



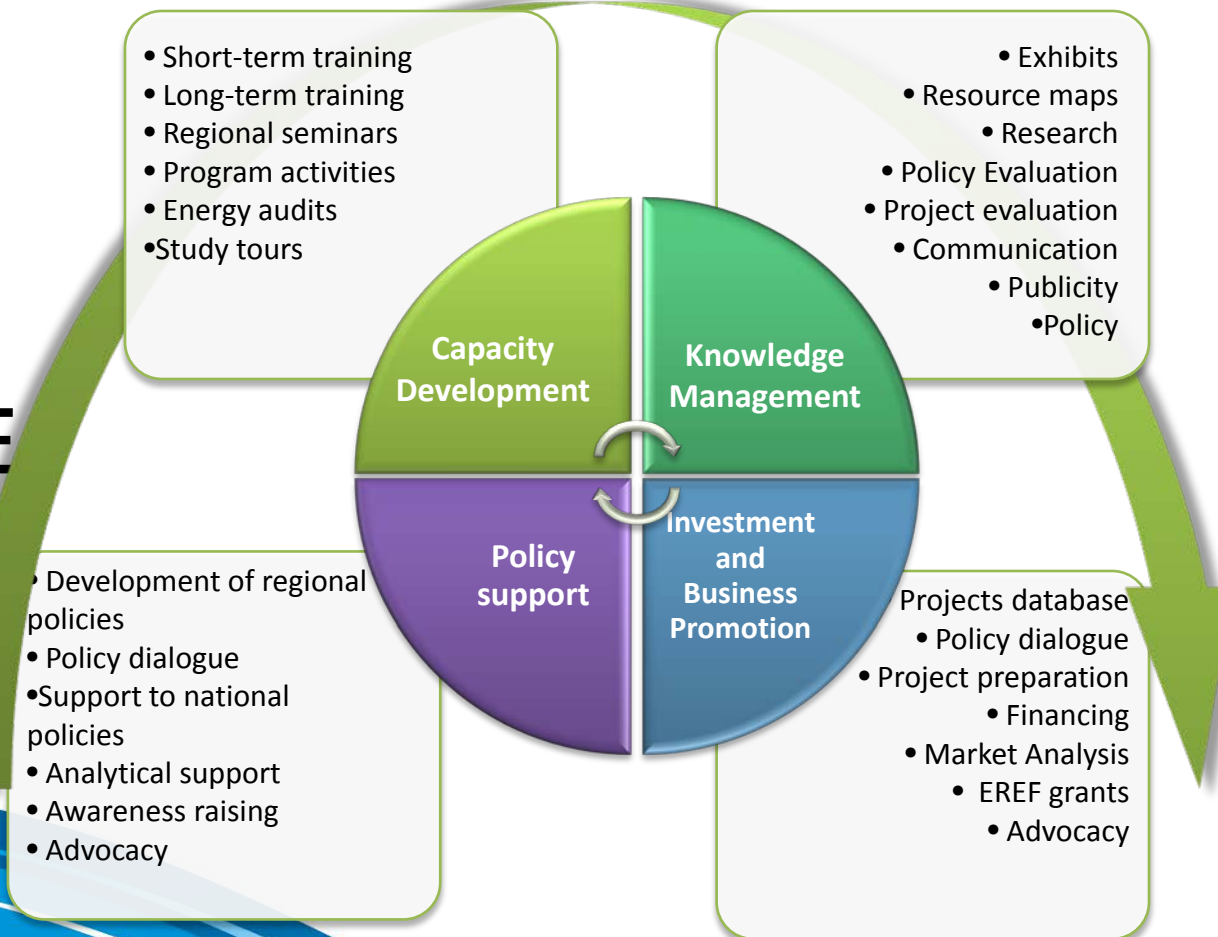
ECREEE INVESTMENT AND BUSINESS PROMOTION PROGRAMME

EREI 2013

ECREEE OBJECTIVE: CREATION OF AN ENABLING ENVIRONMENT FOR REGIONAL RE&EE MARKETS BY MITIGATING EXISTING BARRIERS

TO ENABLE

SOFTWARE



HARDWARE

INVESTMENT AND BUSINESS PROMOTION PROGRAMME

- The overall objective of the investment and business promotion program is power generation from sustainable, clean and affordable RE resources, contributing simultaneously to regional energy access and global climate change mitigation.
- Key achievements since 2011
 - 30 projects under implementation with grant support and technical assistance (EREF);
 - 41 projects supported with additional studies to help reach financial closure (EREI);
 - Establishment of the ECOWREX Investment Portal.



