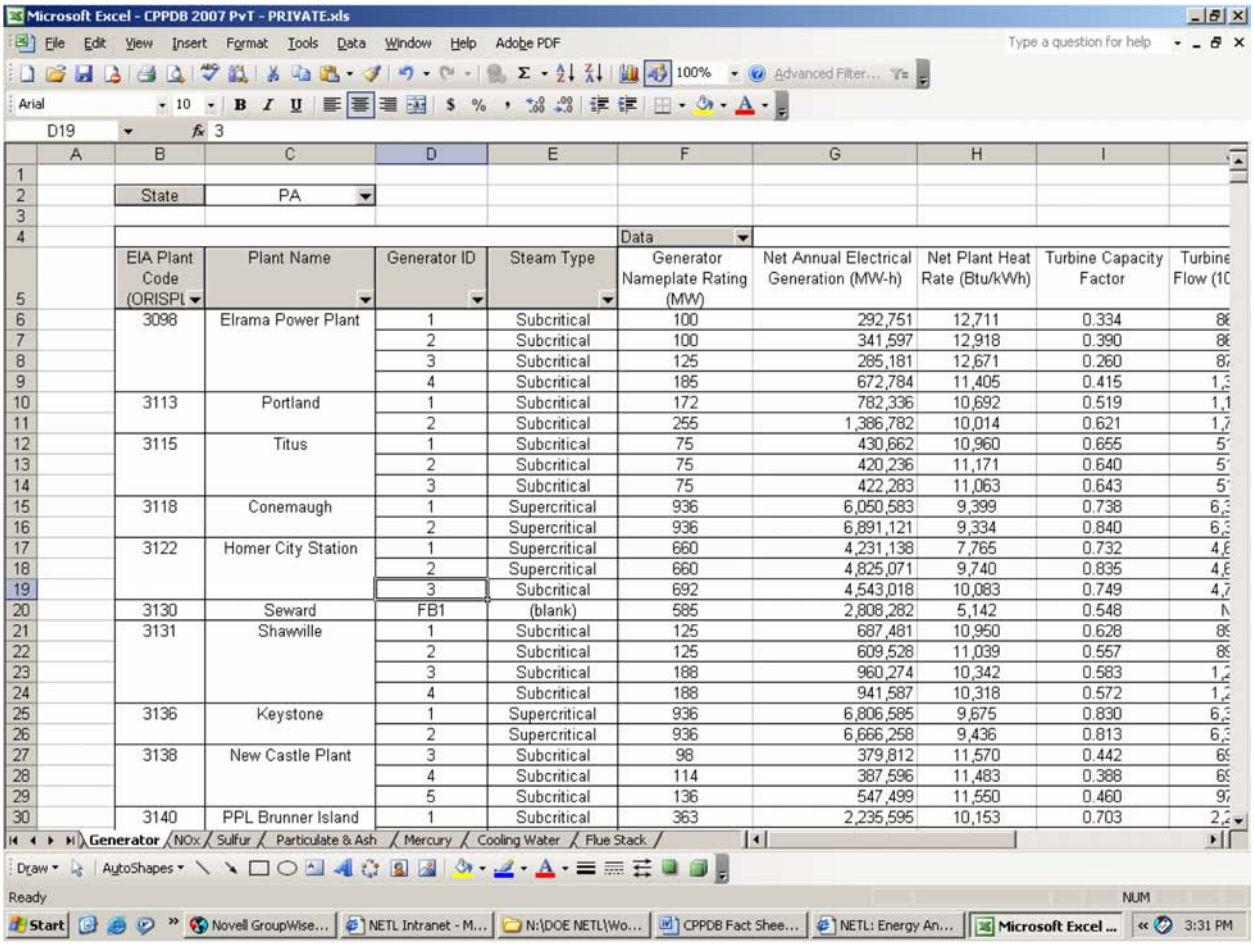
WEBSITE

www.netl.doe.gov

Benefits

The CPPDB is very useful for project planning purposes. The data contained within the database describes the layout of the coal-fired power generation in the United States. Any person interested in managing a coal-related project can refer to the database to plan the most effective application of resources.

This database is also useful to any person interested in understanding the U.S. coal generation landscape. The three versions allow all parties—from engineers to laymen—easy access to information contained in the database. NETL's database can be a valuable tool for performing various analyses on our nation's existing coal-fired fleet.



Pivot Table Version