

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Sudanese Electricity Distribution Company *Republic of Sudan*

Place, Date



Ministère de l'Energie, chargé des
Ressources Naturelles (MERN),
République de Djibouti

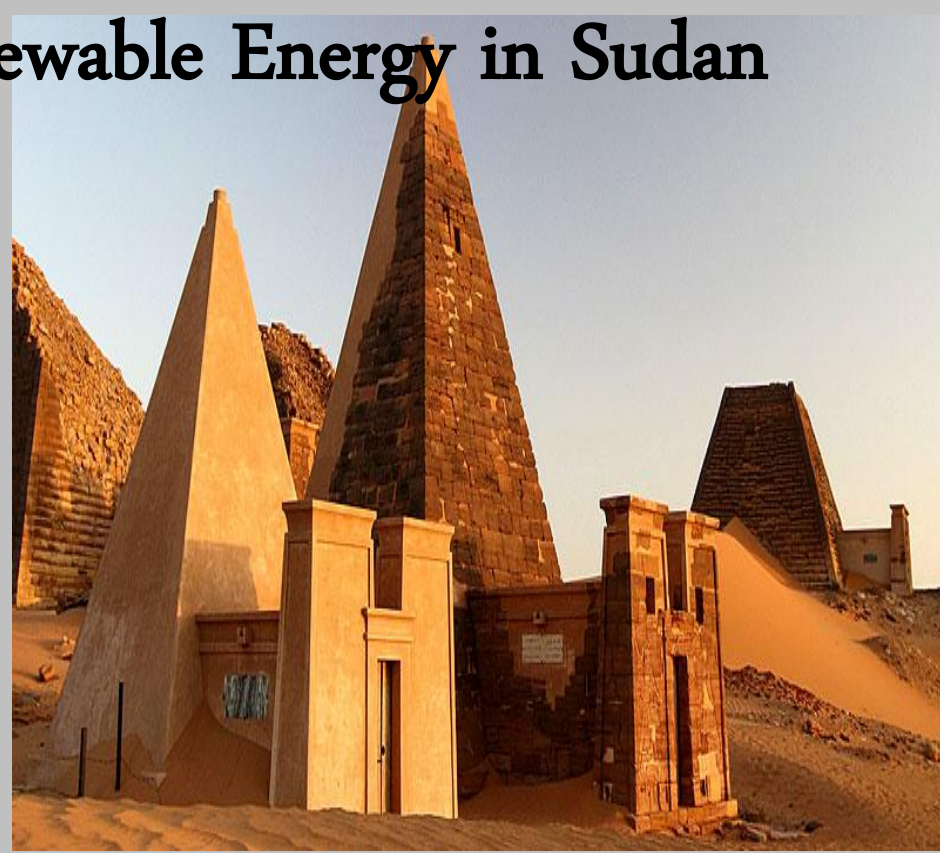




Republic Of Sudan
Ministry of Water Resources & Electricity
Sudanese Electricity Distribution Company



Rural Electrification & Renewable Energy in Sudan



Contents:

- General Information about Sudan.
- Electricity Sector.
- Rural Electrification Project.

- Sudan is one of the largest countries in Africa (1.89 M Sq. Km).
- Sudan is bordered by seven countries which are Egypt, Libya, Chad, Central Africa, South of Sudan, Ethiopia, Eritrea in addition to the Red Sea in the east.





General Information about Sudan

- this large area enjoys a variety of climates, from desert region at north , to tropical at south.
- A favorite environment creates integrated investment of agricultural activities from production to processing industries



General Information about Sudan



population

- Sudan is a relatively sparsely populated country
The total population now (2013) about 33.2 million inhabitants ,34% live in urban areas while 66% live in rural areas.
- population density is 17 per kilometer square.
Sudan is rich in land, water recourses and solar radiation.



General Information about Sudan



Energy Situation

- According to last evaluation of energy resource consumes at 2012 , Sudan meets approximately 64% of its energy needs of biomass . While oil supply 32 % and the remaining 4% are produced from hydro, the heavy dependence on biomass threatens the health and future of domestic forests.

