DEVELOPING RENEWABLES
Renewable Energy that benefits all

Country energy information
Liberia

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

Tropical rain forest deforestation; soil erosion; loss of biodiversity; pollution of coastal waters from oil residue and raw sewage

Environment - international agreements

Party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94
signed, but not ratified: Environmental Modification, Law of the Sea, Marine Life Conservation

Energy situation

Of the 2000 power production total, 100% came from fossil fuels. Consumption of electricity in 2000 was 418.5 million kWh. Liberia has no domestic petroleum resources. Wood accounts for about 90% of the total energy requirement. The ongoing civil unrest has caused severe fuel distribution problems and shortages.[15]

A large portion of the Liberia Electricity Corporation\'s (LEC) generation and distribution infrastructure was damaged or destroyed during the civil war. LEC estimates that it will cost more than $107 million and take over five years to repair the entire electricity generation and distribution system.[2]

Energy sector organisation

The Liberia Eletricity Corporation is responsible for generation, transmission and distribution of electricity.[2] LEC operates two electric power systems, the Monrovia Grid and the Rural Electrification Network. The Monrovia Grid serves the capital city Monrovia and the surrounding area and is the largest of the two power systems. The Grid serves five of the country\'s thirteen counties and has over 40 000 customers. The Rural Electrification Network serves the remaining 8 counties with small isolated diesel unit systems.[34]

Renewable energy potential

Liberia has an economic hydro potential of around 1000 MW. All electricity comes from fossil fuels because hydropower generators were destroyed during the civil war.[34]

Renewable energy

No information is available on Liberia's RE policy.

	Liberia	Unit
General		
Population (2005)	3482211	
Country area	99065	km²
Total density of population (people/km2)	35.000	capita/km²
Growth of people % /year	2.640	%
Land use arable (%)	3.950	%
Land use perm crops (%)	2.280	%
Percentage of total people living in cities	0.000	%
HDI (2002)	0.000	
Social		
Illiteracy	57.500	%
Year of estimation	2003	
Corruption (CPI 2003) 0=high 10=low	0.000	
GDP in ppp mostly $ 2004 est	2.90	billion
Economic		
Income /capita $ mostly 2004	900	
Variability of income/capita GINI index (2004)	0.000	
Population below poverty line	80.000	%
Year of estimation		
Total External Debt in % GDP (2004 est.)	0.000	%
Inflation rate (consumer prices) (%)	15.000	%
Year of estimation	2003	
Growth of economy	21.800	%
Year of estimation	2004	
EDI energy development index	0.000	
Energy development		
Percentage of people connected to the grid (electricity)	0.000	%
Traditional fuel consumption (% of total energy requirements 2002) . Estimated consumption of fuel wood, charcoal, bagasse (sugar cane waste) and animal and vegetable wastes.	0.000	
Oil consumption	3100.000	bbl/day
Fossil fuel consumption		
Year of estimation	2001	
Coal consumption (Million Short Tons)	0.000	millions short tonnes/year
Natural gas consumption, year 2001 if not mentioned others		
Nuclear power production (Billion Kilowatthours) 2003	0.000	billion kWh/year
Hydro electricity capacity (2003)	0.000	million kilowatts
Renewable energy situation		
Geothermal, Solar, Wind, Wood and Waste Electricity Installed capacity (2003)	0.000	million kilowatts
RE biomass production of primary energy from combustible Renewables and Wast TJ/Year 2002	0.000	
RE energy electricity consumption (2003)	0.000	billion kWh/year

Total Primary Energy Supply 2000	0.000	billion kWh/year
Share of total renewables in % of TPES 2000	0.000	%
Share of renewables excluding combustible renewables and waste in % of TPES 2000	0.000	%
TPES 2003	0.000	billion kWh/year
Share of Renewables in TPES % (2003)	0.000	%
Hydro (2003)	0.000	%
Geothermal, Solar, Wind, Tide (2003)	0.000	%
Combustible Renewables and Waste (2003)	0.000	%
Total kWh per capita	0.000	

Energy consumption for various sectors

Industry	0.000	%
Transportation	0.000	%
Agriculture	0.000	%
Commercial and public services	0.000	%
Residential	0.000	%
Other purposes	0.000	%
Total oil production	0.000	bbl/day

Energy production

Total coal production (Million Short Tons)	0.000	millions short tonnes/year
Total natural gas production		
Total Electricity Production GWh	0.000	GWh

Electricity

Electricity production from coal %	0.000	%
Electricity production from oil %	0.000	%
Electricity production from gas %	0.000	%
Electricity production from biomass %	0.000	%
Electricity production from waste %	0.000	%
Electricity production from nuclear %	0.000	%
Electricity production from hydro %	0.000	%
Electricity production from geothermal %	0.000	%
Electricity production from solar thermal and PV %	0.000	%
Electricity production from other sources %	0.000	%
Electricity consumption GWh (2003)	474.000	GWh
Total final electricity consumption GWh (2002)	0.000	GWh
Electricity used by Industry % (2002)	0.000	%
Electricity used by Transport % (2002)	0.000	%
Electricity used by Agriculture % (2002)	0.000	%
Electricity used by Commerce and Public Services % (2002)	0.000	%
Electricity used by Residential % (2002)	0.000	%
Electricity used by Other Non-Specified % (2002)	0.000	%
Electricity used by Non-Energy Use % (2002)	0.000	%