



Union for the Mediterranean

Topic A: Towards a Mediterranean Solar Energy Plan; Discussing on the potentialities for sustainable development, energy efficiency and financial uprise for the region of the Mediterranean Sea.

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Introduction

In Paris on Sunday 13th July at the Heads of State Summit, a formal declaration launching the Union for the Mediterranean was issued, setting the objectives and priorities of the 43-member organisation.

The attention, however, is drawn on one of its cornerstone initiatives, the

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Mediterranean Solar Plan. The Mediterranean Solar Plan (MSP) aims to meet the major energy and climate challenges confronting the Mediterranean region and the European Union in the coming decades. It is one of six key initiatives of the Union for the Mediterranean (UfM), launched in Paris on 13 July, 2008.

Its prime objective is the development of a sustainable energy future in the Mediterranean region. The Mediterranean region has an enormous, and largely untapped, potential in the field of renewable energies. Renewable energies can significantly contribute to the sustainable development of the region. There is an opportunity for cooperation among all interested parties, because the benefits of the necessary investments can be shared in an equitable way.

According to the International Energy Agency total additional investment needs for the period 2010-2050 amount to USD 45 trillion¹. The average annual investments between 2010 and 2050 needed to achieve a virtual decarbonisation of the power sector include the build of 215 million square metres of solar. Solar Power as a means to shift from high-yield and heavy-carbon profits, to lower cost and cleaner energy was at the Paris Summit of 2008 a necessity, not an option.

The Union for the Mediterranean confirms the need to focus on alternative energy sources, as recent activity on energy markets in terms of both supply and demand could not be overlooked. Market deployment as well as research and development of all alternative sources of energy was declared a major priority in efforts towards assuring sustainable development. The Secretariat of the UFM was as a result tasked to explore the feasibility, development and creation of a Mediterranean Solar Plan.

UFM experts working on the MSP have confirmed that “Energy demand is projected to rise significantly, while fossil fuel prices will most likely continue to follow an unstable and most likely rising trend. To address these challenges, the countries of the EU and the other member countries of the Union for the Mediterranean need to intensify their efforts to develop adequate policies in the field of energy efficiency and energy savings, renewable energies and reduction of greenhouse gas emissions.”²

The UFM is working closely with the European Union and especially the European Commission in order to better pave the way towards the achievement of the MSP. In order to facilitate the mobilisation of funds for investments in sustainable energy and foster the attainment of the MSP objectives, several European Financing Institutions (EFIs) have established the “MSP Renewable Energy and Energy Efficiency Project Preparation Initiative” (MSP-PPI) which is financed by the EU funded Neighbourhood Investment Facility (NIF) managed by the European Commission. By supporting eligible investment projects through the financing of Technical Assistance (TA) targeted at advanced project preparation, the MSP-PPI aims to accelerate the implementation and financing of RE, EE

¹ According to its recently published report, “Energy Technology Perspectives 2008 - Scenarios and Strategies to 2050”,

² Strategy Paper, issued on the meeting of February 10, 2010

and related grid connection projects.

Objectives:

The primary objectives of the Mediterranean Solar Plan are two:

- (i) developing 20 GW of new renewable energy production capacities and
- (ii) achieving significant energy savings around the Mediterranean by 2020.

It thus addresses both supply and demand of solar energy through the following basic guidelines of project implementation:

- a) Developing electricity generation from renewable sources of energy
- b) Energy efficiency and energy savings
- c) Creating favourable framework conditions

More specifically:

- a) The MSP aims at increasing the use of renewable energy sources for power generation. As a result, the MSP aims at using European and Mediterranean for a in order to ensure the establishment of common framework in terms of legal, regulatory and investment environment for the development, by 2020, of 20 GW of new generation capacity in solar and other renewable energies in the countries around the Mediterranean Sea.

To this end, the MSP will build on the enormous potential for solar electricity generation available in the Mediterranean countries, notably through the development of Concentrating Solar Power (CSP) and Photovoltaic (PV) plants, and of other available and mature renewable energy technologies.

The MSP will also promote activities in the field of transfer of know-how and technology. Topics to be covered shall include but not be limited to education and training, research and development and local manufacturing capacities. Collaboration with regional and international institutions, in particular the International Renewable Energy Agency (IRENA), in this field should be encouraged.