ECREEE INVESTMENT AND BUSINESS PROMOTION PROGRAMME (2)

- In October 2013, the following activities are on-going
 - **Within EREF**
 - Continuing assistance to implementation of the 30 granted projects
 - Preparation of the second call for proposals
 - Preparation of a working paper on rural electrification schemes
 - **Within EREI**
 - 23 RE projects/sites are selected for support to reach financial closure with:
 - Feasibility studies
 - Assistance on meeting in-country legal and regulatory requirements



2013 ECRREE RE&EE PROJECTS PIPELINE

(includes EREI, SSHP, SEFA and GEF)

STATUS	NUMBER OF PROJECTS	CAPACITY (MW)
Operational	18 projects (14 SSHP)	167 MW
Under implementation	4 projects (1 EE)	120 MW
Planned	35 projects (13 PV)	640 MW (330 MW wind and 170 MW PV)
Identified	505 projects (449 SSHP)	3.650 MW (2.860 MW SSHP)
TOTAL	562	4.577 MW



OPERATIONAL PROJECTS



- **7.5 MW solar in Cape Verde**
- **2 MW Solar in Ghana**



25 MW Wind in Cape Verde



32 MW Biomass in Sierra Leone

....And 14 SSHP projects (133.43 MW) operational in Burkina Faso, Cote d'Ivoire, Guinea, Mali, Nigeria and Sierra Leone

EREI 2013

➤ **Priority projects**

- 12 projects with feasibility study reports available or under preparation
- Support on legal and regulatory in-country procedures for power generation
- Support on projects communication for fund mobilization

➤ **AIP Resource Assessment study**

- Five sites selected with prefeasibility study report available
- Feasibility study
- Support on legal and regulatory in-country procedures for power generation

➤ **Special program for selected countries**

- One project in each of the six selected countries
- Feasibility study
- Support on legal and regulatory in-country procedures for power generation



PRIORITY PROJECTS



6 MW SOLAR PV - BENIN

- Construction and operation of a grid connected power plant in the city of Kandi (Northern Benin)
- Promoter: Helios Energie
- CAPEX: 17.8 mio
- OPEX: EUR 36/MWh
- Available fund: EUR 2.68 mio
- Funding gap: EUR 15.12 mio (debt)



5 MW SOLAR PV - BENIN



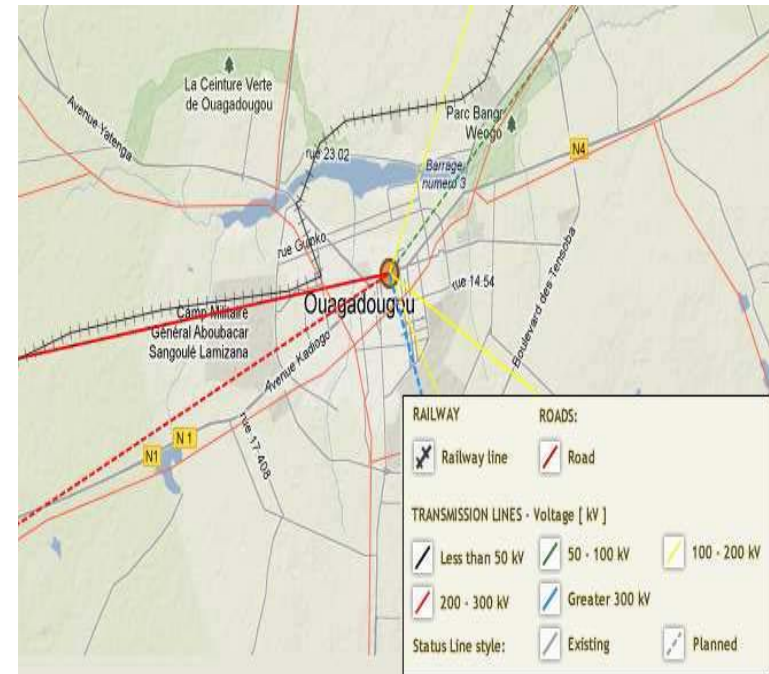
- Construction and operation of a grid connected power plant in the city of Djougou (Northern Benin)



