

13th Kronberg Talks

Rabat - 17 Mai 2011

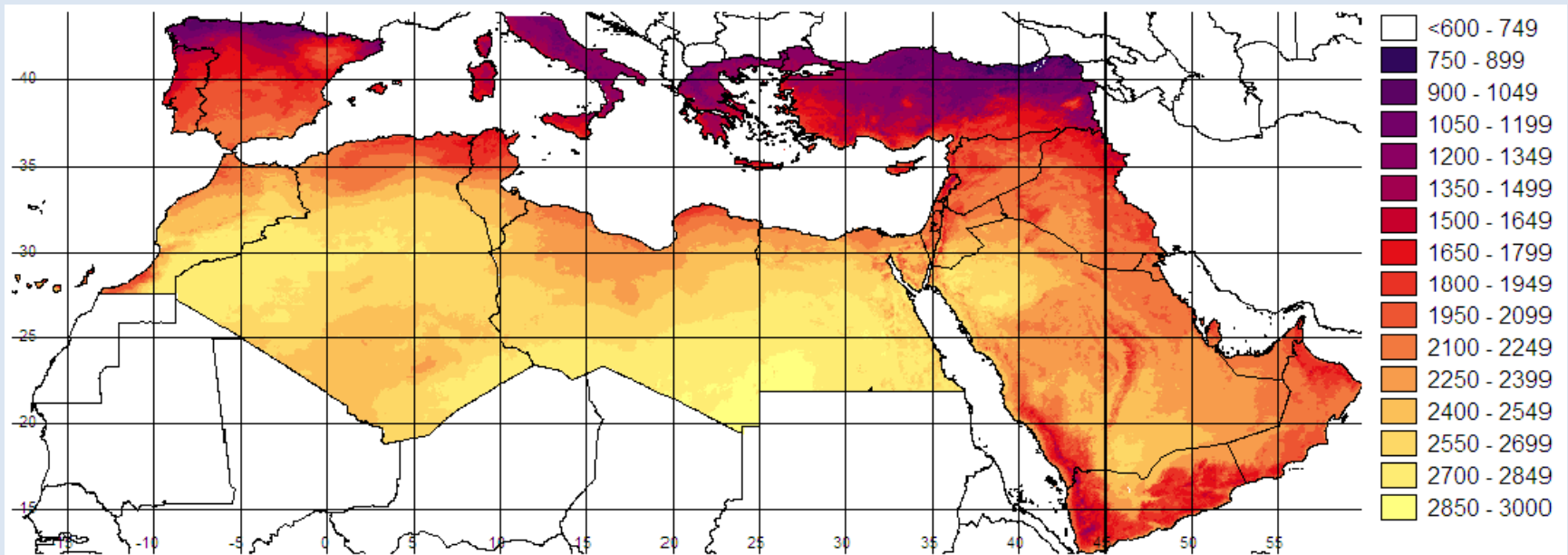
DESERTEC UNIVERSITY NETWORK

Rabat , 17 Mai 2011

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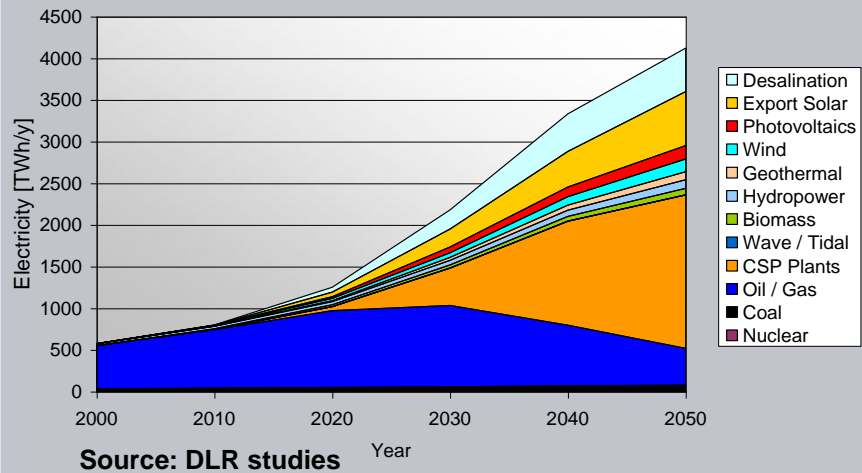
1- Overview of Solar resources



