

*Regional Validation Workshop on the use of
Geographical Information Systems in the energy sector
July 26-28, 2016
Dakar, Senegal*

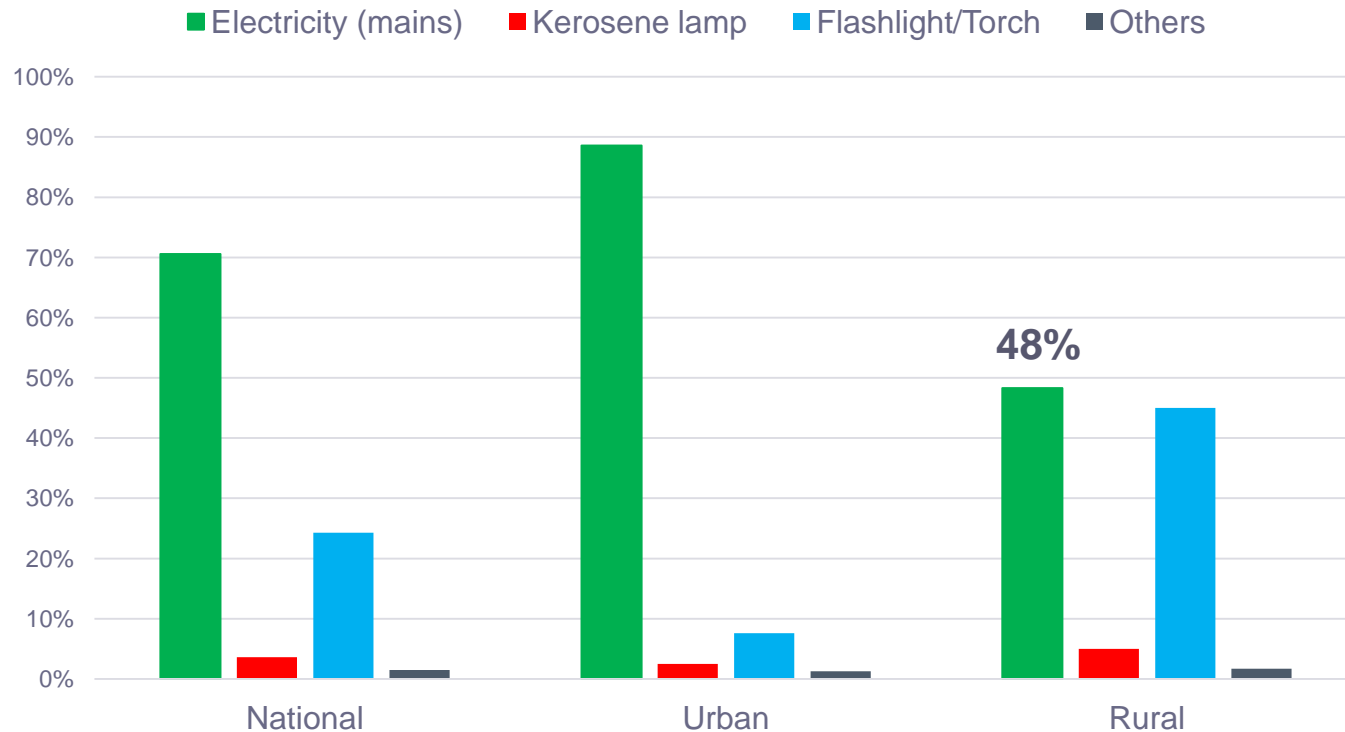
Energy and Rural Electrification Planning in Ghana

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Introduction

1. At the end of 2013, 48% of rural **households** have access to electricity.



Ghana Statistical Services (2014)