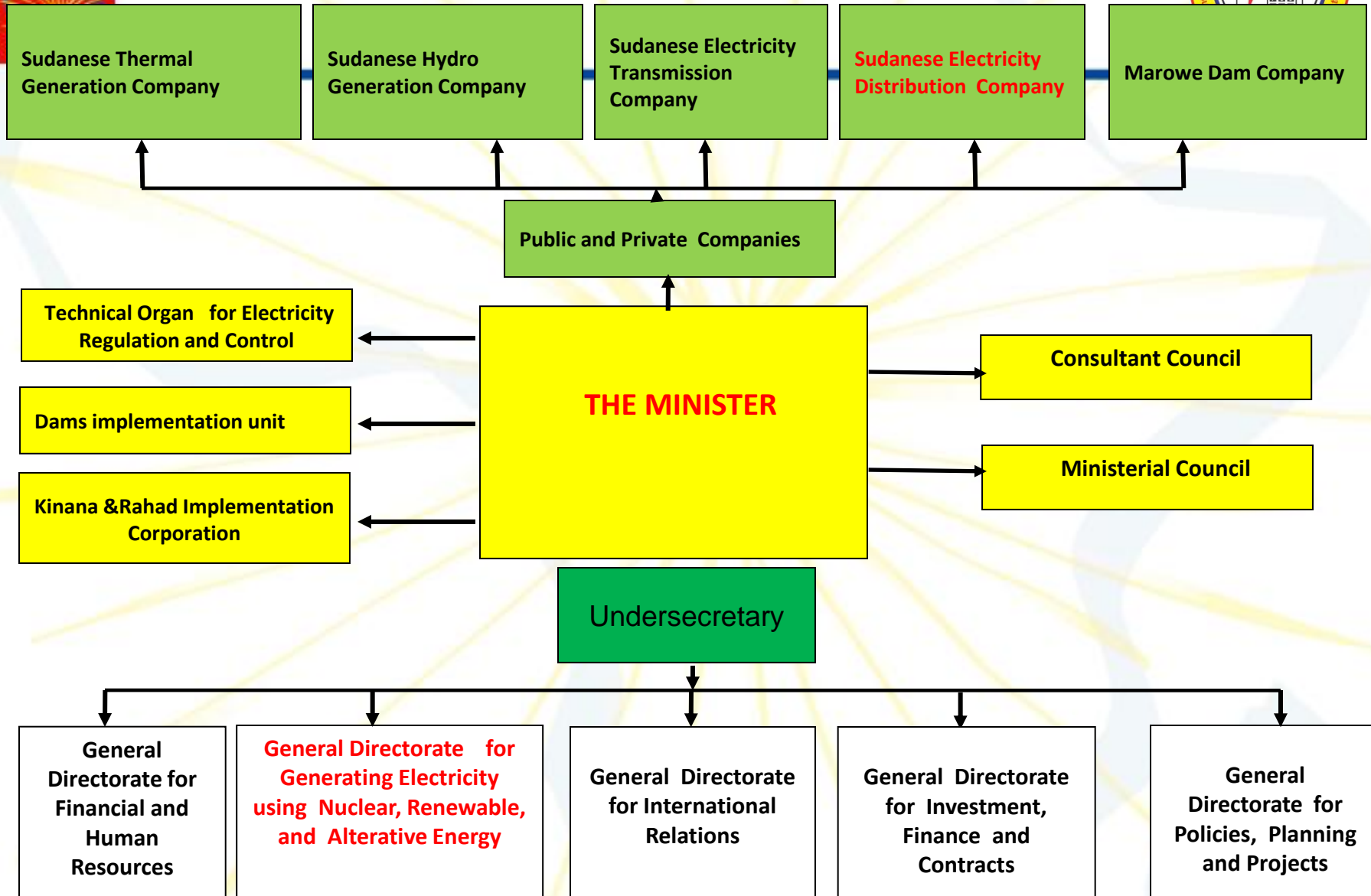


Electric Power Sector in Sudan



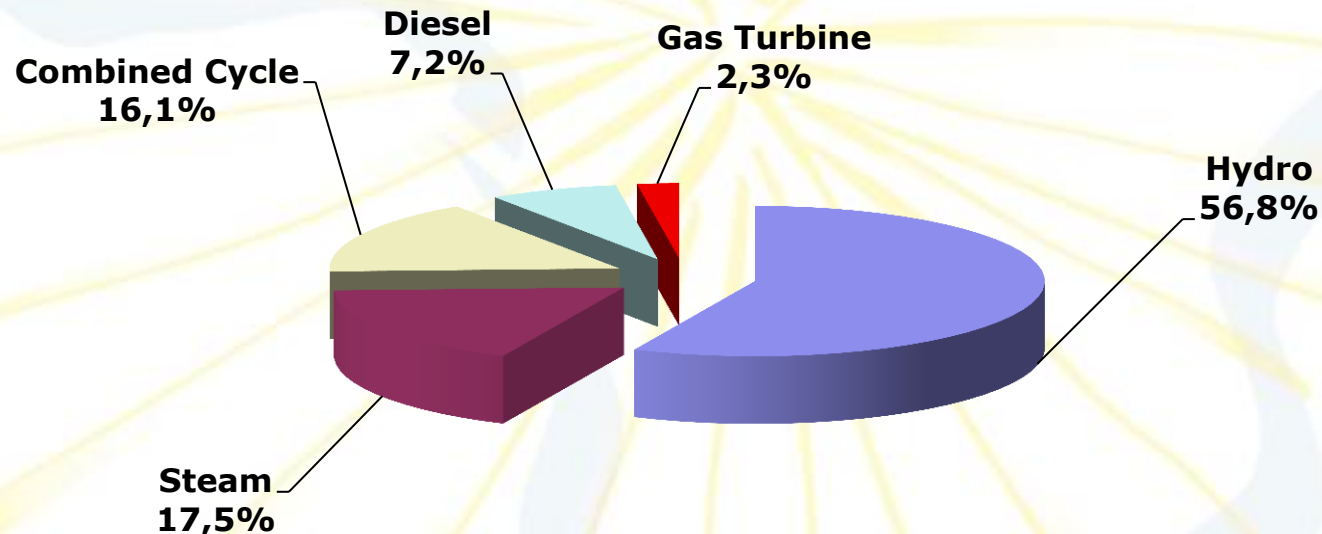
- The supply of electric energy in Sudan started in Khartoum the capital of Sudan in the year 1908.
- From 2010 the Ministry of Water Resources and Electricity became the responsible state body for the electric power sector in Sudan.
- Under the ministry there are 5 companies which are Hydro Generation Company, Thermal Generation, Transmission, Distribution, and Marowe Dam Company.

