DEVELOPING RENEWABLES
Renewable Energy that benefits all

Country energy information
Guinea

September 2006

SIXTH FRAMEWORK PROGRAMME PRIORITY 3
Underpinning the economic potential and cohesion of a larger and more integrated EU

SPECIFIC SUPPORT ACTION

Project Acronym: RECIPES
Project full title: Renewable Energy in emerging and developing countries: Current situation, market Potential and recommendations for a win-win-win for EU industry, the Environment and local Socio-economic development
Contract number: 513733
Start date of contract: 1st January 2005

Introduction

The information in this report was gathered from publicly available sources (the source list is available at www.energyrecipes.org), like surveys, statistical data from the internet and books and other publications. The information consists of:

1. indicators and indices;
2. descriptions of the relevant energy items/subjects /themes.

Due to differences in availability of data per country the level of detail of these reports will differ.

For all the 114 developing and emerging countries of the INCO list a report like this is available. (see also www.energyrecipes.org for the countries) Except for the following 15 countries, where more detailled reports are available.

Argentina	China	Cameroon
Brazil	India	Ghana
Colombia	Indonesia	Niger
Mexico	Pacific Islands	South-Africa
Peru	Thailand	Uganda

The RECIPES project

The RECIPES project aims to contribute to the implementation of renewable energy in emerging and developing countries. The RECIPES project is financed under the 6th Framework Programme for Research and Technological Development of the European Commission.

The main objective of the RECIPES project is to provide the European Commission and other stakeholders with pragmatic information and recommendations facilitating appropriate action to further the implementation of renewable energy in emerging and developing countries, taking into account:

- The effects on the local socio-economic situation.
- The competitive position of European renewable energy industry.
- The impacts on the local and global environment.

Data collection on the situation and potential of renewable energy in emerging and developing countries is the core of the RECIPES project.

An identification of the RE market potential is carried out for 15 developing and emerging countries. Local experts gathered data for all of these countries. The results of these in-depth studies are extrapolated to 99 other developing and emerging countries for which data is gathered through desk research.

See the RECIPES website (www.energyrecipes.org) for relevant data collected and reports produced.

Environmental problems

Deforestation; inadequate supplies of potable water; desertification; soil contamination and erosion; overfishing, overpopulation in forest region; poor mining practices have led to environmental damage

Environment - international agreements

Party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Wetlands, Whaling
signed, but not ratified: none of the selected agreements

Energy situation

Guinea does not have any proven domestic reserves of coal, natural gas or oil, and is forced to import all of its fossil fuels.[1]

In 1996 electrical consumption in Guinea was estimated at 488 GWh, of which 190 GWh, approximately 38%, was supplied by hydropower. The country's total electrical installed capacity in 1997 was 186 GW, of which 43 GW was installed in hydropower schemes.[14]

Development of an additional 91 MW of hydro capacity is planned, including the 80 MW Kaleta porject. There is 1.35 MW of pumped-storage capacity in operation within Guinea. The Garafiri hydroelectric facility on the Konkoure river, featuring a 75 MW power plant is expected to meet the power demand of the Conakry region was expected to begin operating in the second half of 1999. Construction of the Garafiri facility began in 1986. The project includes a two billion m3 dam reservoir and a spillway able to evacuate 2000 m3 per second. A water intake tower will supply water to the 75 MW plant.

Energy sector organisation

The Ministry of Energy and the Environment is responsible for the management and regulation of energy, through the Direction Nationale de L'Energy et des Hydrocabures. The country's main power authority is ENELGUI (Enterprise Nationale d\'Electrite de Guinee), a publicly owned with autonomous administration, which in 1987 superseded the Societe Nationale d\'Electricite. The operator responsible for production and distribution of electricity is Societe National d\'Electricite (SOGEL).[14]

Renewable energy potential

Guinea is the source of several major West African rivers (including the Gambia and Niger Rivers) and has a hydroelectric potential (technically feasible) estimated at 19,400 Gigawatthours per year (Gwh/yr). Only about 1% of Guinea\'s technically feasible potential has so far been developed.[2]

Approximately 150 potential mini and micro plants, with a total capacity of 14.24 MW, have been identified throughout Guinea.[14]

Renewable energy

No information is available in Guinea’s RE policy.

	Guinea	Unit
General		
Population (2005)	9467866	
Country area	245857	km²
Total density of population (people/km2)	39.000	capita/km²
Growth of people % /year	2.370	%
Land use arable (%)	3.630	%
Land use perm crops (%)	2.580	%
Percentage of total people living in cities	34.200	%
HDI (2002)	0.425	
Social		
Illiteracy	35.900	%
Year of estimation	1995	
GDP in ppp mostly $ 2004 est	19.5	billion
Economic		
Income /capita $ mostly 2004	2100	
Variability of income/capita GINI index (2004)	40.300	
Population below poverty line	40.000	%
Year of estimation	2003	
Inflation rate (consumer prices) (%)	18.000	%
Year of estimation	2004	
Growth of economy	1.000	%
Year of estimation	2004	
Traditional fuel consumption (% of total energy requirements 2002) . Estimated consumption of fuel wood, charcoal, bagasse (sugar cane waste) and animal and vegetable wastes.	90.600	
Fossil fuel consumption		
Oil consumption	8600.000	bbl/day
Fossil fuel consumption		
Year of estimation	2001	
Coal consumption (Million Short Tons)	0.000	millions short tonnes/year
Nuclear power production (Billion Kilowatthours) 2003	0.000	billion kWh/year
Hydro electricity capacity (2003)	0.139	million kilowatts
Renewable energy situation		

Geothermal, Solar, Wind, Wood and Waste Electricity Installed capacity (2003)	0.000	million kilowatts
RE energy electricity consumption (2003)	0.000	billion kWh/year
Total coal production (Million Short Tons)	0.000	millions short tonnes/year
Electricity consumption GWh (2003)	721.000	GWh