

## European Solar and Energy Storage Solutions

# Libya geothermal energy and



## Overview

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Can geothermal energy be used in Libya?

However, it was reported that the geothermal resource in Libya is of the low-temperature type, and hence, the practical utilization is mainly limited to direct uses, i.e. industrial processes, recreation, space heating and/or cooling, aquaculture, greenhouse cultivation, etc. [ ].

What is the potential of solar PV & onshore wind in Libya?

The average potential of solar PV and onshore wind over the Libyan territories amounts to 1.9 MWh/kW/year and 400 W/m, respectively. Notwithstanding, biomass and geothermal energy sources are likely to play an important complementary role in this regard.

What re technologies are available in Libya?

Existing utilization state and predicted development potential of various RE technologies in Libya, including solar energy, wind (onshore & offshore), biomass, wave and geothermal energy, are thoroughly investigated.

Are there alternative energy options in Libya?

As the national Libyan energy plan was limited in scope focusing primarily on solar energy and onshore wind energy, this paper focuses the spotlights towards the implications of exploring other RE alternatives in Libya, so that decision makers and energy planners may revisit future RE strategies and implementation policies.

What percentage of Libya's electricity comes from natural gas?

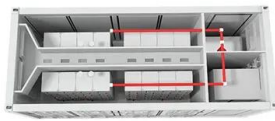
Natural gas represents about 63% of the Libyan electricity as presented in [ ]. Approximately 29% of Libya's electrical power is generated from oil-fired plants, while the remaining comes from non-fuel combined steam power plants.

How much energy does Libya use?

Electricity and gasoline represent the bulk of energy consumption in Libya [ ]. According to the International Energy Agency (IEA), electricity consumption in Libya was equivalent to 2580 kilo tonne of oil equivalent (ktoe) i.e.,  $2580 \times 10^6$  kg in 2017– a figure that is greater than its counterpart of the year 2000 by a factor of 2.5 (1032 ktoe) [ ].

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### ENERGY PROFILE Libya

developing areas. Energy self-sufficiency has been defined as total primary energy production divided by total primary energy supply. Energy trade includes all commodities in Chapter 27 of the Harmonised System (HS). Capacity utilisation is calculated as annual generation divided by year-end capacity x 8,760h/year. Avoided

### ENERGY PROFILE Libya

Libya Renewable Energy Strategic Plan 2013-2025 Council of ministers' decree No. 32 for 2012, about the organization of the oil and gas ministry. Council of ministers' decree No. 341 for 2012, to approve the organization of the General Authority for the Environment



Standard 20ft containers



Standard 40ft containers

### Prospects of renewable energy as a non-rivalry energy alternative in Libya

The country has a significant potential of diverse renewable energy (RE) resources that can have a pivotal role in the national energy mix as a NREA. This paper does not only provide a broad review of the current status of Libya's energy resources, but it also carries out a comprehensive resource assessment of available RE potentials.



## Libya

Tidal energy Given that Libya has a coastline of 1,770 km, there is likely to be potential for the development of tidal energy but comprehensive studies to determine this need to be carried out (Gatnash, 2012). Geothermal The geothermal energy sector has some potential especially in the area of indoor cooling, along the

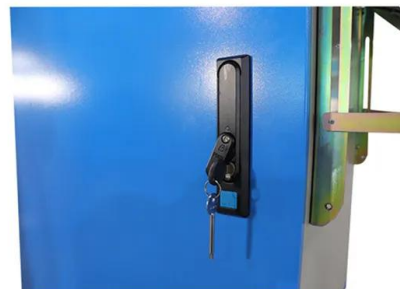


## Libya Signs Nuclear Agreement for 2019-2023

Mr Ramadan M. Kuridan, Chairman of the Libyan Atomic Energy Establishment, signed Libya's Country Programme Framework (CPF) for the period of 2019-2023 on 22 October 2019 in a ceremony attended by Mr Shaukat Abdulrazak, Director of the Division for Africa, in his capacity as acting IAEA Deputy Director General and Head of the Department of Technical ...

