



Development and prospects for renewable energy in the Arab world

Alternative energy in Saudi Arabia: a strategy to ensure water and electricity.

Saudi Arabia needs to invest at least 266,600 million dollars in the water and electricity sectors in the next fifteen years to increase its production capacity at a pace that meets the needs of a population with an annual growth of 2.5%. The local demand for water and electricity in the kingdom is growing at an annual rate of 8.5%. This requires real investments in two directions: extending projects generating electricity and water desalination and the use of renewable energy, such as solar, for these projects. Source: *Al-Sharq Al-Awsat*. **Full article.**

Saudi Arabia: water and electricity projects for the value of 133,000 million dollars in the next 10 years.

According to data of the Water and Electricity Ministry, 80,000 million dollars will be allocated to electricity projects. Source: *Al-Sharq Al-Awsat*.

Five sustainable, tourist and leisure projects in DubaiLand.

Among the new projects is that of a sustainable city that will meet the highest environmental standards and criteria of sustainable urban planning. The city will have a university to teach environmental science, organic farming plantations, fields of solar panels and water treatment systems. For its part, the Ajman Palace Hotel will have solar panels on the roof to heat the water consumed in its premises. Source: *Al-Bayan*.

Egyptian scientists say waste materials are an inexhaustible treasure.

Egyptian scientists have developed a project to produce energy from waste materials equivalent to a quarter of the amount of oil consumed at present. The project could provide annual benefits of between 3,000 million and 4,700 million dollars. Source: *Al-Sharq Al-Awsat*.

Libya commits to renewable energy as the future.

The Libyan Minister for Economic Affairs stated that "Renewable energy is the energy that we will use in the future using the vast desert we have. At present, we cannot benefit from it as we not have the necessary infrastructure." Source: *Al-Jazeera*.

Vision United Arab Emirates 2021 and renewable energy.

It is anticipated that by 2020 one percent of the electricity needs of Dubai will be covered by solar energy, a percentage that will rise to 5% in 2030. The Mohamed Bin Rashid Al-Maktum solar park will produce 1,000

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megawatts and will cost 12,000 million dirhams. The management and development of the complex will be borne by the Dubai Electricity & Water Authority (DEWA) within the integrated energy strategy of the emirate for 2030 that aims to diversify energy sources. Dubai has an integrated gas strategy for 2030 aimed at guaranteeing the sustainability of the supply of gas to Dubai and reducing the dependence on gas to produce electricity from 99% to 70%, using clean coal in the remaining 30% and developing and guaranteeing renewable and sustainable energy sources according to the Vision United Arab Emirates 2021. Source: *Al-Bayan*.

In 2030 Saudi Arabia will produce 54 gigawatts of renewable energy.

Solar energy will account for 41% of the total renewable energy the country needs. It is expected that this figure will reach 27% in 2020 and 80% in 2050. Saudi Arabia will need 121 GW of electricity in 2030 and there will be an energy gap of 60 gigawatts of energy that renewable energy could provide. The country also envisages the possibility of locally generating 80% of the investments in renewable energy in 20 years. Source: *Al-Sharq Al-Awsat*. **Learn more.**

The Egyptian economy grows 5.2% for the first time since the revolution and looks for alternative energy.

Industrial projects in the country are confronting the obstacle of generating the necessary electricity and for this reason the country must look for alternatives as it may suffer an energy crisis in the next ten years. The Agency of Industrial Development has received three offers of solar energy. One of the bids was made by a Saudi investor and is not just aimed at generating electricity with solar energy but also the desalination of seawater. Source: *Al-Bayan*.

First bank in the world specializing in the environment created, will be based in the Gulf.

The bank is in the process of being established by a team of experts from around the world. Early next year it will be made public in its second phase. The entity will be based in a GCC country and will start with a capital 10,000 million dollars. Source: *Al-Sharq Al-Awsat*. **Learn more.**

Clean electricity export project from Tunisia to Europe.

The private company TuNur will implement an electric energy project through a technique concentrating sunlight and using a closed circuit in which the generator is artificially cooled, without the need of seawater, so making its installation in the Desert of Tunisia possible. The energy generated in the project will be for export to Europe. Source: *Al-Sabah*.

International interest in Arab renewable energy

Economic Cooperation Agreement between Iraq and the EU.

The protocol establishes a cooperation program in the energy sector between the EU and Iraq for the period 2010-2015 and

includes, among other components, a program to encourage the use of renewable energy in Iraq. Source: *Al-Sabah Al-Jadid*.

UAE and China seek to expand the economic partnership.

A study has limited to 15 the key areas that should be worked towards by the Emirate investments in China. Renewable energy is in third place in the list of priorities. Source: *Al-Bayan*.

