Reproducible Research Repository

Not Too Much, Not Too Little: A Goldilocks approach to sustainable, universal electricity access in sub-Saharan Africa

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This review verifies the reproducibility of the exhibits included in the paper *"Not Too Much, Not Too Little: A Goldilocks approach to sustainable, universal electricity access in sub-Saharan Africa"*.

Contents in this review:

Main findings

- **Every exhibit of the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
  1. Verifying underlying data and the exhibits in the excel sheets.
- We conducted our reproducibility analysis based on the paper shared by the authors in the reproducibility package.
- **Verification Process and Data Handling**:
  - The reproducibility package relies on 1 type of data: open
- **Reproducibility Summary**:
  - **Data**: All data sources are publicly available and included in the reproducibility package.
  - **Code**: All excel files (from cleaning to analysis) are included in the reproducibility package.
  - **Outputs**: All outputs are generated in excel sheets and they are included in the reproducibility package.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

- **Figure 1** Does not apply. Does not show analysis results.
- **Figure 2** Does not apply. Does not show analysis results.

- **Table 1** Reproduced. Based on the *README_Uganda.docx*, 2030 values were verified against *Uganda _Electrification _Model _2030.xlsx* sheet "Summary of Tables" D13–D20 and "Summary of Financing" C36–C37. 2040 values were verified against *Uganda _Electrification _Model _2040.xlsx* sheet "Summary of Tables" F12–F19 and "Summary of Financing" C25–C26.
- **Table 2** Reproduced. Based on the *README_Zambia.docx*, values verified against *REMPFinancial _Model_2030.xlsx* specifically, `REMP investment 4_CS_Full_Sector!Q99`, lifetime program CAPEX from `1_Executive_Summary!O33`, donor request from `1_Executive_Summary!B10`, net viability-gap disbursements from `3_Sector_Dashboard!F156`, and Finance-Co sources equal uses from `1_Executive_Summary!F31`.
- **Table 3** Reproduced. Based on the *README_Madagascar.docx*, fandriana values verified against *giz2025-fr-Electrification Rurale Intégrée de Fandriana.pdf* pp. 2–4. Jiro Taratra values verified from:*giz2025-fr-Electrification Rurale Intégrée de Jiro Taratra.pdf* pp. 2–4.
- **Table 4** Does not apply. Does not show analysis results.

Reproduction Environment

Paper exhibits were reproduced on a computer with the following specifications:

- OS: Windows 11 Enterprise
- Processor: INTEL(R) XEON(R) PLATINUM 8562Y+ 2.80 GHz (2 processors)
- Memory available: 32.0 GB
- Software version: Microsoft Excel for Microsoft 365 MSO