## The Geothermal Regime in Sirt Basin, Libya: The Geological Role ...

PDF , On Jan 1, 2019, Ahmed Al-Rashed and others published The Geothermal Regime in Sirt Basin, Libya: The Geological Role and Heat Flow Studies , Find, read and cite all the research you need on



## Renewable Energy Engineer

British Petroleum (BP) is looking to expand its involvement in Libya, particularly in exploratio 22 Oct 2024. NOC and Deloitte discuss go NOC chairman Farhat Bengdara and board members had follow-up talks today in Tripoli with the 22 Oct 2024. Renewable Energy Engineer;



## Hydrogeological Characteristics of the Geothermal ...

Algeria, Libya and Tunisia, contains very large reserves of non-renewable water. It covers an area in excess of 1,000,000km<sup>2</sup> of which 700,000km<sup>2</sup> are in Algeria, geothermal energy. It shows the variation of temperature with depth at each point of the study area. Figure 3 shows the



## A Solution to Global Warming, Air Pollution, and Energy ...

A Solution to Global Warming, Air Pollution, and Energy Insecurity for Libya By Mark Z. Jacobson, Stanford University, October 22, 2021 (CSP), geothermal, hydro, tidal, and wave power. WWS heat-generating technologies include geothermal and solar thermal. WWS storage includes electricity, heat, cold, and hydrogen storage. WWS equipment

## Libya Geothermal Energy News Monitoring

Libya Geothermal Energy News Monitoring. Get by Email or RSS. Published on Nov 19, 2024. 3 Small-Cap Energy Stocks With Major Upside

Potential. Consistent withdrawals from global oil inventories owing to OPEC+ production cuts, increasing geopolitical risks, and supply disruptions are likely to push the oil prices higher in 2024, and the rally



## The Geothermal Regime in Sirt Basin, Libya: The Geological Role ...

Bottom hole temperatures (BHTs) and static formation temperatures (DSTs) of 70 deep exploratory wells are used to evaluate the geothermal regime in the northeastern part of Sirt Basin. A linear regression was derived between the BHT's and the DST's, for correcting the bottom hole temperatures from the drilling factors that lower them from the true formation

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## The Geothermal Regime in Sirt Basin, Libya: The Geological Role ...

2. Objectives With the recent shortage of energy resources, the possible use of geothermal energy as an alternative source has received much attention. In the past, geothermal studies attract the attention of a few research workers in different countries, because of scarcity of the subsurface thermal data.



## Hydrogeological Assessment of the Geothermal Aquifer in the



In Libya, the northwestern part of the country has a relatively high geothermal potential, with temperatures less than 90 °C and two geothermal aquifers in its northwestern part, dated for

## The Geothermal Regime in Sirt Basin, Libya: The ...

Lately, active drilling operations in exploring for oil and gas in Sirt basin, Libya, yield a lot of bottom hole temperatures at different depths, that helps to study the subsurface distribution of the geothermal gradients, estimation of the heat flow ...



12V 10AH



## Libya

Energy products (fuels and electricity) are heavily subsidized in Libya, with subsidies reaching as high as 86% -91% for the various products but are not fully paid by the Government. Petrol and electricity accounted for nearly 70% of Libya's USD 5.4 billion subsidy budget in 2019.

## The Geothermal Regime in Sirt Basin, Libya: The Geological Role ...

Lately, active drilling operations in exploring for oil and gas in Sirt basin, Libya, yield a lot of bottom hole temperatures at different depths, that helps to study the subsurface distribution of the geothermal gradients, estimation of the heat flow values and relating their variations to the



subsurface geology, and the geothermal



## A review of geothermal energy status and potentials in Middle

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Geothermal energy production and consumption is one of the world's top priorities as it ensures sustainable developments via steady yield of renewable energy and helps to reduce atmospheric carbon dioxide (CO<sub>2</sub>) emissions and air pollution levels. The objective of this study is to critically assess geothermal energy prospects in terms of number of proven ...

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