Agencies in charge of rural electrification

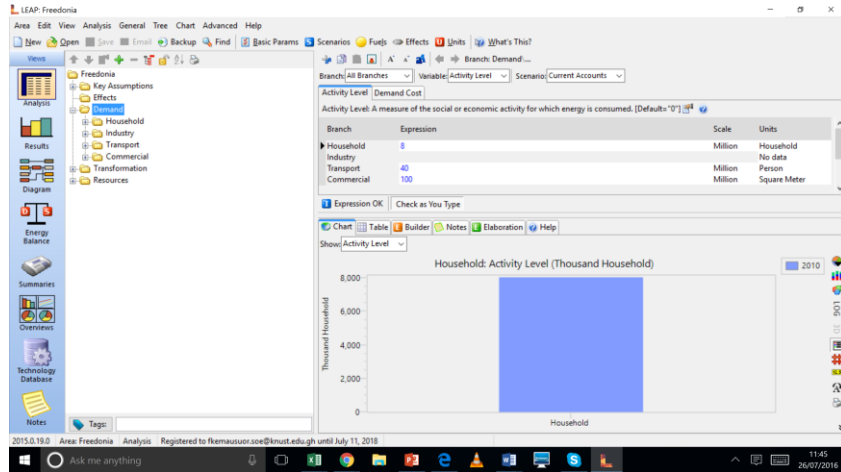
- Rural electricity planning is coordinated by the Ministry of Power.
 - Renewable and Alternative Energy Directorate
 - Ghana Energy Development and Access Project (GEDAP)
 - Energy Commission
- Many of remaining **un-electrified** rural households are in remote and island communities – off-grid and mini-grids targetted
- Renewable Energy Masterplan (REMP) under preparation, with **targets for RE mini-grids and solar systems** for remote and island communities

System	2020	2025	2030
Solar standalone (MW)	7	9	10
Solar Lanterns (units)	500,000	1,300,000	2,000,000
Mini-grids (units)	50	100	200

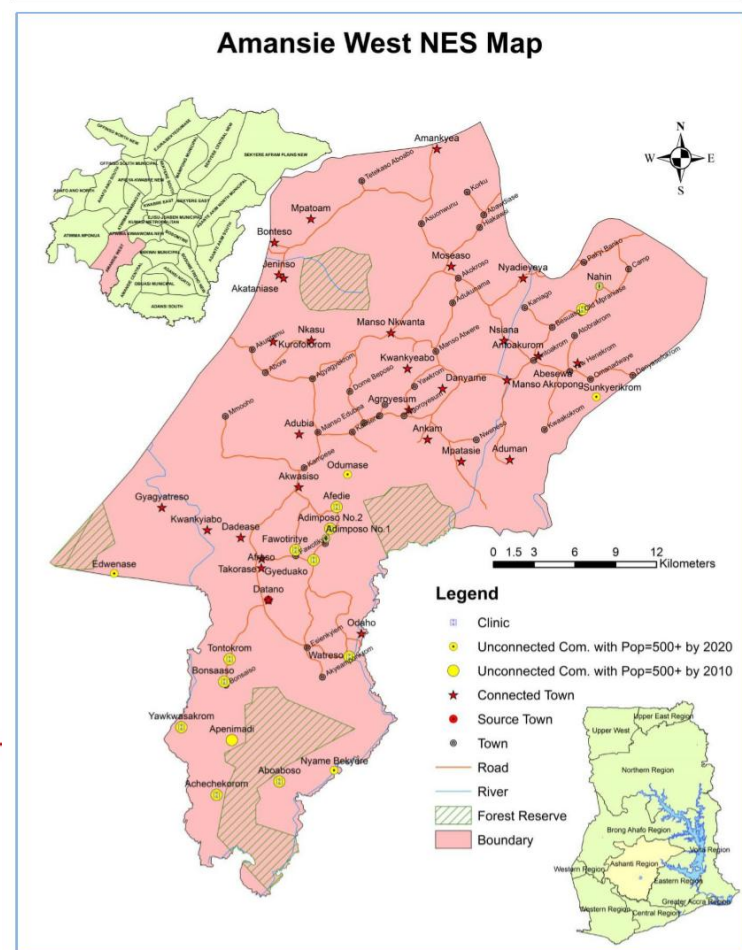
Source: REMF Taskforce (provisional)