- Promoter: CEB

35 MW CSP - BURKINA FASO

- Construction and operation of a grid-connected CSP power plant in the city of Ouagadougou
- Promoter: Ministry for Energy
- CAPEX: USD 407 mio (CR) or 508 mio (PT)
- OPEX: USD 48.89/ MWh (CR) – 54.71/MWh (PT)
- LCOE: USD 367.9/MWh (CR) – 451.1/MWh (PT)



7,000 TONS WASTE TO ENERGY – CAPE VERDE



- Construction and operation of a recycling system to transform waste mineral oil from gas station to clean fuel that can be used for power generation
- Promoter: Sector Verde Lda
- CAPEX: USD 3.9 mio
- OPEX: USD 1.75 mio
- Funding available: 1.37 mio
- Funding gap: 2.53 mio

8 MW BIOGAS – COTE D'IVOIRE

- Installation of a flaring gas system at the Akouedo landfill site & construction and operation of a 8 MW power plant using the flared gas
- Promoter: Groupe Eoulee s.a.r.l
- CAPEX: EUR 31.8 mio
- OPEX: EUR 52.3/MWh
- LCOE: EUR 115/MWh
- Funding available: EUR17.54 mio
- Funding gap: EUR 14.26 mio



20 MW SOLAR PV – THE GAMBIA



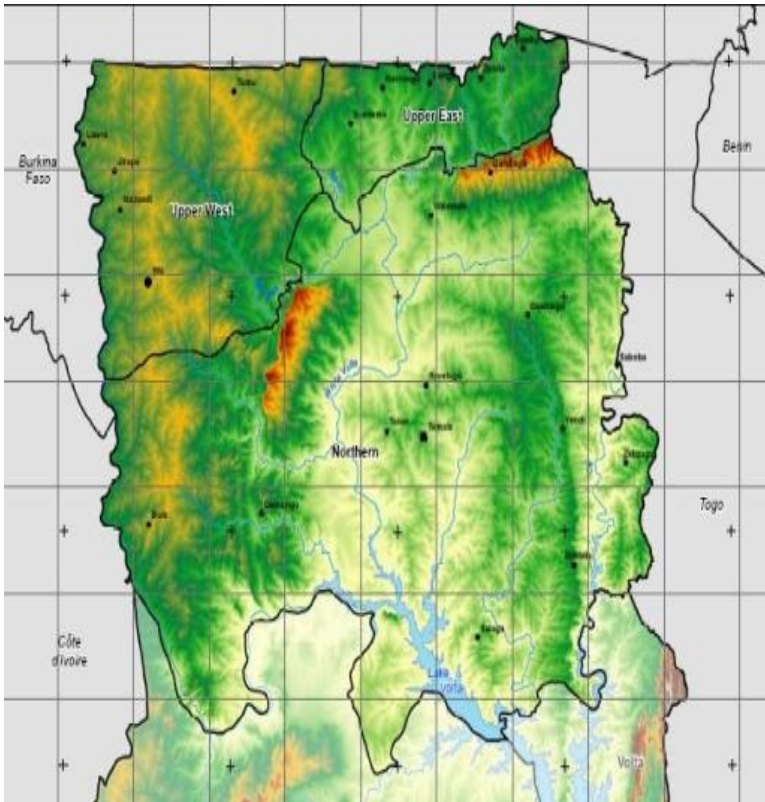
- Construction and Operation of a solar power plant, connected to the grid in the Greater Banjul Area, in the West Coast region
- Promoter: Ministry for Energy
- CAPEX: USD 42 mio (crystalline) – 54 mio (thin film)
- OPEX: USD 738,000 – 1,107,000 (1st year, depending on tracking system)

