

# Data Governance Plan for the Malawi Energy Access Project



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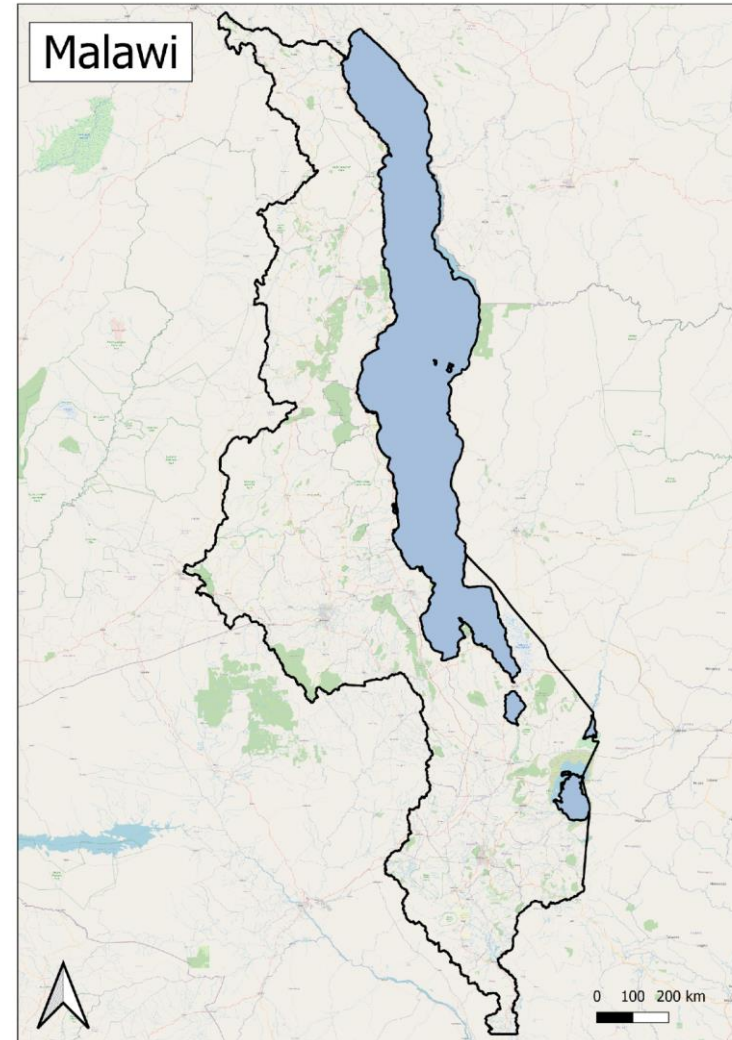
**Energy Modelling Platform Global (EMP-G)**

2024

# Introduction

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- Malawi Electrification Rate at 25.8%
- Energy Access Project under implementation
  - 180,000 households to be connected to the grid
  - Over 250,000 Solar Home Systems
  - The connections need to be tracked using a geospatial platform
  - The platform to also track clean cooking initiatives



# Context, Challenges, and Main Findings

The energy data governance plan will address these challenges

- Fragmented and inconsistent energy data
- Poor data quality
- Limited data accessibility
- Lack of coordination among stakeholders
- Lack of sustainability in data management



# Modelling Approach/Tool Implemented

The data governance framework is designed to support energy access modelling using tools such as onSSET and OnStove which require high-quality geospatial and demographic data.

- These tools help to simulate various scenarios for electrification and clean cooking initiatives.
- The database will follow a relational model with tables for population data, electricity data and clean cooking data

## Data Sources

- Primary data collected through field surveys and remote sensing
- Secondary data from national statistics and international organizations; Open data platforms such as OpenStreetMap and World Bank datasets

## Data Collection Tools

- Global Navigation Satellite System devices such as GPS
- MerjinMaps and QGIS for integrating the data into the platform.

# Assumptions & Scenarios

## Assumptions

- Availability of up-to-date and accurate data from government and third-party sources.
- Data entries will follow standardised formats and units of measurement
- Cross-system and temporal consistency checks will be done to ensure uniformity across datasets.

## Scenarios - Energy Access Pathways

- Grid Expansion
- Offgrid Electrification
- Clean Cooking
- Sensitivity analysis conducted to assess the impact of data quality and completeness on the outcomes of the modelling scenarios.

