



Country energy information Congo (Democratic Rep. Of)

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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 detailed 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

Poaching threatens wildlife populations; water pollution; deforestation; refugees responsible for significant deforestation, soil erosion, and wildlife poaching; mining of minerals (coltan - a mineral used in creating capacitors, diamonds, and gold) causing environmental damage

Environment - international agreements

Party to: Biodiversity, Climate Change, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Tropical Timber 83, Tropical Timber 94, Wetlands
signed, but not ratified: Environmental Modification

Energy situation

The democratic republic of Congo (DRC) produces crude oil, but is not able to process its oil in refineries. Petroleum products, mainly used in the transportation sector, have to be imported. Over 90% of the energy consumed in DRC comes from traditional biomass, mainly used by the rural population, as well as by the industry sector.¹³

Congo's total electrical consumption in 1996 amounted to 6265GWh, while its production of electrical energy amounted to almost 6400 GWh. Of the total electrical energy produced 93.75% came from hydropower production. In 1996 Congo exports approximately 200 GWh of electricity to neighboring countries. Congo has a total electrical installed capacity of 3.311 GW (1997).¹⁴

Energy sector organisation

The Department of Electricity and Water Affairs has the responsibility of managing energy policy and is in supervises the technical aspects of the Societe Nationale d'Electricite (SNEL), the national power authority.¹⁴

Renewable energy potential

The Democratic Republic of the Congo is blessed with the greatest hydropower potential in Africa, and among the largest in the world. This potential is a result of the country's location with the catchment area of the Congo river. The republic's technically feasible potential is 774 000 GWh/year (estimated in 1997). In 1991, the economically feasible potential was estimated at 419 210 GWh/year, less than 1

percent of the technically feasible potential has been developed.¹⁴

There is potential to construct a large hydro project on the Zaire river, La Grand'Inga, which could have a capacity of up to 35 500 GW. This project will go ahead if export markets in north and central African countries, including Egypt, are secured. A study concluded that such a large project was technically and economically feasible, and envisaged the construction of an 8000 MW first stage plant by 2010. Lake Mobutu Sese Seko also holds possibility for a storage site for a multipurpose project for hydro and for regulation of Nile river flows.¹⁴

Renewable energy

No information is available on the DRC's RE policy.

	Congo (Democratic Rep. Of)		Unit
General			
Population (2005)	3039126		
Country area	341999	km ²	
Total density of population (people/km2)	9.000	capita/km ²	
Growth of people % /year	0.000	%	
Land use arable (%)	2.960	%	
Land use perm crops (%)	0.520	%	
Percentage of total people living in cities	53.100	%	
HDI (2002)	0.494		
Social			
Illiteracy	83.800	%	
Year of estimation	2003		
Corruption (CPI 2003) 0=high 10=low	2.200		
GDP in ppp mostly \$ 2004 est	42.74	billion	
Economic			
Income /capita \$ mostly 2004	700		
Variability of income/capita GINI index (2004)	0.000		
Population below poverty line	0.000	%	
Year of estimation			
Total External Debt in % GDP (2004 est.)	0.000	%	
Inflation rate (consumer prices) (%)	1.800	%	
Year of estimation	2004		
Growth of economy	3.700	%	
Year of estimation	2004		
EDI energy development index	0.189		
Energy development			
Percentage of people connected to the grid (electricity)	19.600	%	
Traditional fuel consumption (% of total energy requirements 2002) . Estimated consumption of fuel wood, charcoal, bagasse (sugar cane waste) and animal and vegetable wastes.	65.600		
Oil consumption	14000.000	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)	0.092	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	26003.000	
RE energy electricity consumption (2003)	0.000	billion kWh/year
Total Primary Energy Supply 2000	10.470	billion kWh/year
Share of total renewables in % of TPES 2000	68.500	%
Share of renewables excluding combustible renewables and waste in % of TPES 2000	2.900	%
TPES 2003	11.600	billion kWh/year
Share of Renewables in TPES % (2003)	65.000	%
Hydro (2003)	4.400	%
Geothermal, Solar, Wind, Tide (2003)	0.000	%
Combustible Renewables and Waste (2003)	95.600	%
Total kWh per capita	2427.000	

Energy consumption for various sectors

Industry	5.000	%
Transportation	24.000	%
Agriculture	0.000	%
Commercial and public services	0.000	%
Residential	71.000	%
Other purposes	0.000	%
Total oil production	227000.000	bbl/day

Energy production

Total coal production (Million Short Tons)	0.000	millions short tonnes/year
Total natural gas production	0	million cu m
Total Electricity Production GWh	397.000	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 %	100.000	%
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)	619.000	GWh
Total final electricity consumption GWh (2002)	301.000	GWh
Electricity used by Industry % (2002)	53.000	%
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)	47.000	%
Electricity used by Other Non-Specified % (2002)	0.000	%
Electricity used by Non-Energy Use % (2002)	0.000	%