4 MW WIND – THE GAMBIA

- Construction and operation of a grid connected small scale wind park in the western Atlantic Coast
- Promoter: Ministry for Energy
- CAPEX: EUR 3.2 million – 6.67 million (depending on scenarios)
- OPEX: variables depending on scenarios



12 MW SOLAR PV – GHANA



- Construction and operation of grid-connected solar power plants in the Northern region of Ghana
- Promoter: Volta River Authority
- CAPEX: EUR 30 mio
- 2 MW already commissioned

50 MW WIND - GHANA

- Construction and operation of a grid connected wind farm in the city of Prampram (Greater Accra)
- Promoter: NEK Ghana Ltd
- CAPEX: EUR 73.7 mio
- OPEX: EUR 1.9 mio



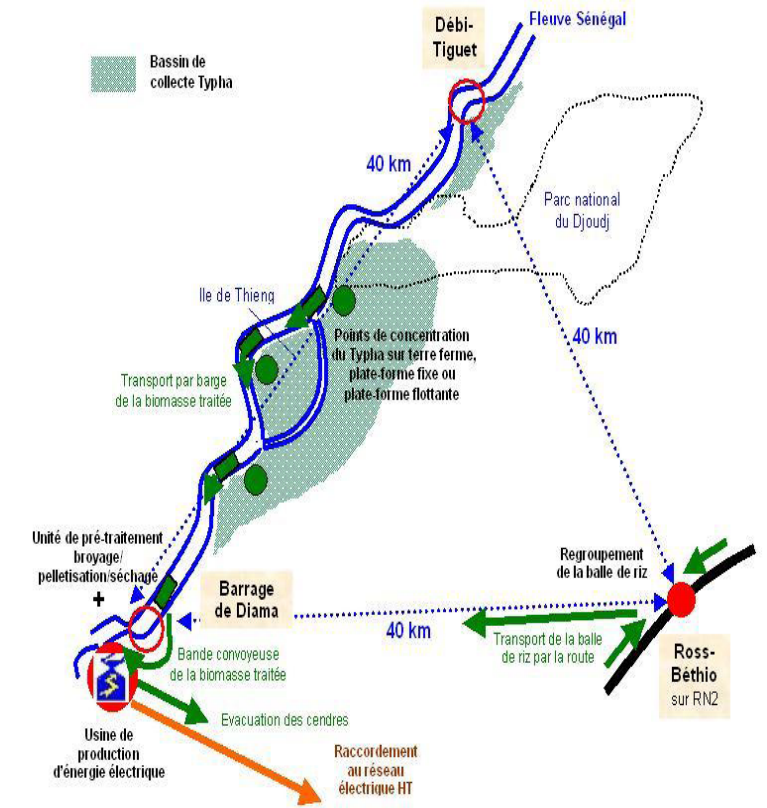
1.5 MW SSHP - LIBERIA



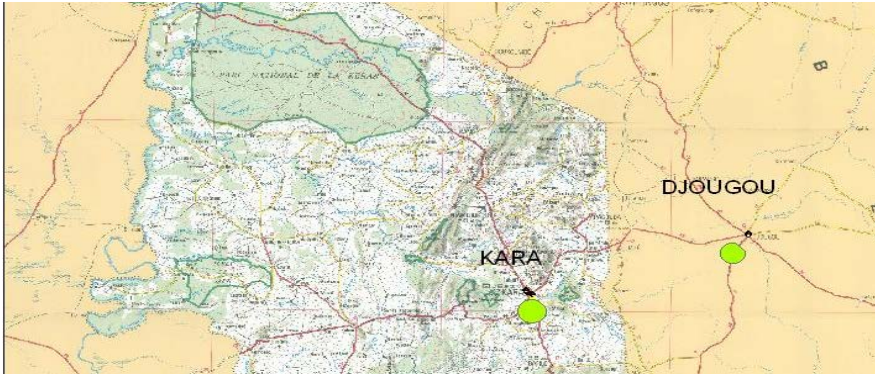
- Construction and operation of an isolated SSHP facility
- Promoter: Winrock
- CAPEX: USD 4.8 mio
- OPEX: USD 0.183
- LCOE: USD 0.164 (Phase 1) & USD 0.130 (Phase 2)
- Funding available: 1.25 mio
- Funding gap: USD 3.55 mio