- b) The MSP aims at ensuring energy savings and maximize energy efficiency , after consulting the recommendations of , inter alia,
 - 1. the Mediterranean Association of National Energy Agencies (MEDENER)
 - 2. the Mediterranean Energy Observatory (OME),
 - 3. the Regional Centre for Renewable Energies and Energy Efficiency (RCREEE) in Cairo
 - 4. and the Mediterranean Renewable Energy Centre (MEDREC) in Tunis
- c) Working on favourable framework conditions will be expanded in indicatively three areas:
 - 1. Regulatory framework
 - 2. Know-how and technology transfer
 - 3. Electricity transmission: New interconnections and a more streamlined network of electricity sharing is of utmost importance in order for energy from the power plants to be distributed to other countries. Special attention will be given to the improvement of North-South interconnections in order to make possible the export of green electricity from Mediterranean countries to EU countries.

Preparation and Implementation

The MSP is divided into mainly two concrete stages: (1) the preparation stage (2008-2009) and (2) deployment phase(2011-2020), while it is also on schedule that a Master Plan will have been developed by 2011.

a) The preparation Stage (2008-2009)

The preparation phase was mainly launched by a conference on 22 November 2008 in Paris, where high level policy makers, industry, investors, financing institutions and specialised agencies from all interested countries convened with a view to putting the MSP to practice. Following up on the results of a seminar held in Seville on 21 October 2008 with the European Solar Thermal industry, as well as on a workshop in Berlin on technology options and cost estimates for the development of solar and wind capacities in the Mediterranean region (28 and 29 October 2008), the conference was a major opportunity to discuss the first aspects of practical issues concerning the implementation of the program.

a.a) While in Preparation Stage **an Action Plan (2010 -2011)** was set up in order to launch a first set of projects in each field during the period 2010-2011. The Action Plan should also have duly covered aspects relating to the improvement of framework conditions (regulation, legislation, technology transfer, business environment). The Action Plan shall inter alia allow identifying a first set of projects to be launched.

Through the development of these projects, it was expected to define and test legal frameworks and financial mechanisms, and establish a viable import-export framework for green electricity to the European Union. This phase will in particular allow securing and developing adapted financing mechanisms as currently discussed notably with the World Bank and the European Investment Bank as well as with several bilateral development banks.

The Action Plan also allowed the identification of the main links between the different regions involved in the plan that already existed at the time or in the track or will be established in the near future. These include in particular the following interconnections:

- Morocco-Spain (operational)
- Morocco-Algeria (operational), reinforcement under preparation
- Tunisia-Italy (under preparation)
- Tunisia-Algeria
- Tunisia-Libya (existing cables, but not operational)
- Turkey-Greece and Turkey-Bulgaria (existing cables, but not operational).
- Egypt-Libya (operational)
- Egypt-Jordan-Lebanon-Syria (operational)
- Egypt-Greece (under-study)
- Syria-Turkey (Partially operational)

The Action Plan was expected to be finalised by end 2010.

a.b) Assessment of the progress made by 2010³

³ For more informations than presented in this study guide, seek the report "Identification Mission for the Mediterranean Solar Plan" filed by the ENPI - Neighbourhood – Mediterranean & Eastern Europe

The challenge facing the MSP can be highlighted by the fact that today less than 1% of electrical consumption in MPCs is provided by RE (excluding hydro), which represents less than 1 GW of installed capacity.

Thus, the objective of reaching 20 GW by 2020 looks very difficult in the future. Despite a number of positive legal developments, the established support mechanisms for RE and EE (or those under preparation) do not seem sufficient to significantly scale-up RE generation, to disseminate EE practices and to attract private sector investment. In a nutshell, the MSP program has neither managed to achieve the expected amount of solar energy nor has it managed to make it profitable , and thus attractive enough to be traded lucratively on market rules.

The outbreak of the economic crisis in 2008 basically demonstrated that RE and EE development in MPCs were neither sufficient nor attractive to the markets, since the immediate consequences of this crisis include tighter financing conditions (especially for large scale projects), and reduced capital availability for high risk projects, while at the same time standard energy commodities' producers were ready to protect their own from market disortion through lower oil and gas prices, which, as expected, have reduced the relative attractiveness of alternative energy source projects. As a result, Governments will likely show little interest in strengthening support schemes for RE and EE if they also face budgetary constraints due to depleted fiscal resources. That in turn, will make alternative sources of energy less distant to the private sector, allowing standard energy commodity exporters to prepare themselves again for the next "attack" of alternative energy sources. Thus, the future of alternative energy and especially solar energy seems ominous.

