DESCRIPTION OF DOCUMENTATION FOR:

"The Influence of Renewable Energy's Changing Cost on Its Capacity Growth"

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The data management and analysis for the paper were conducted using R version R 3.3.2 GUI 1.68 Mavericks build (7288) using RStudio version 1.0.136 on a Mac System. In addition to the base R package, several packages are used. These can be seen at the top of the Rmd document loaded in the first code chunk.

The paper was knitted to pdf using the elsevier article format contained in the rticles package. Knit- ting to pdf requires a LaTeX installation on your computer, though you will not need to write any LaTeX code directly.

The documentation is organized into three main directories (listed in order of importance for reproduction of results):

• Final Presentation: contains the Rmd.file and relevant files used to create the final presentation slide. The knitted slides, in html format, is also included here.

• Original Data: contains the data we collected in the most original form possible. All four datasets included here are in their original format. With the exception of "openpv_all" in CSV format, all other original datasets are in Excel format. Nothing in this file should be necessary to reproduce the results in the paper, but these files serve as a record for the data used in analysis.

• Processing and Analysis: contains all data called by the Rmd file in analysis, as well as supplementary code that is called by the source command in the Rmd file.

  • Constructed Data: this folder contains a new cleaned dataset after cleaning the original datasets and combining them into a desired format.

  • Importable Data: The importable data folder contains the original data files modified to the minimal extent necessary to import them into R. All Excel documents here are converted to CSV.

  • Supplementary Code: The Supplementary code folder contains script (Data Tidy) that is called by the Rmd code and do not need to be run directly by the user. This code does the data cleaning necessary to put the data into analysis form. It is excluded from the Rmd file only to keep the document cleaner. All further processing is done in the code. The R Data Tidy file here, which has the identical code as the Rmd. Data Tidy file, is created to help R source these codes.

Moreover, this folder also contains the Data Appendix code and file.

• Source code: Here you will find the Rmd file that reproduces the entire paper, along with all auxiliary files created in process of knitting the pdf. Mybibfile contains the necessary information for R to generate proper citations.

To reproduce all results reported in paper:

Copy the Documentation folder to your computer. Make sure to leave the folder structurally intact. The code has relative paths to the data and supplementary code that assume the data is in this folder structure. PLEASE DO NOT RENAME this folder.

Open the Rmd file in the Source Code folder using R Studio. Make sure all required packages are installed. Run all code in the file. If the output format is changed to an R notebooks format, the chunks can be run one at a time to see individual results. Knit the file to elsevier article. (Knitting to other pdf formats should change only the formatting. You must have a LaTeX installation on your computer to do this.