15 MW BIOENERGY - SENEGAL

- Construction and operation of a grid-connected power plant, using typha and rice usks in the city of Diama (Northern Senegal)
- Promoter: SGI
- CAPEX: EUR 38 mio
- OPEX: EUR 38/MWh
- LCOE: EUR 119/MWh



5 MW WIND - TOGO



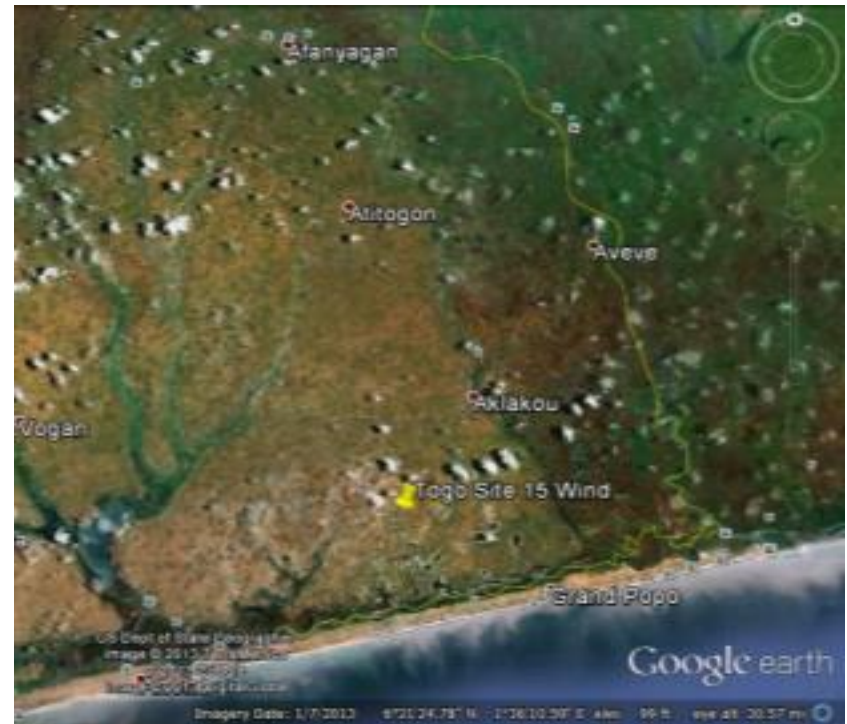
- Construction and operation of a grid connected power in the city of Kara (Northern Togo)
- Promoter: CEB

