



KINGDOM OF MOROCCO

**Ministry of Energy, Mines,
Water and Environment**

Conference

“Concentrated Solar Power”

**Speech by Mrs. Amina Benkhadra,
Minister of Energy, Mines,
Water and Environment**

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Your Highness

Excellencies

Ladies and Gentlemen,

First of all, I would like to thank Her Highness Lalla Joumala Alaoui, Ambassador of the Kingdom of Morocco to the Court of Saint James and Dr Howard Stoaate, Member of Parliament, for granting me the privilege to speak at this parliamentary conference dedicated to Desertec concept that will be presented in detail by Dr Gerhard Knies, President of Desertec Foundation and coordinator of the Trans-Mediterranean Renewable Energy Cooperation.

The participation to this meeting of Lord Philip Hunt, Minister of State for Energy, Sir Charles Hendry, the Conservative Party's Shadow Minister of Energy and Sir Simon Hughes, the Liberal Democrat Party's Shadow Secretary of State for Energy and Climate Change, together with so many parliamentarians as well as leading members of the business community and journalists, constitutes an evident demonstration of the crucial importance the United Kingdom is giving to the development of Renewable Energies.

Indeed, these new energies, clean and inexhaustible, are not only considered as a mean for ensuring security of supply and availability of energy, but as the main foundation of the new energy system that will fuel the whole new productive system of sustainable development based on responsible economy growth, equitable share of wealth and environment preservation. Actually, if clean technologies, like carbon capture and storage, will lower greenhouse gases emissions generated by the combustion of fossil fuels that will still dominate energy mix for some decades, the radical way for winning the combat against the general warming and avoiding irreversible destruction of our ecosystems, is to urgently and imperatively develop and generalize the use of renewable sources that are free-carbon energies and exploit all

energy efficiency potential. Energy renewable sources are abundant and well distributed worldwide to allow regional balanced development inside all countries and enhanced cooperation among nations liberated from the fear of lacking energy.

Excellencies, Ladies and Gentlemen,

Morocco has embarked in the sustainable development revolution as the country is engaged in a tremendous economic and social development, under the High Guidance of His Majesty, King Mohammed VI.

The new energy strategy adopted in March 2009, and which essential two objectives are to provide sufficient and reliable energy to the economy and the population as well as to prevent any harmful effect on the environment stemming from energy supply and uses rests on five strategic axes:

- (a) security of supply with diversification of fuel types and origins;
- (b) availability of and access to energy for all segments of the society at affordable prices;
- (c) mobilization of domestic energy sources, mainly renewable energy and at the same time intensification of hydrocarbons exploration and oil shale valorisation
- (d) promotion of energy efficiency; and
- (e) regional energy integration among the Euro-Mediterranean markets.

Morocco has the necessary assets to achieve these goals, particularly of developing Renewable Energies, mainly wind and solar, and realize its integration among the Euro-Mediterranean markets.

The Moroccan Wind potential is estimated at more than 25 000 MW of which 6000 MW are forecast to be implemented by year 2030 in regions with an average 9m/s wind speed.

With an annual sunshine averaging 3000 hours equivalent to an irradiation density of almost 5.3 KWh/m²/day, Morocco is well endowed to build large scale solar energy power.

At the heart of an international energy crossroads, Morocco has a special geographical position that allows it to become an important hub of the increasing electricity exchange between the countries around the Mediterranean thanks to the interconnections it has developed and is strengthening with Spain and Algeria.

Politically, Morocco, with its Advanced Statute with the European Union and as a founding member of the Mediterranean Union, is very well positioned to be a leading actor in the construction of the Europe-MENA strategic alliance for co development and shared wealth among the two banks of the Mediterranean Sea. The Mediterranean Solar Plan and the DESERTEC project will promote synergy in the development of solar and wind energy in the Euro Mediterranean Area.

In this context and according to the high priority given to renewable energies development, His Majesty, King Mohammed VI, has presided on November 2, 2009 the launch ceremony of a huge Concentrated Solar Power (CSP) project totalling 2000 MW to be achieved by year 2020 on five sites. The first 500 MW will be commissioned in 2015. The whole project investment is estimated to 9 billion US dollars.

This project accelerates the massive introduction of renewable energies in electricity generation as they will represent 42% of the total 14580 MW installed power by year 2020 compared to 26% of the 5292 MW installed in 2008. When completed, this project will have a strong impact on environment preservation by avoiding 3.7 million tons of CO₂ emission. It will also reduce our energy dependency from than 97% today to 85% by 2020 by saving 1 million toe of energy import. At the same time, as nuclear electricity is forecast to represent 7% of the total power

generation, by 2020, nearly 50% of power generation will come from clean fuel.

New laws relating to renewable energies and energy efficiency have been promulgated to give clear visibility to investors and operators. Besides the creation of an Energy Fund with one billion US dollars capital, two dedicated bodies have been set up, the Moroccan Agency for Solar Energy for the implementation of the 2000 MW CSP project and a special Agency for promoting Renewable Energy and Energy Efficiency development.

Excellencies, Ladies and Gentlemen,

The Desertec concept core idea is to take advantage of the solar-rich desert sun-belt of Middle East and North Africa to build large scale Concentrating Solar Power plants. The electricity produced will be sufficient to satisfy the increasing power demand of the MENA region and supply 15% of electricity requirement of Europe by year 2050. The residual steam from the Thermal CSP will be used for sea water desalination to upset the deficit of drinkable water occurring in many MENA countries. High Voltage Direct Current, an available advanced technology for long distance electrical transmission, is suitable to link MENA production to Europe with a minimum loss of 3% per 1000 Km. In parallel, Europe will develop its huge on and offshore wind power which intermittency would be compensated by using solar electricity from MENA, smart grid and classical base load plants.

Morocco, with the exploitation of its solar and wind potential and its proximity to Europe, can form the first milestone in implementing effectively and concretely the Desertec concept. For this purpose, it is necessary to strengthen the cooperation among the EUROMENA space by ensuring real transfer of technology, enlarging financing mechanisms, setting up joint ventures, building progressively a unified win-win electricity market by harmonizing legislation and regulatory frameworks.

Morocco's support for the Desertec Industrial Initiative will soon become effective with the adhesion of the Moroccan private company NAREVA. This is based on our belief that if the necessary means are made available, the Desertec concept could be viable and participates largely to reduce GHG emissions at the required magnitude to achieve the 2°C global warming target and mitigate the climate change effect.

His Majesty King Mohammed VI will preside over the ceremony of the signatory of the National Charter for Environment and Sustainable Development on the 22nd of April 2010, the Earth Day for which Morocco has been selected as the focal country for its official celebration. This Charter will become the main reference for all our economic and social activities and a decisive step in our policy for preserving the environment and combating climate change in which renewable energies and energy efficiency will be the central drivers.

Morocco is offering the necessary institutional conditions and business opportunities in energy, environment and other sectors generating wealth and added value. It constitutes the convergent centre where the Desertec concept can see its first concretization with a massive participation of British enterprises bringing their experience, know-how and technologies.

Thank you for your attention.