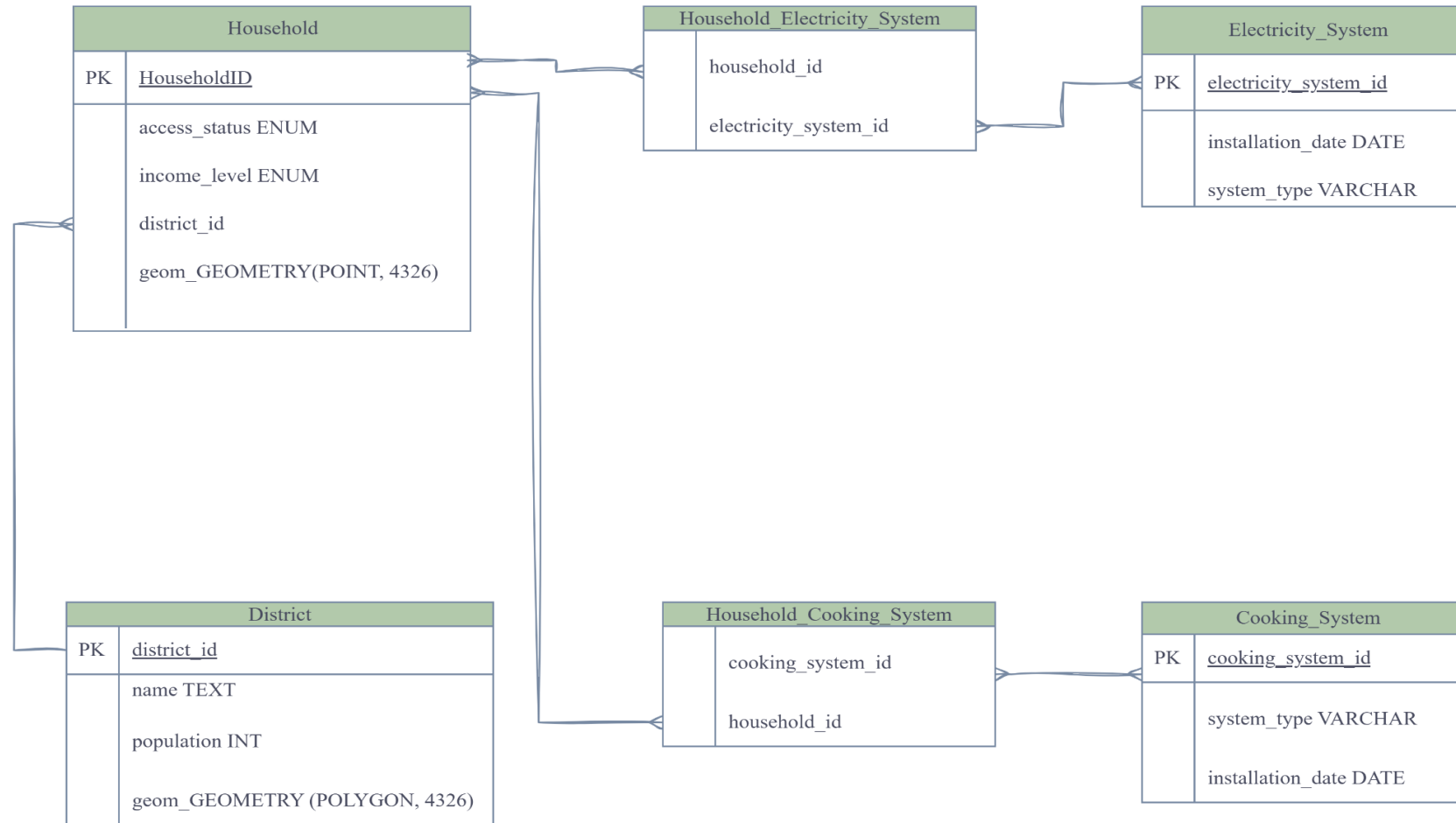
# Results

The Data Governance Plan provided the following insights:

- Informed the project of the need for complete data sets to avoid gaps
- The need to preserve data integrity across different stages of the project
- Informed the project of the importance of consistency when integrating data from multiple sources
- Provided clarity on who is responsible for data management, quality control, and decision-making processes

The project must comply with relevant data protection regulations and standards

# Energy Access Database Schema



# Conclusions and Policy Insights

- Government should develop a National Policy on Energy Data; designate a centralized data management body for energy and strengthen the capacity of government staff and other stakeholders in energy data management, analysis, and cybersecurity.

## Future Work

- Form a data governance working group which will oversee the development and operation of the energy access data platform
- Undertake a survey and stakeholder engagement meeting to understand the current situation on energy access data availability
- Organise training sessions on geospatial data management for key stakeholders in the energy sector



# Thank you