SELECTED SITES WITHIN THE ECOWAS RESOURCE ASSESSMENT STUDY

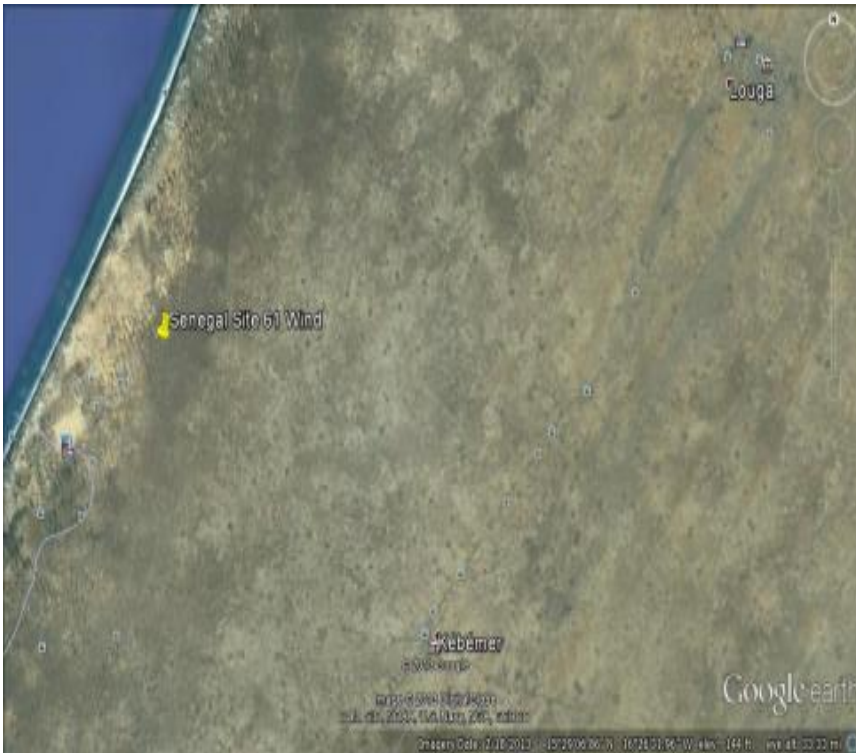


49.5 MW WIND - TOGO

- Construction and operation of a grid connected wind farm in the coastal area of Togo between the cities of Aklakou, Grand Popo and Dakonji
- CAPEX: USD 147.2 mio
- OPEX: USD 4 mio (1st year)
- LCOE: USD160/MWh