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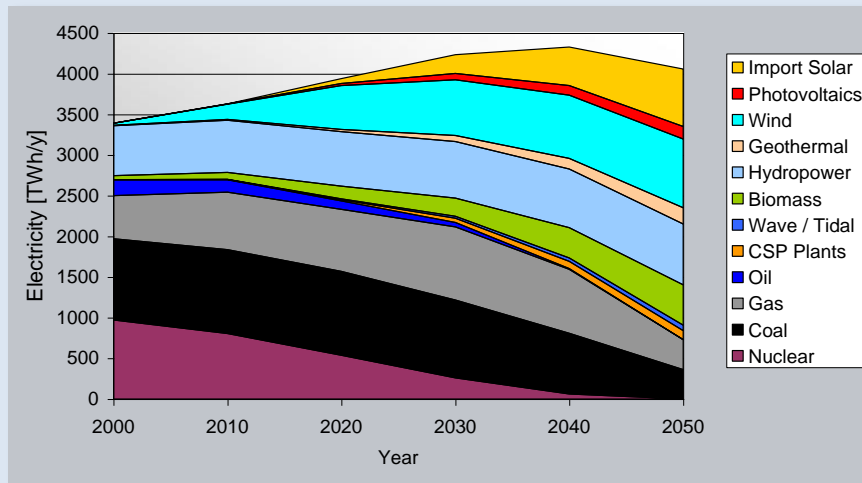
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4- Figures for EU-MENA



MENA: Transition Mix 2000-2050

including export to Europe and power
for water desalination



EU: By clean power from deserts EU may gain

10-15 years in the fight against climate
change, by importing 17% from MENA

Thanks to energy efficiency and renewable
energies, nuclear energy can be phased out
completely, and oil, gas and coal largely.

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5- A quick SWOT Analysis

(Source: Desertec initiative: powering the development of southern Mediterranean countries - Dr Steffen Erdle/d-i-e)

5.1-Strengths:

- Comprehensive long term vision
- Largely existing technology basis
- Solid perspectives for future learning effects (Technological advances and declining cost levels)
- Direct involvement of the private sector
- Propitious political timing ?

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5- A quick SWOT Analysis

5.2-Weaknesses

- Lack of established lead technology
- In some extent there is a degree of *insecurity*: future policy preferences, energy costs, technological progress...
- Lack of a ' european energy consensus' on import
- High up-front costs and slow return ratios of 'solar plants'
- Still prevailing top-down approach: relative neglect socio-political and economic aspects
- Soft reference to inclusive applications: water, transport, mobility...

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5- A quick SWOT analysis

5.3- Opportunities:

- Positive economic effects and economic growth : employment , industries, technology transfer
 - Synergies and trade-offs among participating countries and institutions
 - Energy security and sustainable development :less dependancies on fossil fuels and exposures to external risks
 - Kick-off research activities and programs in EU-MENA

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5- A quick SWOT analysis

5.4- Threats:

- Substantial amounts of public subsidies needed
- Delay in cost reduction results
- Scepticism and mistrust
- Slow public acceptance

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6 - Simple Statements (source :Mr Günther Oettinger 's speech- Barcelona 16th October 2010)

- (i)- *Tomorrow's energy challenges cannot be met with today's technologies and conventionnal ways of thinking.*
 - 1- It is about inventing new energy solutions
 - 2- It is about developing new industrial partenerships
 - 3- It is about improving knowledge transfer and enhance capacity building
- (ii)- *The Projects have to be developed in cooperation with countries of the region on an equal footing ; it can not be imposed from the outside*

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7.1 - DESERTEC UNIVERSITY NETWORK

Objectives

- **Bringing together research, and academic institutions interested in and capable of contributing to the implementation of the DESERTEC Concept and RE systems.**
- **Promoting the development of human resources, so that energy systems can be constructed with a maximum of local products and services.**
- **Contributing to the design, manufacture, installation, operation and maintenance of future DESERTEC energy systems..**

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7.1- DESERTEC UNIVERSITY NETWORK

Missions

- *International Cooperation*
- *Research and Development*
- *Dissemination and Promotion of Technology and Knowledge*
- *Support for the Creation of Local Enterprises*

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7.1- DESERTEC UNIVERSITY NETWORK

Fields of activity:

- **Renewable Energies and their applications:**
Mainly: Solar, Wind
Water Desalination, mobility
- **Energy Efficiency**
- **Environmental security**
- **Socio-economic effects**

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7.1 - DESERTEC UNIVERSITY NETWORK

Today:

Members: 18 institutions from MENA

5 institutions from Europe

DESERTEC Foundation

5 individuals

Membership in process: 8 institutions from Europe

Governance : Office in Tunis & Executive Director

Supervisory Board

Science & Technology Council

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7.1 - DESERTEC UNIVERSITY NETWORK

Working Program Priorities

- *Master Programs: Capacity building*
- *Public Awareness and Acceptance for Renewable Energies in general and the DESERTEC Concept in particular*
- *Creation of “ by country DESERTEC development scenarios”, and their stimulation for a socio-economic development process in MENA countries*
- *Socio-economic effects*
- *Technological issues:*
 - *Dust / Cleaning Mirrors*
 - *Dry Cooling*
 - *System choice :CSP (PT/L F / ST)-PV-CPV-Wind?*

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7.2 -Reference Projects:

Aiming at :

- Proving and demonstrating
- Learning and teaching
- Adapting and customizing
- Getting support and gaining acceptance

Strong need:

THINK AND ACT DIFFERENTLY

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Thank you for your attention