Electric Power Sector Structure in Sudan



Electricity Generation-2013

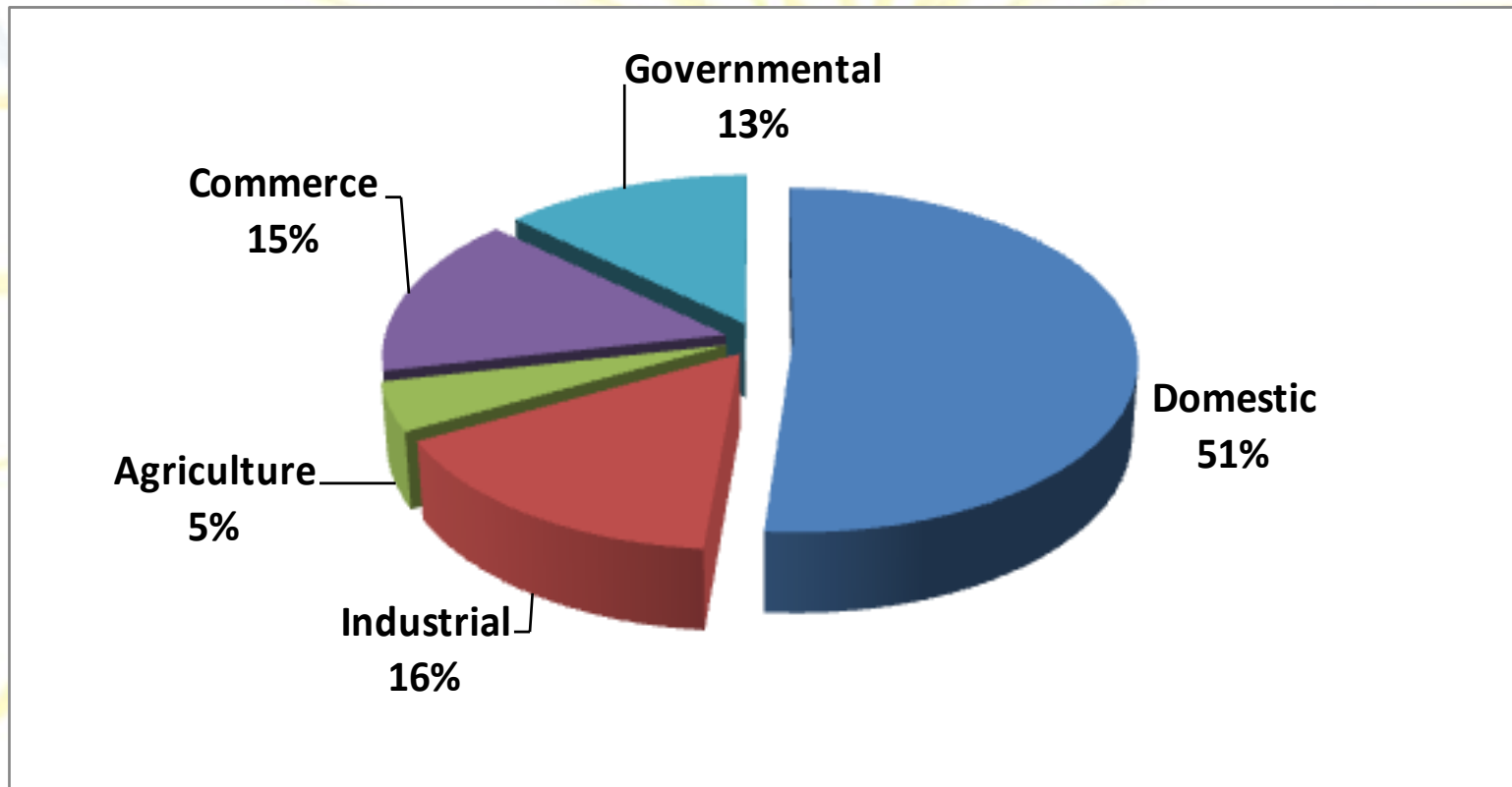
Total Installed Capacity = 2,533 MW



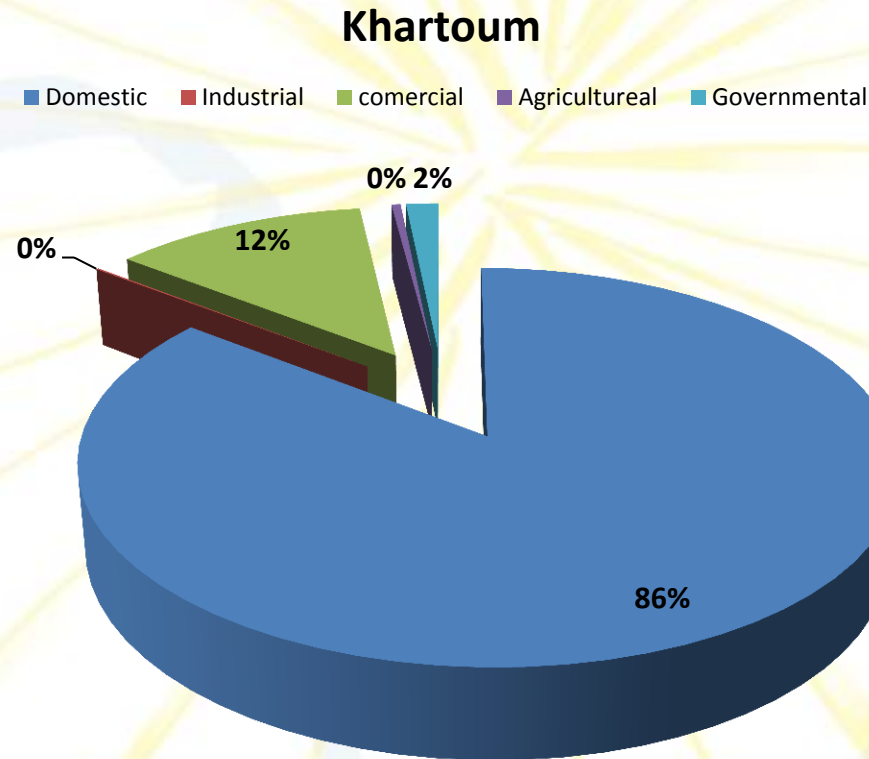
Electricity Transmission

- The Sudan electricity generation system comprises approximately 8,560 km of high voltage transmission lines.
- In addition, fourteen isolated centres are served by thermal generating plants and local distribution networks.

