

REPLICATION PACKAGE

Paper: Electricity demand has not become more price-responsive despite ninety years of technological change
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Project URL: <https://meta-analysis.cz/electricity>

PACKAGE CONTENTS

The replication package contains the following files and folders.

Main directory files:

- `electricity.xlsx`: Main input dataset (sheet `data`, one row per estimate; sheet `var_list` documents the variables).
- `electricity.R`: R replication script (see below).
- `studies.xlsx`: List of the primary studies (sheet `papers`) behind the included-studies appendix.

Subfolders:

- `figures/`: Output folder for all figures of the paper (each written as `.pdf` with a companion `.png`).
- `tables/`: Output folder for all tables of the paper (`.tex`); created automatically when the script runs.

SOFTWARE REQUIREMENTS

- R version 4.0 or higher (certified on R 4.6.0).
- R packages `readxl`, `sandwich`, `lmtest`, `BMS`, `metafor`, `ggplot2`, `patchwork`, `scales`, `ragg`, and `jsonlite`. Missing packages are installed automatically.

REPLICATION INSTRUCTIONS

Run the following command in R from the package directory:

```
source("electricity.R")
```

(equivalently, `Rscript electricity.R` from a terminal). The script performs the following:

- Imports the dataset and constructs the analysis variables (Marshallian-equivalent pool, 1%-winsorization).
- Produces the headline results (the identification ladder, the horizon path, and the two-clocks calendar-time test) with study-clustered inference.
- Runs the full publication-bias battery (FAT-PET, PEESE, WAAP, Top-10%, STEM, endogenous kink, MAIVE, p-uniform*, selection model) with two-way (study \times database) clustering.
- Performs Bayesian Model Averaging (BMS) together with the best-practice and robustness checks.

- Writes all tables of the paper as `.tex` files into `tables/`, all figures into `figures/`, and three plain-text result summaries (`results_headline.txt`, `results_model_averaging.txt`, `results_database_clustering.txt`).

NOTES ON REPRODUCIBILITY

- **Relative paths.** After downloading and unzipping the package, run all analyses from the directory where the files are extracted. The script locates its own folder, so no manual changes to file paths or working directories are required.
- **Determinism.** All results are deterministic except for the seeded MCMC in the Bayesian Model Averaging step, whose negligible sampling noise (≤ 0.002) does not affect any reported number.
- **Documentation.** Additional documentation and online appendices are available at <https://meta-analysis.cz/electricity/>.

CONTACT

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