UAE and South Korea widen cooperation in renewable energy. Source: *Al-Bayan*. **Full article.**

Europe looks for renewable energy in the deserts of Africa and the Middle East.

Europe is about to establish a practical framework for a plan to obtain the supply of clean energy in the deserts of Africa and the Middle East. Institutions, European companies and government agencies had a strong presence at the 5th Conference of Renewable Energy of the MENA region (MENAREC 5) held in Marrakech last week. Last year already investments in renewable energy exceeded investments in conventional sources. Source: *Al-Bayan*.

Renewable energy at the conference “Financing development projects in the new Tunisia”.

One of the wind power projects intends to produce at least 100 megawatts. The project includes a 1,000-megawatt electricity link between Tunisia and Italy and a plant generating electricity with a potential energy of 1,200 MW of which 400 will go to the Tunisian market and the rest to the Italian market. The project costs between 3,000 and 4,000 million dinars. It aims to save 660 kilotons of oil through the creation of a solar plant in southern Tunisia (in seven years), produce electricity with wind power, create a hybrid solar and gas plant with a budget of 97 million dinars and a solar and oil project which will be implemented in a framework of the association of local organizations and the National Energy Conservation Agency over six years. Source: *Al-Sabah*.

Solar Energy

Saudi Arabia will invest 100,000 million dollars in solar energy in the next 20 years.

Saudi Arabia aims to save between 360,000 and 520,000 barrels of oil per day through the implementation of a plan using solar energy by 2030. The King Abdullah City for Nuclear and Renewable Energy will begin implementing this strategy this year. Solar energy will cover more than 20% of the electricity needs of the kingdom within 20 years, but other alternative sources of energy such as wind power will contribute to covering 50% of the electricity needs of the country in year 2032. In the solar area, the objective for this year is to reach 16 GW of photovoltaic power and 25 GW of solar thermal energy. In addition, the kingdom intends to nationalize 80% of the value-added chain of solar energy. To date, Saudi Arabia produces less than 50 megawatts of solar energy despite having announced years ago its intention to be a pioneer country in this field. From now until 2032 the country will build nuclear power

plants to obtain 17 gigawatts as well as four gigawatts of geothermal energy and energy generated from waste products to cover one-sixth of the anticipated demand. It is expected that the demand will peak in the next twenty years at 121 gigawatts, 60.5 of which will come from power plants operating on oil and gas. Sources: *Al-Sharq Al-Awsat* and others.

Agreement signed for a solar energy project in Bahrain.

The company Petra Solar has signed an agreement between the National Oil and Gas Authority, the Bahraini oil company Bapco and Caspian Energy Holdings to distribute 5 megawatts of solar energy between Awali City, the University of Bahrain and other areas of the kingdom. This project is just the first in a series of initiatives by the National Oil and Gas Authority to diversify the energy sources needed to guarantee sustainable development in the kingdom and reach the objectives of the Bahrain Vision 2030. Source: *Al-Watan*. **Learn more.**

Morocco starts work this year on an electricity generation project with solar energy.

This year the first contract will be awarded to generate 160 megawatts from solar energy. The consortium winner, who will be chosen from among three groups of companies

and will implement the first phase of the solar plant of Warzazat (southern Morocco) will be announced in early summer. The Warzazat complex, which will have a capacity of 500 megawatts and will be completed in 2015, is the first phase of the Moroccan Solar Energy Project which aims to generate 2,000 megawatts of electricity with solar energy in 2020, i.e. 38% of the total electricity generated at present in the country. Source: *Al-Quds Al-Arabi*.

Solar energy project inaugurated in Medina.

This is a training project resulting from a partnership agreement with a German company that aims to cover the gaps of professionals specialized in the field of solar energy. Source: *Ukaz*.

Iraq: Babel carries out research to equip remote schools in the province with solar energy

The idea of the project came from the deficiencies in the Iraq sector of production and distribution of electricity in general and the existence of remote schools to which the electricity supply does not reach. Source: *Al-Sabah Al-Jadid*

Upcoming events

 **ARAB FORUM FOR ENVIRONMENT AND DEVELOPMENT**, Beirut, 29 and 30 November. Source: *Al-Wasat*.

Tenders

Tender for the execution of the Mohamed Bin Rashid Al-Maktum solar park for this month of May.