Energy Planning Tools

1. Long Range Energy Alternative Planning Tool - EC



2. GIS – MoE Electrification Materplan Review



ENERGY COMMISSION



STRATEGIC NATIONAL ENERGY PLAN

(SNEP II)

VOLUME ONE

Energy Demand Projections for Ghana

2015 - 2035

Final Draft II

3. Ghana Energy Access Toolkit



The Ghana Energy Access Toolkit is an interactive web based platform for monitoring and evaluating energy access and renewable energy (RE) resources in Ghana. The platform presents both spatial and attribute data in a GIS context as well as statistical data. The tool is intended to inform and stimulate policies designed to attract public and private investment in the RE sector of Ghana.



Modules and notifications

Renewable Energy Resources

Wind, Solar and Other RE potential

Electricity Access Map

Community Access to Electricity

Energy Access Trendline

Electricity and LPG Trends

Energy Access Database

Power Generation, Electricity Access & Fuels

LPG Access Map

LPG Stations and Access

Help Centre

Help Information

Notifications

Energy Access Database

Power Generation, Electricity and LPG Access, Fuels

Help and User Interaction
Get Latest Help Information

Energy Access Trendlines
Electricity And LPG Trendlines

Electricity Access Map
Community Access to Electricity

LPG Access Map

Ghana Energy Access Toolkit

The screenshot displays the Energy Commission of Ghana's website. The browser address bar shows 'energycom.gov.gh'. The page features a navigation menu with categories: About, Regulation, Licensing, Renewables, Efficiency, Planning, Data Center, and News. The 'Data Center' menu is expanded, listing various resources. The 'Ghana Energy Access Toolkit' link is highlighted with a red rectangular box. Below the navigation, there are promotional banners for 'Call for Nominations GH Green Awards & Expo' and 'Energy Conservation Begins at Home'. The Windows taskbar at the bottom shows the system clock at 11:30 on 26/07/2016.

Energy Commission Ghana

energycom.gov.gh

Jul 26, 2016 Last Updated 1:14 PM, Jul 21, 2016 Documents Enquiry Gallery Public Notices

