Instructions for data access and code

The European Union Emissions Trading Scheme and Fuel Efficiency of Fossil Fuel Power Plants in Germany

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This paper is based on confidential administrative micro data from the German Statistical Offices. Data access is limited to institutions of higher education or other institutions entrusted with tasks of independent scientific research, and is dependent on project approval by the German Statistical Offices (subject to a fee). Interested researchers can obtain more information on data access and conditions from the Research Data Centre of the Federal Statistical Office and of the Statistical Offices of the Federal States at https://www.forschungsdatenzentrum.de/en.

The final data set in this paper is based on the following two different confidential and restricted data sets provided by the German Statistical Offices as well as the plant list ("Kraftwerksliste") provided by the Federal Network Agency ("Bundesnetzagentur"), which was merged to the two different data sets by the German Statistical Offices (the statistical office had to execute the merge due to confidentiality reasons):

- AFiD-Panel Energy Plants ("AFiD-Panel Energiebetriebe")
- Annual data of the monthly report on electricity generating plants ("Jahresdaten des Monatsberichtes zur Elektrizitätsversorgung der Anlagen für die allgemeine Versorgung")

The time period of the two data sets used in this analysis is from 2003 to 2012. Since the confidential micro data is restricted and formally anonymized, I am not able to publish the data set online. Furthermore, to secure anonymity of the individual plants, analyses are in general subject to review by the Research Data Centre of the German Statistical Offices. For example, descriptive statistics with only a low number of observations cannot be generated (see, e.g., annual 10 and 90 percentiles of ETS intensity for lignite power plants, which could not be presented in the paper).

To support replication of the analyses in this paper, I provide do-files for data preparation, descriptive statistics, and analyses as well as an R-script to generate the figures and tables in the paper.

Upon data access provided by the German Statistical Offices, the following files can be executed to replicate the results:

1. Run the file "0_master.do" that executes the do-files "1_data_preparation.do", "2_descriptive.do" and "3_results.do" successively. In these files, regression results are generated and furthermore, the output of these files can be used in the second step (to construct the figures and tables of the paper and the web appendix).
2. Run the file "4_figures.R" to generate the figures and tables of the main text and the web appendix.

I am happy to help with clarifying questions regarding the analyses done in the paper via e-mail (robert.germeshausen@zew.de).