The Supreme Council of Energy of Dubai announced that the tender for the execution of the Mohamed Bin Rashid Al-Maktum solar park will be launched in late May as a prelude to the choice of the company executing the project. The Dubai Electricity & Water Authority (DEWA) has received 150 applications from companies interested in taking responsibility for the construction of the first solar photoelectric power complex of 10 MW. In early April, the period for these submissions was opened and the examination of them will end in late May so that the qualifying companies can make their bids in June. The complex was launched earlier this year and it is expected that its production capacity will be 1,000 megawatts. The project will cost 12,000 million dirham and is one of the initiatives to create a green and sustainable economy in the emirate. Source: *Imarat Al-Yaum*.

New tenders

Country	Description	Deadline	Reference	Link
Kuwait	KUWAIT NTEC inks a deal with HELIOCENTRIS to establish Energy firm		11433409	http://www.globaltenders.com
UAE	United Arab Emirates : UAE inks Permanent Headquarters Agreement with IRENA		11430733	http://www.globaltenders.com
Bahrain	Bahrain launches distributed smart solar energy project in Awali		11421514	http://www.globaltenders.com
Morocco	Supply of electrical energy from wind	11-Jul-12	11346142	http://www.globaltenders.com
Morocco	MOROCCO plans to generate 2,000 MW of solar power by 2020		11410267	http://www.globaltenders.com
Algeria	Construction Works Of Outdoor Lighting And Solar Generators At Unit Level	30-Jun-12	11433678	http://www.globaltenders.com
Palestine	Processing work for Solar System of the Faculty of Sport in the New Campus of the University .	10-Jun-12	5633959	http://www.tendertiger.com
Algeria	Work of the solar Generators & Lighting External with the Level of the Units .	1-Jul-12	5831856	http://www.tendertiger.com
Middle East	ENPI cleaner energy-saving Mediterranean cities.	29-Jun-12		http://www.tendersinfo.com

Other tenders referred to in previous bulletins

Country	Description	Deadline	Reference	Link
Morocco	Development, design, financing, construction, operation and maintenance of a wind project, consisting of five wind farms, a total installed capacity 850 MW	21-Jun-12		http://www.globaltenders.com
A. Saudi	Supplying the Production of Alternative Energy for Use in Makkah Municipality (100 Megawatts Solar Power).	24-Jun-12	5497725	http://www.tendertiger.com
A. Saudi	Supply & Installation of Sludge Drying Using Solar Energy Mechanically .	12-Jun-12	5633959	http://www.tendertiger.com
EAU	Construction of 33KV Switching Station for 10MW Solar Power Plant at Ghadeer Barashy	14-Jun-12	5729502	http://www.tendertiger.com
The Gulf	Establishment of a Desalination Plant Solar-Powered Reverse Osmosis Khafji.	24-Jun-12		http://www.tendersinfo.com
Iraq	Supply, Testing & Implementation of Solar Lighting Systems with all Accessories .	10-Jun-12	5708200	http://www.tendertiger.com
Jordan	Supply of testing equipment, training equipment, weather instruments, data loggers and other energy efficiency equipment to the National Energy Research Centre of the Hashemite Kingdom of Jordan	19-Jul-12	10531878	http://www.globaltenders.com
Morocco	Development, design, financing, construction, operation and maintenance of a wind project, consisting of five wind farms, a total installed capacity 850 MW	21-Jun-12	11226114	http://www.globaltenders.com
Morocco	Development of integrated 850mw wind project in production of private electricity	21-Jun-12	376716120509	http://www.globaltenders.com
Morocco	Supply, Installation and Commissioning of a Solar Hybrid Dryer on Behalf of the Regional Direction of Agriculture of Gharb Chrarda Bni Hssen.	21-Jun-12		http://www.tendersinfo.com
N. Africa	Supply of electrical energy from wind.	11-Jul-12		http://www.tendersinfo.com
N. Africa	Supply, installation and commissioning of production lines for photovoltaic prayers..	21-Jun-12		http://www.tendersinfo.com
N. Africa	Supply And Installation Of Four Photovoltaic Pumping Systems In The Governorate Of Tataouine.	12-Jun-12		http://www.tendersinfo.com
N. Africa	Development, design, financing, construction, operation and maintenance of a wind project, consisting of five wind farms, a total installed capacity 850 MW.	21-Jun-12		http://www.tendersinfo.com
N. Africa	Supply of electrical energy of wind origin of overall consumption of 160 gwh/year.	20-Jun-12		http://www.tendersinfo.com
N. Africa	Provision of Electric Energy Consumption of Wind Origin Global.	20-Jun-12		http://www.tendersinfo.com
Middle East	Supply and Installation of Wastewater Treatment Facility Heating Purposes of Parabolic Solar Collectors Palm Corrugated Design, Works..	24-Jul-12		http://www.tendersinfo.com
Middle East	Supply of Photovoltaic Systems..	15-Jun-12		http://www.tendersinfo.com
Middle East	Management Consulting Services and Support - Solar thermal Power Generation and Water Project.	15-Jun-12		http://www.tendersinfo.com
Syria	Design, Manufacture, Supply, Transport, Insurance, Testing, Execution of The Civil & Erection Works & Putting into Operation of the Equipments, Machineries & Appliances to Execution a Typical Wind Park With Total Capacity (50) MW .	12-Jun-12	5545462	http://www.tendertiger.com

Analysis

Alternative energy in Saudi Arabia: a strategy to guarantee water and electricity.

