

MED-ENEC Capacity Building Workshop Political and Economic Framework Conditions for Energy Efficiency and Renewable Energy in Buildings

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Lessons learned and best practices from MEDA

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• What is an Energy Efficiency and Renewable Energy Policy?

- Governments pledge to generate energy from targeted percentages of RE and EE by fixed dates.
- Governments define :
 - energy savings objective to energy actors,
 - energy savings priorities and projects to implement in order to respect obligation,
 - action plan for implementation,
 - the monitoring and verification methods to apply to measure energy saving,
 - the financial facilities.

- The current policy situation with regards to EE and RE in the MEDA countries

- In several countries, a legislative framework is introduced to provide an impulse to the promotion of EE and RE.
- Several countries have established an independent regulator, at least for electricity, sometimes for natural gas.
- Several countries have established Agency for EE and RE.

- Legislation for liberalisation / electricity market opening

Morocco	Algeria	Tunisia	Egypt	Israel
2007/08	2002		Draft	2003

Jordan	Palestine	Lebanon	Syria	Turkey
2002	Draft	2002		2001

- Independent regulators have been established or should be in place shortly in the following countries

Morocco	Algeria	Tunisia	Egypt	Israel
Planned	Established	Planned	Established	Established

Jordan	Palestine	Lebanon	Syria	Turkey
Established	Planned	Planned		Established

- Existing tariffs enable or will gradually enable the electric power sector to cover its costs in the following MEDA countries:

Morocco	Algeria	Tunisia	Egypt	Israel
Yes	No	Yes	No	Yes

Jordan	Palestine	Lebanon	Syria	Turkey
Yes	Yes	No	No	Yes

- Agency Responsible for Energy Efficiency:

Morocco	Algeria	Tunisia	Egypt	Israel
	APRUE	ANME	Unit at EEHC	IRMD

Jordan	Palestine	Lebanon	Syria	Turkey
NERC		LCEC	NERC	NECC and EIE

- Agency Responsible for Renewable Energy:

Morocco	Algeria	Tunisia	Egypt	Israel
CDER	APRUE and CDER	ANME	NREA	IRMD

Jordan	Palestine	Lebanon	Syria	Turkey
NERC		LCEC	NERC	NECC

- Specific Laws related to Energy Efficiency or Renewable Energy

Morocco	Algeria	Tunisia	Egypt	Israel
Possibility of new ER/EE law in 2007	1999 Law states tax on the conventional energy consumption serving to create the FNME (National Energy Conservation funds). 2004 RE Law	The August 2, 2004 Law aimed at helping incorporate Energy Efficiency considerations in earlier stages of the planning. Energy Efficiency Funds (law 2005)	1986 law enacted was to impose on all new apartment buildings built in the new urban cities outside of main cities to use solar water heating systems. 1988 Egypt Government cancelled the obligation	Law of "Planning and Building Regulation" (Ayalon 2004) aimed at helping incorporate environmental considerations in earlier stages of the planning.

- Specific Laws related to Energy Efficiency or Renewable Energy

Jordan	Palestine	Lebanon	Syria	Turkey
<p>Energy Efficiency Strategy.</p> <p>Energy Strategy 2004.</p> <p>Draft Renewable Energy Law.</p> <p>Preliminary Draft Energy Efficiency Law</p> <p>New Energy Strategy (June 2007).</p>		<p>Draft Energy Law</p>	<p>Energy Conservation Law 2003.</p> <p>Draft laws for renewable energy and EE</p>	<p>Energy Efficiency Strategy 2004.</p> <p>Energy Efficiency Law May 2, 2007.</p> <p>Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy 2005.</p>

- Energy Efficiency or Renewable Energy Targets

Morocco	Algeria	Tunisia	Egypt	Israel
<p>2001 strategic plan for RE development : objective of 10% of electricity production from RE in 2010.</p> <p>Achievement : Low</p>	<p>Define the Potential of Energy saving and RE, 6 Mtoe (2006-2020)</p> <p>Achievement : difficult to reach</p>	<p>Energy saving 1.25 Mtoe (2005-2008). Installation of 175000 m2 of solar panels (2006-2008) expected energy saving 23.5 ktoe</p> <p>Achievement : Satisfactory</p>	<p>Egypt engaged itself , at the international conference on renewable energies of Bonn in June 2004, to cover by 2020 14% of its energy needs from renewable.</p> <p>Achievement : unrealistic</p>	<p>Energy Saving 3% of primary energy from the installation of solar water heating systems.</p> <p>Achievement: Satisfactory</p>

- Energy Efficiency or Renewable Energy Targets

Jordan	Palestine	Lebanon	Syria	Turkey
<p>National Agenda 2006-2015 : objective of 3% of energy production from RE in 2015.</p> <p>New Energy Strategy (under development) will targets 8% of energy consumption from EE and RE in 2020.</p> <p>Achievement : Ambitious</p>	<p>NA</p>	<p>Lebanese Center for Energy Conservation targeting Energy Saving of 1% per year by 2020.</p> <p>Achievement: Need more effort</p>	<p>Strategy plan to develop RE 2002-2011</p> <p>Objective of 1 Mtoe energy saving by 2011.</p> <p>Syrian Energy Conservation Project targeting Energy Saving of 1.5 % by 2011.</p> <p>Achievement : Low</p>	<p>Electricity Generation from geothermal 1000 MW by 2020. Heating of 500000 residences in 2010.</p> <p>EMRA is evaluating 88 wind farms projects of 2135 MW.</p> <p>8.2 million m2 solar collectors.</p> <p>Ach. Satisf.</p>