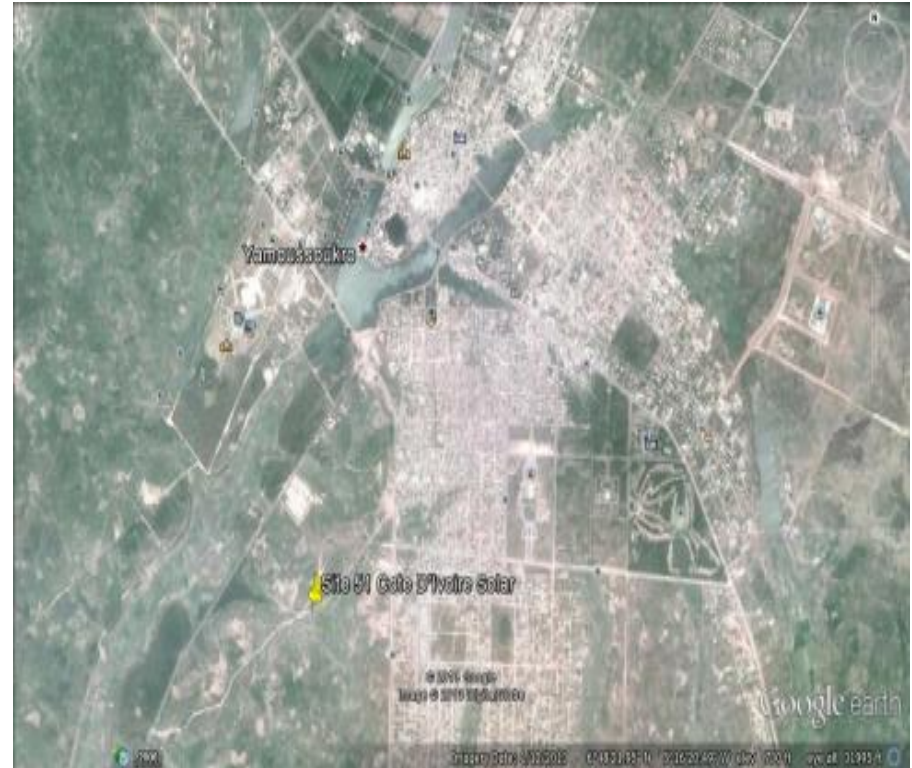
49.5 MW WIND - SENEGAL



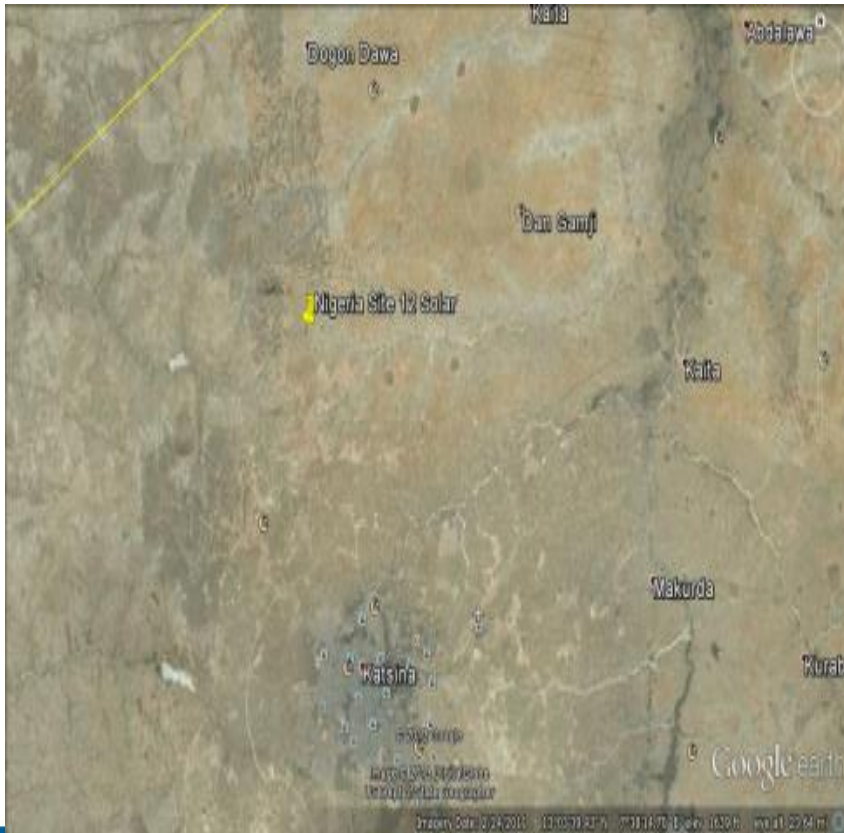
- Construction and operation of a grid connected wind park in the coastal area of Senegal, in the city of Kebemer
- CAPEX: USD 147.2 mio
- OPEX: USD 4 mio (1st year)
- LCOE: USD165/MWh

25 MW SOLAR PV – COTE D'IVOIRE

- Construction and operation of a grid-connected solar PV power plant in the city of Yamoussoukro
- CAPEX: USD 87.5 mio
- OPEX: USD 1.11 mio
- LCOE: USD 235/MWh



25 MW SOLAR PV - NIGERIA



- Construction and operation of a grid connected solar PV power plant in the city of Katsina
- CAPEX: USD 87.5 mio
- OPEX: USD 1.11 mio
- LCOE: USD 332/MWh

25 MW SOLAR PV – THE GAMBIA

- Construction and operation of a grid-connected solar PV power plant in the city of Jambajali
- CAPEX: USD 87.5 mio
- OPEX: USD 1.11 mio
- LCOE: USD 337/MWh



PROJECTS OF THE SPECIAL PROGRAMME FOR SELECTED COUNTRIES



23 MW BIOENERGY - BENIN

- Construction and operation of a SSHP unit in Beterou (South Benin)
- River: Oueme
- Promoter: Government of Benin
- CAPEX: EUR 60.9 mio
- Feasibility study done in 1992



20 MW WASTE TO POWER - GHANA



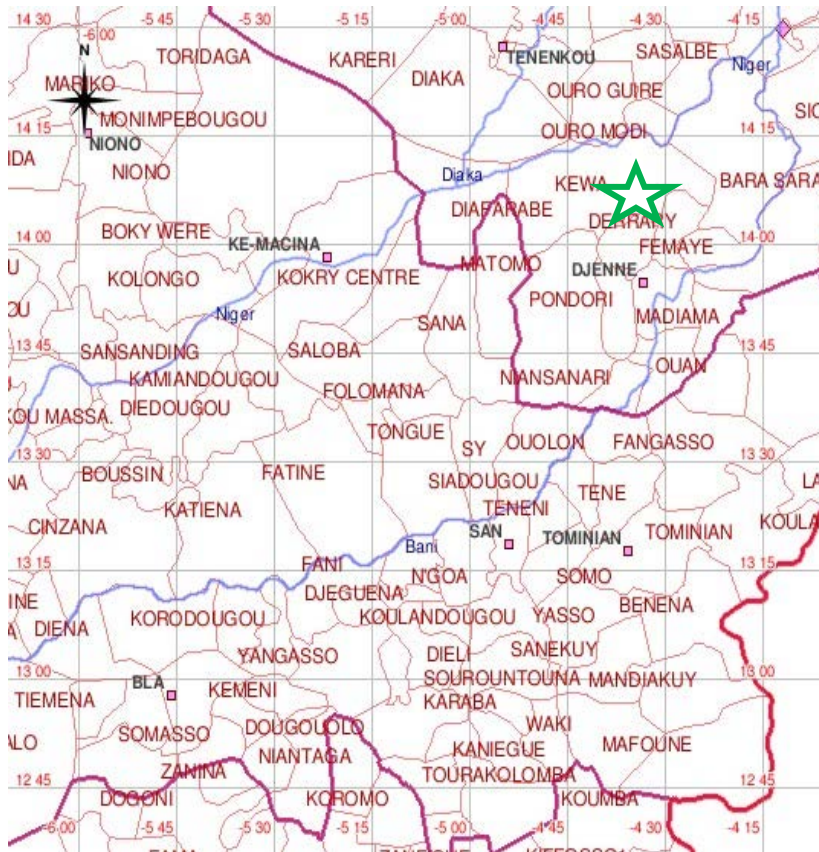
- Construction and operation of a waste to energy unit for electricity supply and heating in the city of Tema