Al-Sharq Al-Awsat, 08/05/2012

Abed Al-Sahimi

Saudi Arabia will have to confront a real challenge in the next fifteen years in the energy sector. Ironically, the largest producer of energy (oil) in the world urgently needs to solve the energy problem in its internal structure and to curb oil consumption. Although oil represents 88% of state revenue, the situation could be tricky if not resolved at this time of oil revenue boom for the Saudis. If solutions to the problem of energy are not found, the daily oil consumption in the kingdom will increase to 7.8 million barrels at the end of the next decade.

Turki Al-Huqail, a Saudi economist based in Washington, declared that, according to some estimates, **Saudi Arabia needs to invest at least 266,600 million dollars in the water and electricity sector in the next fifteen years** to be able to expand its productive capacity to keep up with the needs of a population growing at a rate of 2.5% per year. Huqail stated that to the population growth rate of 2% per year must be added the increase in the electricity demand, a result of the accelerated growth of the industrial base. According to the same expert, water and electricity projects are a priority for the Saudi government. The public and private investment in these two sectors were insufficient in the past decade and therefore the problem has to be addressed in the coming years to meet a **local demand which is growing 8.5% per year and could multiply by four in the next two decades which would increase domestic oil consumption to 7.8million barrels per day.**

Expanding the water and electricity sector to meet the growing demand in this decade and half of the next will require considerable investments, for example, in infrastructure, bearing in mind that in the country the rate of growth in the electricity demand surpasses the growth rate in the electricity supply in other countries of the region, and that it is one of the poorest in the world in renewable water resources. These two problems, added to oil dependency, mean that the country needs investments in two ways: the expansion of electricity generation projects and water desalination and the use of renewable energy in these projects (nuclear or solar).

Abdurrahman Al-Ibrahim, governor of the public company Saline Water Conversion Corporation (SWCC) announced in March of this year that the company had established a plan to invest 80,000 million dollars in water projects in

the next twenty years. The company currently produces 3 million cubic meters of desalinated water per day and that production will rise to 5.7 million cubic meters in 2015. Moreover, the SWCC is studying with ARAMCO the issue of energy efficiency in the desalination plants.

The SWCC started a water desalination project with solar energy in Jafyi City as part of a water desalination initiative proposed by the Saudi monarch. The project, 20 megawatts of power, produced 30,000 m³ of desalinated water a day, a production that could increase to 60,000 m³.

In the next 15 years it is anticipated that the Saudi Water and Electricity Ministry will invest 80,000 million dollars in electricity generation, 53,300 million dollars in desalination of seawater projects and 53,300 million dollars in the sanitation sector. Huqail believes that this investment of 186,600million (approximately 33% of Saudi GDP at current prices) would have to be increased by at least a third for the country to respond comfortably to the demand for light and electricity, and that the private sector must play an essential role in this process through strategic partnerships between the public and private sectors.

According to this expert, Saudi Arabia has extended the water and electricity sectors in recent years although at a slower pace than the growth in demand: the demand for electricity grew by 85% between 2000 and 2010 while the power generation capacity only grew by 75% in that decade. Water resources in the country have also been under increasing pressure in the last decade. The per capita share of water reserves fell 25% due to the large increase in the rates of water consumption at individual, agricultural and industrial levels between 1980 and 2010. According to FAO estimates, the volume of water consumption for irrigation increased by more than three reaching 23 km³ due to the country's aspirations to develop agriculture in desert areas in this period. The quota per capita of all local water sources diminished a little more than a third between 1992 and 2010 according to FAO data. This FAO report points out that the volume of consumption of surface water and groundwater exceeded by more than 988% the total renewable water in 2010.

These figures, according Huqail represent the real indicators of water and electricity consumption in the kingdom and are, at the same time, elements of pressure to adopt alternative energy sources. For this expert, the use of renewable energy is subject to the consumers having sufficient incentives. The presence of the sun all year in the country permits the launching of a broad program using solar power but the idea will not be serious if not accompanied by crucial changes in culture, awareness and consumption habits.