ENERGY COMMISSION
Securing Ghana's Energy Future Today

About Regulation Licensing Renewables Efficiency Planning Data Center News

Call for Nominations
GH Green Awards & Expo

Energy Conservation Begins at Home

NATIONAL ROOFTOP SOLAR PROGRAMME

Energy Conservation Begins at Home

NEDPIC

Energy Statistics

Ghana Energy Access Toolkit

Charcoal Tracking In Ghana

Energy Outlook for Ghana

Ghana Wholesale Electricity Market Watch - Monthly Bulletin

41.66.247.82:82/gheatweb

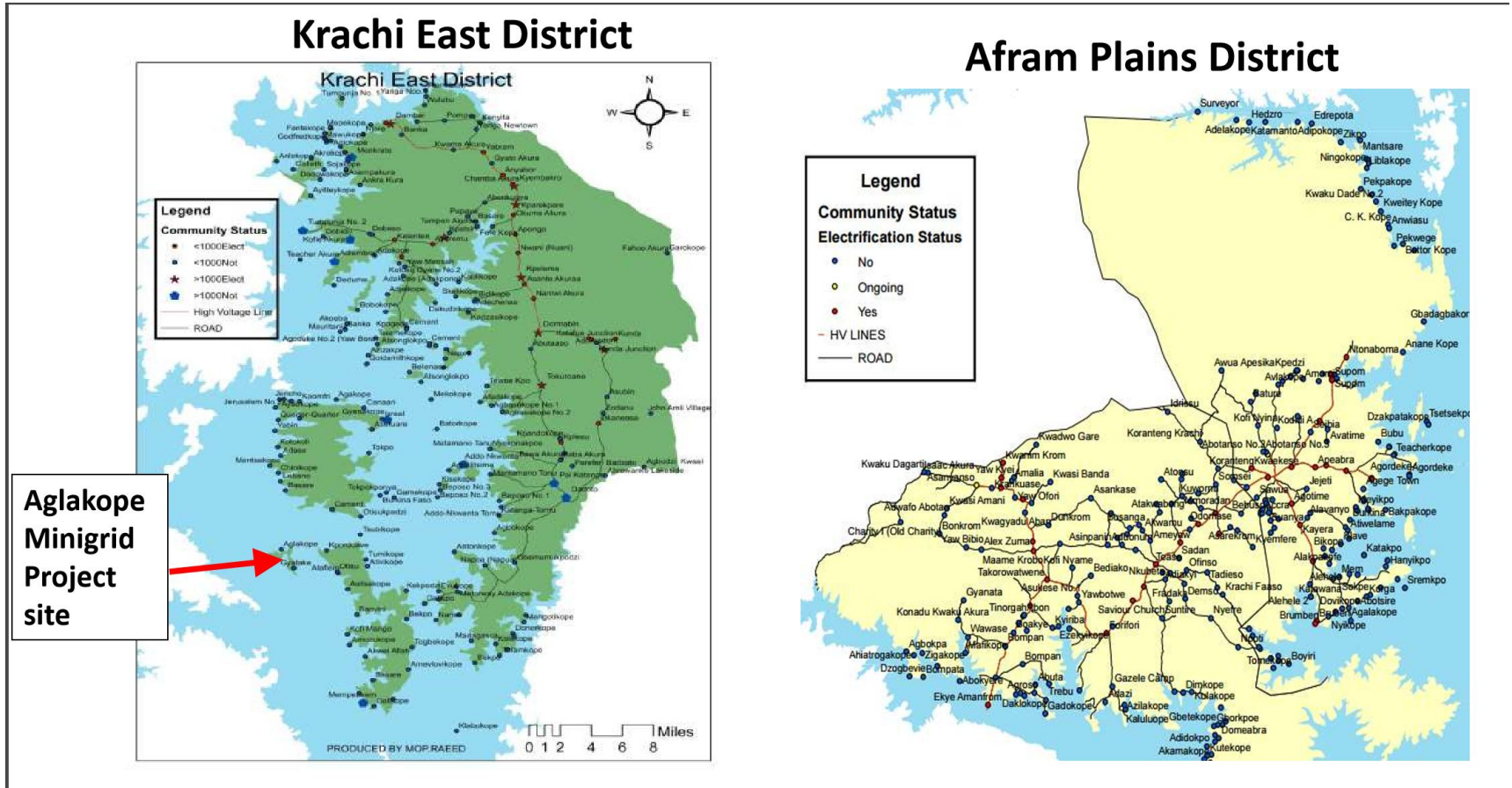
Ask me anything

11:30
26/07/2016

Ghana Energy Access Toolkit

The screenshot displays the Ghana Energy Access Toolkit web application. The browser address bar shows the URL ghea.energycom.gov.gh. The application header includes the Ghana Energy Access Toolkit logo and navigation links for Account, Sign In, and About us. The main interface features a map of Ghana with contour lines representing potential hydro sites. The map is overlaid with various energy sites, including Mini Hydro Sites (marked with blue triangles) and Transmission Lines (marked with grey squares). The legend on the left side of the map lists various energy resources and sites, such as RE Resources, Base Maps, Energy Maps, Climate Stations, Mini Hydro Sites, Wind Stations, Solar Radiation (K), Agro-ecological Zones, Charcoal Production, Diffuse Radiation, Direct Normal Solar Radiation, Forest Variation, Global Horizontal Solar Radiation, Municipal Waste, Potential Wind Sites, and Transmission Lines. The map also shows contour lines with values ranging from 47 to 56. The application interface includes a toolbar with options like Refresh, Maptip, Select Radius, Clear Selection, Query, Quick Plot, and Measure. The Windows taskbar at the bottom shows the system tray with the time 11:23 and date 26/07/2016.

4. GIS for rural mini-grid planning - MoP



Source: Wisdom Ahiataku-Togobo, Director, Renewable and Alternative Energy Directorate, Ministry of Power (2016)

Agency and contacts

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Thank you

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