Electricity Consumption by Sectors – 2012



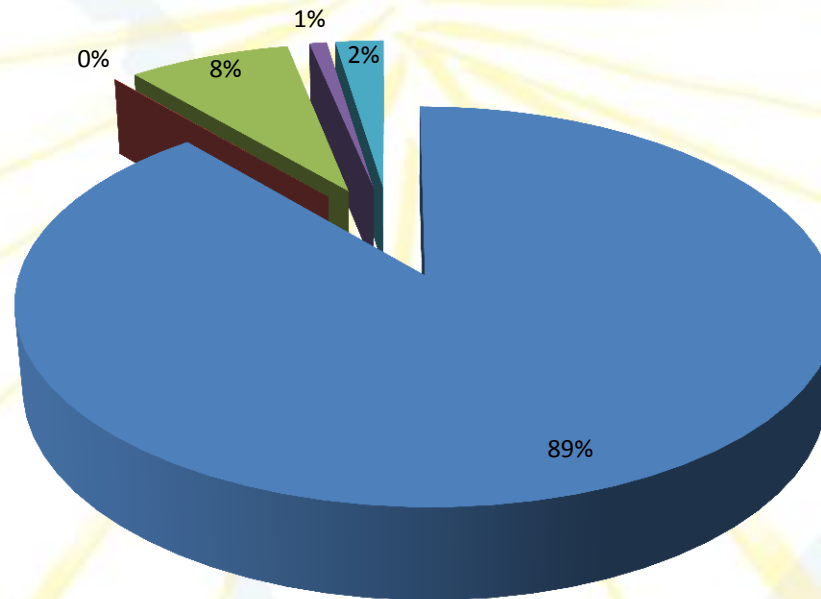
Number of Consumers by Sectors – 2012



Number of Consumers by Sectors – 2012

States

■ Domestic ■ Industrial ■ comercial ■ Agricultural ■ Governmental



Ratios on the rural electrification status

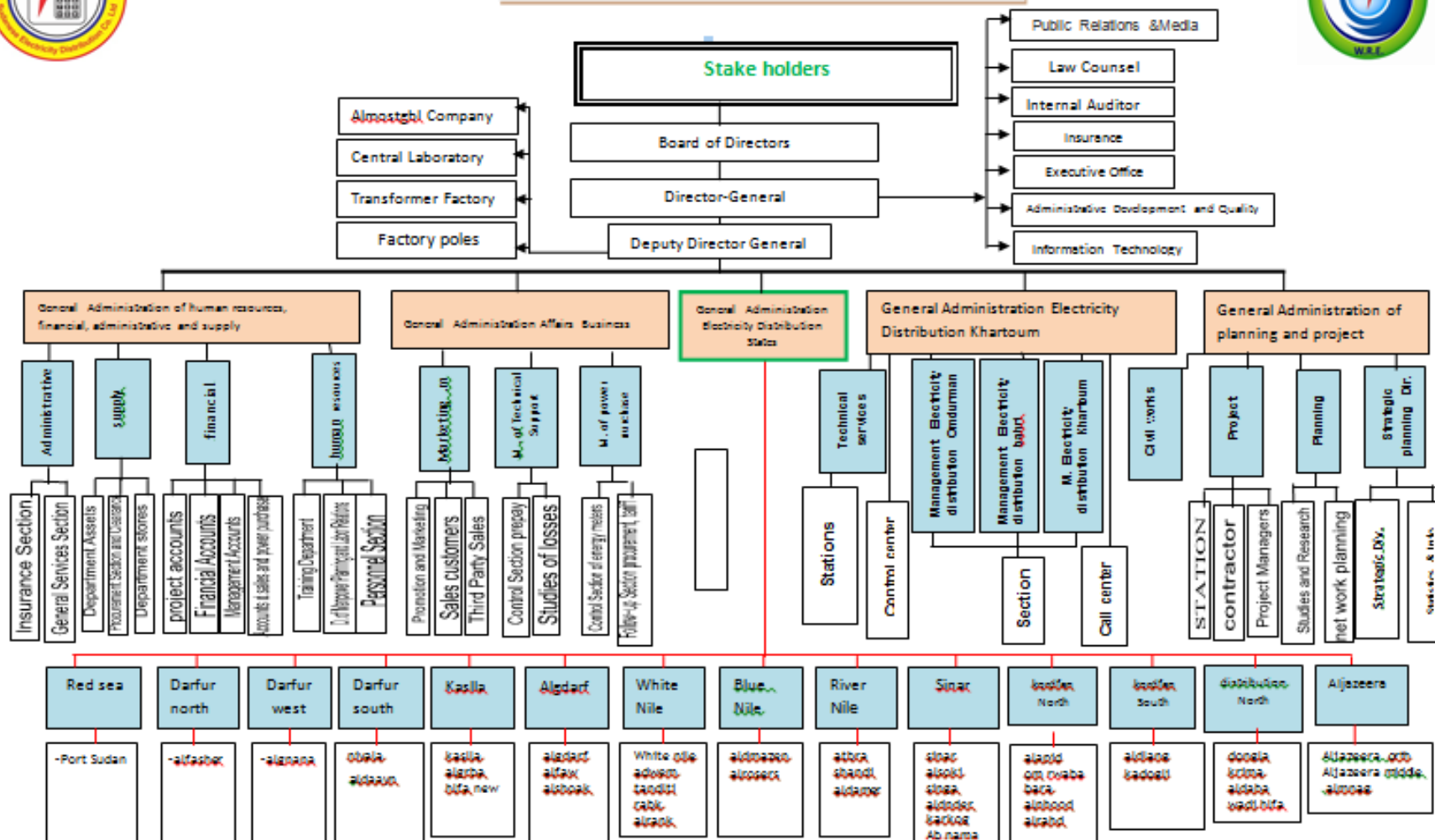
Population and Access to Electricity in sudan:

- 34% of the population live in urban areas, 55% of them have access to electricity.
- while 66% live in rural areas, 29% of them have access to electricity.

Institutional and regulatory framework



The organizational structure of the company Sudanese Electricity Distribution Ltd.