• Thermal Standard for buildings and Energy Building codes

Morocco	Algeria	Tunisia	Egypt	Israel
Code under development	<p>DTR 1996 Cooling and heating Mandatory Implementation Very low</p> <p>DTR 2006 Natural Ventilation</p>	<p>Thermal regulation for building 2007</p> <p>Mandatory for office buildings and Residential (draft decrees)</p> <p>Implementation In process</p>	<p>Thermal standard 1998</p> <p>Mandatory Implementation very low</p> <p>EBC for residential 2003</p> <p>For commercial 2005 voluntary Implementation 0%</p>	<p>Thermal Standard Residential 1986</p> <p>Office 1998 Mandatory Implementation : Good</p> <p>Green Buildings 2005 Voluntary Implementation : Low</p>

- **Thermal Standard for buildings and Energy Building codes**

Jordan	Palestine	Lebanon	Syria	Turkey
Thermal Standard 1990 Mandatory Implementation Very low	Thermal Standard 2005 Voluntary Implementation 0%	Thermal Standard 2005 Voluntary Implementation 0%	Code under development	Thermal Standard 2000 Mandatory Implementation good but control of compliance should be improved

- Standards of minimum energy efficiency and Energy Label programme in MEDA Countries

Morocco	Algeria	Tunisia	Egypt	Israel
<p>Developed for solar water heaters and standard protocol of solar guaranteed results.</p> <p>Planned For air conditioners, refrigerators and Lamps</p>	<p>In process For : air conditioners, refrigerators and Lamps</p>	<p>Enforced MEPS and Energy Label for : room air conditioners, refrigerators, solar collector and storage tanks.</p> <p>In process for offices and residential buildings</p> <p>Planned for tertiary build.</p>	<p>Voluntary MEPS and Energy Label for : room air conditioners, refrigerators, and clothes washing machines.</p> <p>Efficient lighting specifications under preparation.</p>	<p>Enforced MEPS and Label for : AC, refrigerators, water pumps, electric motors, electric heaters, etc.</p> <p>Enforced standards for solar collectors and storage tanks.</p> <p>In process for buildings</p>

- Standards of minimum energy efficiency and Energy Label programme in MEDA Countries

Jordan	Palestine	Lebanon	Syria	Turkey
<p>Ongoing development MEPS and Energy Label for : refrigerators, air conditioner and clothes washers</p>	<p>NA</p>	<p>Ongoing development MEPS for : refrigerators, solar collector and storage tanks, CFL lamps Planned for air conditioner electric heaters. Planned Energy Label</p>	<p>MEPS and Label planned for refrigerators</p>	<p>Planned MEPS and Energy Label for: refrigerators, freezers, washing machines, dish washers, ovens, driers, lamps and air conditioners.</p>

- Lessons Learned from the current policy situation
 - Few countries have a legislative framework providing an impulse to the promotion of EE and RE. Pioneers in the region have been **Tunisia and Turkey**.
 - **Lack of policy instruments (especially energy tariffs)** that would lead to the creation of RE markets or the achievement of the set target % of RE.
 - **Market forces are not sufficient** for encouraging the development of RE/EE.
 - Existing thermal standard **aren't implemented excepted** in **Turkey and Israel**.

- Why improving Energy Efficiency and promoting RE in MEDA-Countries ?

EE and RE impact significantly on:

- Improving Competitiveness of Economies,
- Creating New innovative business sector and new jobs.
- Energy mix for the future (increase independence from Energy import, decrease of oil, coal consumption).
- Reducing local demand to benefit from export income from oil and gas (countries that have oil and gas)?
 - However, Barriers exists...

- What are the Barriers to EE and RE development?
 - The actual subsidised gas price (especially in Algeria and Egypt).
 - Lack of a legal framework for EE and RE technologies
 - Lack of information among political decision makers about the energy savings potential and additional macro-economic benefits of EE and RE technologies.
 - Insufficient human and institutional infrastructure.
 - Weak incentives and inconsistent policies.
 - Lack of implementation (compliance, enforcement) of EE Building codes and Thermal insulation standards, where existing.
 - Lack of normalization and certification of solar thermal technologies and products.

- Best practices from MEDA countries
 - National Energy Conservation Policy in Tunisia

Institutional support	National Agency for Energy Conservation (ANME)
Regulation Measures	Energy Audits, Labeling, EE in planning
Financial incentives	National Fund for Energy Conservation (FNME)

- Guideline of “How to develop a good national EE and RE strategy”
 1. Establish and monitor energy policies/strategies or reform plans detailed by sectors, (including medium to long term objectives, priorities, schedule, resources).
 2. Establish firm targets for EE and RE.
 3. Develop action plans for implementation.
 4. Establish specialised agencies (statistics, regulation, energy efficiency and renewables, climate change flexibility mechanisms);
 4. Remove the inherent barriers and subsidies which penalise EE and renewables.
 5. Implement mechanisms to secure and accelerate the new market.
 6. Acquire and implement information and statistics systems; indicators, monitoring of energy efficiency, and follow up of policies.

Thank you for your attention