10 MW SSHP - LIBERIA

- Construction and operation of a small scale power plant at Nimba
- River: St John
- Promoter: Government of Liberia



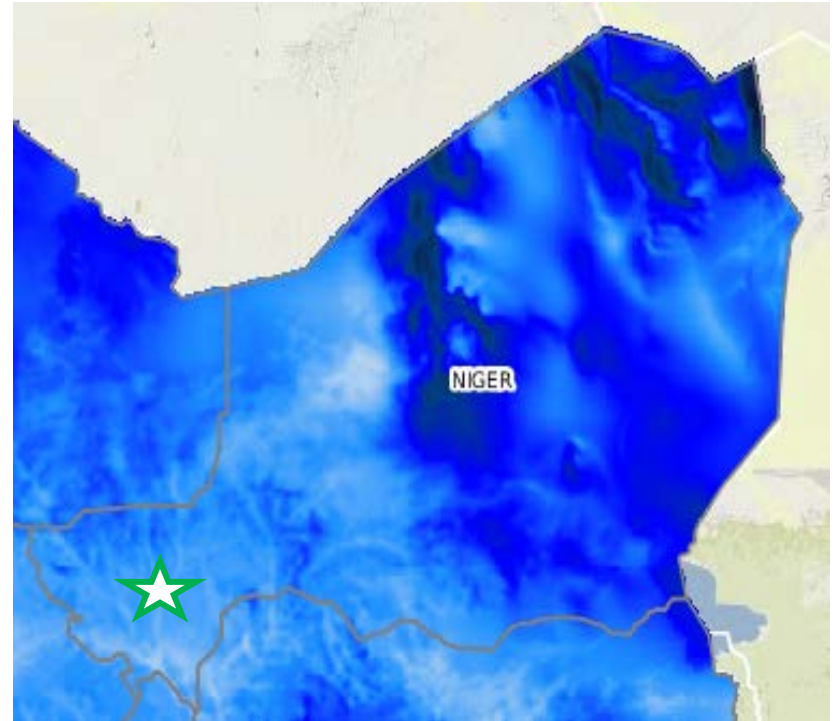
7 MW SSHP - MALI



- Construction and operation of a 7 MW power plant in the city of Djenne
- River: Bani
- Promoter: Ministry for Energy

30 MW WIND- NIGER

- Construction and operation of a grid connected wind farm in Niamey
- Promoter: NIGELEC (utility)



10 MW SSHP - NIGERIA



- Construction and operation of a power plant in the State of Kano.
- River: Kano
- Promoter: Kano State Government
- Dam exists in the project site

MID-TERM PROGRAMME

- Feasibility study for the Burkina Faso CSP project
- Feasibility study for the five selected sites
- Feasibility study for the six projects from selected countries
- Support on legal and regulatory in-country procedures for power generation for the 23 projects

EXPECTED RESULTS

The expected results by end 2014

- 23 ready for implementation projects
- 12 feasibility study reports
- 1 general study report on legal and regulatory in-country procedures for power generation from RE resources



ECOWREX INVESTMENT PORTAL

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THANK YOU! MERCI! OBRIGADO

Aminata Fall

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Get involved, join us Towards Sustainable Energy for All in West Africa