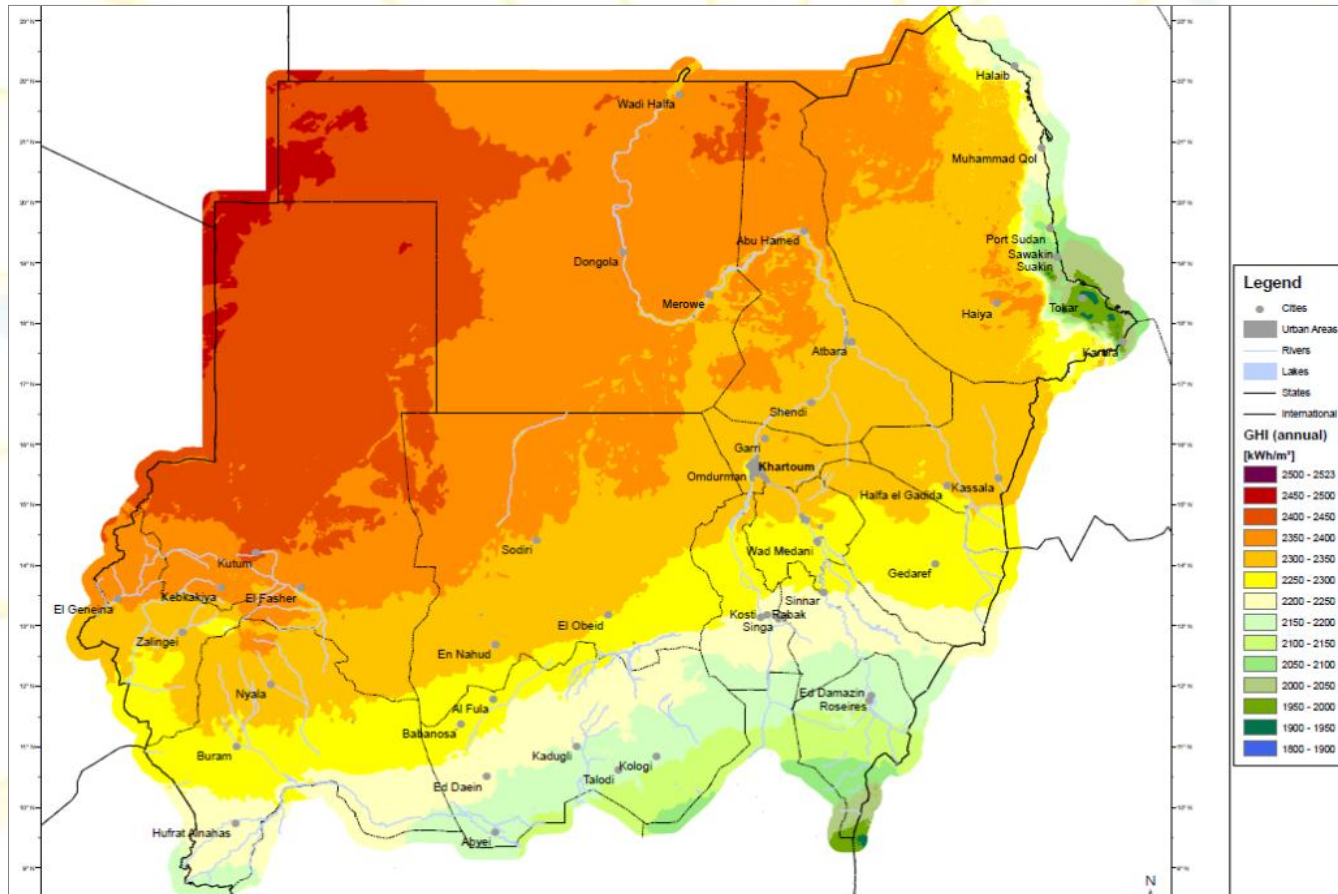




Rural electrification SHS project

General Information:-

- Current Rural Electrification rate is 26%
- SHS project
- Target: 1.1million solar home system(SHS)
- Period: 2012-2031
- Beneficiaries: 5.5 million, 16% of population



■ Average daily solar irradiation: 5.8 – 7.2 kWh/m²



Rural electrification SHS project

Development Impact

- Job creation: more than 10,000 (direct and indirect) in rural area.
- Created new business (after sale services)
- Thousand tons of CO₂ reduction.
- Saving thousand tons of kerosene and other petroleum products.
- Social and cultural development in rural areas.



Rural electrification SHS project Plan

Years	planned consumers	Total Budget		
		Local component(SDG)		foreign component (USD)
		instalation	services	
1st year	100	pilot project for proper sizing,and aqurate specs.		
2nd Year	5,000	1,000,000	3,500,000	2,500,000
3rd Year	14,500	2,900,000		7,250,000
4th Year	58,000	11,600,000	40,600,000	29,000,000
5th year	72,000	14,400,000	50,400,000	36,000,000
Total(2012-2016)	150,000	30,000,000	49,000,000	75,000,000
Total(2017-2021)	250,000	50,000,000	105,000,000	125,000,000
Total(2022-2026)	300,000	60,000,000	175,000,000	150,000,000
Total(2027-2031)	400,000	80,000,000	210,000,000	200,000,000
Total	1,100,000	220,000,000	280,000,000	550,000,000
Total Cost		500,000,000		550,000,000
Total cost USD	656,382,979			



SOLAR ENERGY PROJECTS



- 10 MW Khartoum Photovoltaic Power Plant
- 5 MW Nyala Photovoltaic Power Plant
- 3 MW Al Fashir Photovoltaic Power Plant
- 2 MW Al Geniena Photovoltaic Power Plant
- 1 MW Al deain Photovoltaic Power Plant

A nighttime photograph of the Shanghai skyline. The Oriental Pearl Tower is prominently lit up on the right side, with its distinctive spheres glowing. A suspension bridge, likely the Dongyuan Bridge, spans the water in the middle ground. The city lights and the bridge's structure are reflected in the calm water in the foreground. The overall color palette is dominated by warm, golden-yellow light from the city lights.

Thank You for

your Attention