In this context, the successful implementation of the MSP over the long term will require focusing on several key issues, mainly:

- Enabling MPCs to set up appropriate legal and institutional frameworks in order to effectively develop RE generation and EE. This will lead towards a progressive integration into a common Mediterranean energy market.
- Establishing financial burden-sharing mechanisms between the EU and the MPCs to contribute to financing additional RE generation capacities, which mainly means forming a solid financial cooperation to leverage on energy production and distribution costs, in order

to achieve high-yield production . Although RE technologies show decreasing cost curves, their cost levels remain significantly above other energy sources, which hinders the energy authorities' general objective to provide energy at the lowest possible price.

b) Deployment Phase (2011-2020)

The actual long-term implementation of the Mediterranean Solar Plan will take place over the period 2011-2020 and notably aim at reaching the 20 GW target. The deployment phase was to be supported by **a Master Plan** to be presented in 2011 and covering the period 2011-2020:

Political Context

- UNFCCC Climate change negotiations
- Europe 20-20-20 / Directive 2009/28/EC: setting clear, binding and measurable targets in terms of new productive capacities from renewable energy sources
- Adoption of national renewable energy strategies by many Mediterranean Partner Countries
- Launch of like-minded high-profile initiatives by private business and non-state actors
- Development of new financial support schemes by international financial institutions

Main Objectives

- Defining ways of how to tackle key issues related to a large-scale, market-driven deployment of renewable energy and energy efficiency technologies in UfM Member States.
- Developing a “road map” that will identify the necessary steps and framework conditions to reach this goal.
- Providing a platform where representatives of member states, and other stakeholders, can meet and exchange.
- Serving as an interface and a focal point for the various projects and initiatives at national and regional levels, while building on their results and recommendations.

Content Structure

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- Further improvement of the framework conditions in UfM countries, taking into account results and propositions of ongoing initiatives and projects, in particular "PWMSP"
- framework conditions for a large-scale and self-sustained deployment of 'R3E' in the UfM area
- financial support mechanisms
- capacity development tools
- Concise roadmap detailing the phases, activities and precise timelines for the implementation of the MSP Working Methods

Key principles

- transparency and co-ownership, efficiency and effectiveness, mobilisation of available know-how and expertise
- Establishment of common working platforms :
 - Joint Committee of National Experts of Member States
 - Drafting Group for the Preparation of the Master Plan
 - Technical Expertise Network to support both of them
- Plus technical seminars and policy workshops
- UfMS will prepare activities and assume follow-up, in collaboration with MS and COM, building on existing platforms & networks of communication & cooperation

The goals, content structure and working methods of the MSP Master Plan were presented as previously demonstrated by Marc Strauss and Steffen Erdle, UfM Secretariat Senior advisers for Energy, in Brussels on the 10 February 2011. Following this kick off, the elaboration of the MSP Master Plan will actually start.

Conclusion- The real enemy of renewable solar energy: ⁴

The political will seems now in place for the deployment of CSP plants in the Sahara Desert, with transmission of its clean electricity into Europe. Standard energy commodities

⁴ [POLLY HIGGINS: BARRISTER, ENVIRONMENTAL LAWYER & AUTHOR](#)

such as gas and oil are characterized by instability, vulnerability to market distortion, and most of all the fact that they are not renewable, so the time should come when oil or gas will not be sufficient enough in terms of quantity any more to compete with renewable energy in the markets.

Consequently, the end of any renewable energy project is the development of abundant energy production in nuclear reactors. The CSP can hold though. It has many advantages over nuclear:

- 1) Rapid construction times (3 years versus 10 -20 years),
 - 2) Low environmental impact (even positive environmental impact can be achieved where desalination is incorporated in the plant, thereby providing water for both human consumption and agricultural use),
 - 3) Unlimited availability of resource (in any given 2 week period, deserts receive the same amount of energy from the sun as is contained in all nuclear fuel reserves),
 - 4) Lower security and terrorist risk (compare the bombing of a nuclear plant to the taking out of a bunch of mirrors in the desert - transnational devastation versus 7 years bad luck).
- Let the race commence.

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