

MED-ENEC National Consultation in Lebanon

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Energy Efficiency Policy

EU and Regional Experiences/Prospects

Adel Mourtada

Energy Efficiency Expert

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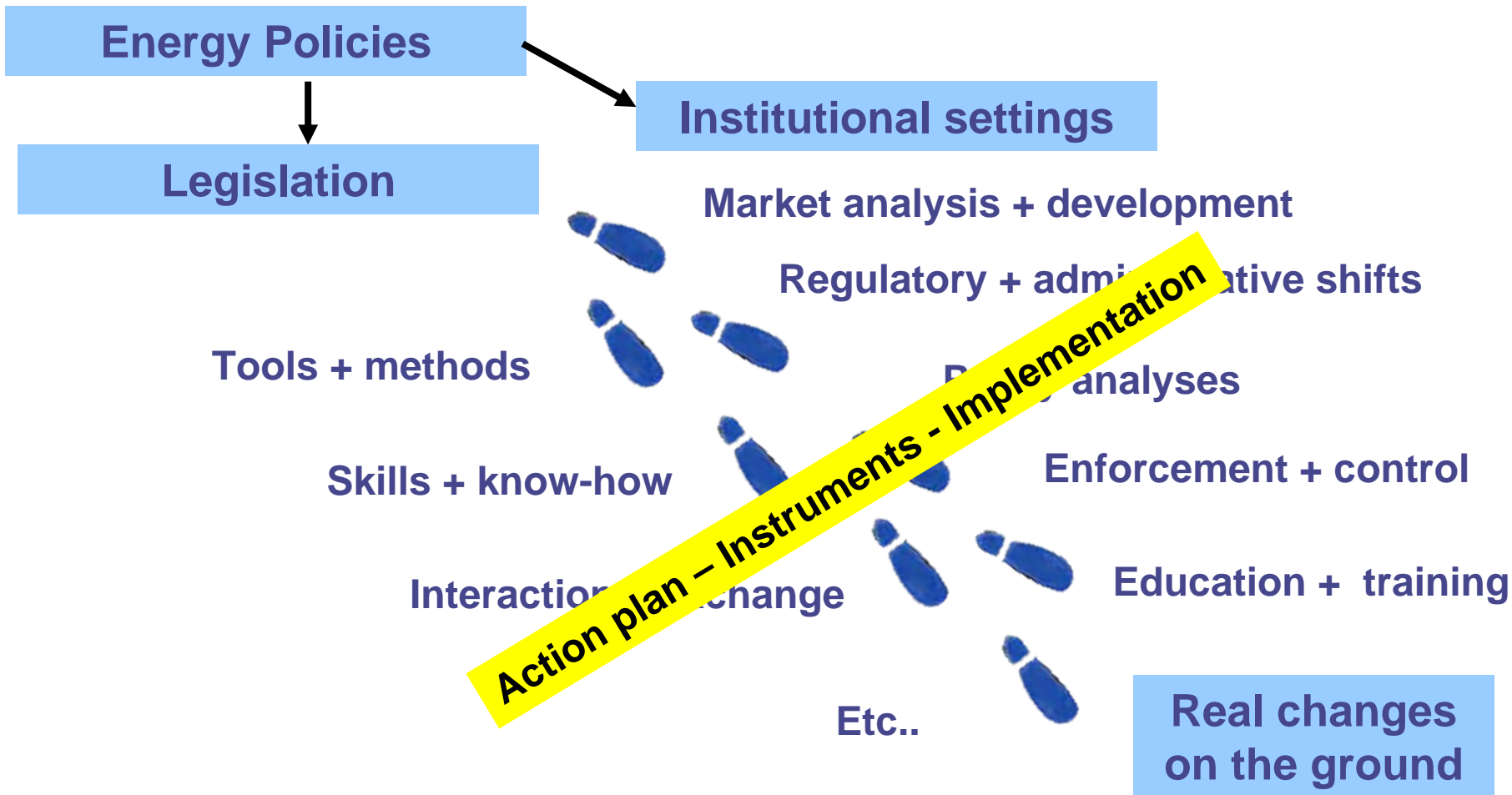
What is an EE and RE Policy?

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

Step by Step From Policy to Action



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1. EU Energy Efficiency Policy

High Priority for building sector

- Buildings account for **40%** of final EU energy use.
- Largest cost-effective savings potential:
 - EU households: **27%**
 - EU commercial buildings: **30%**.

Of sector energy consumption



Examples of European Legislation : Requirements at different levels

- **2003 - Energy Performance of Buildings Directive (EPBD)**
 - MS obliged to implement methods and requirements for energy performance of buildings + certification + inspection
 - No minimum obligations for MS in terms of energy efficiency
- **2005 - Directive on Energy Services & End Use Efficiency (ESD)**
 - Energy supply companies are to become energy service companies
 - Member States to save at least an additional 1% of their final energy consumption each year for the next 9 years.
- **2006 – Action Plan on Energy Efficiency**

EPBD: Main features



Each member state has to adopt :

- Energy Performance calculation procedure(s)
- Requirements for all new buildings
- Requirements for (major) renovations
- Energy Performance certification of all buildings
- Mandatory inspection of boilers & AC systems

MS Implementation programmes

If lack of inspectors : January 2009

Deadline : January 2006

**Implementation of EPBD
by Member States**

Commission's Action Plan

- Priority Action 1
 - Appliance + equipment labelling + min. energy performance standards
 - Includes boilers + water heaters
- Instruments:
 - Labelling + eco-design + energy end-use directives
 - Framework directive 92/75/EC on labelling to be revised + reinforced (target for adoption **2008**)

Commission's Action Plan

- Priority Action 2
- Making buildings more energy efficient
 - Building performance requirements + very low energy buildings
 - Expanded role for the public sector to demonstrate new technologies and methods (2009)
 - Propose minimum performance requirements (kWh/m²) for new and renovated buildings (2009)
- Instruments:
 - Commission to develop strategy for very low energy or passive houses (target 2008)
 - EPBD (2002/91/EC) to be expanded by lowering current threshold of **1000 m²** for minimum performance requirements for major renovations

Commission's Action Plan

- Priority Action 3
- Propose measures for Member States to provide financing for highly cost-effective investments (2009)
- ✓ A coherent use of taxation
- ✓ Instruments:
 - Green Paper on indirect taxation (2007)
 - Review Energy Tax Directive (2003/96/EC)
 - Promote the continuing and more widespread use of reduced VAT Directive (1999/85/EC)?

A key-role to be played by the building sector

- **New regulations starting in**
 - **2006 : thermal regulation (TR 2005) on new building, reinforced every 5 years**
 - **2006 : energy performance certificate for sold or rented building (rating on energy label and recommendations for energy saving)**
 - **2006 : white certificates for energy utilities : mandatory energy savings each year or penalties**
 - **2007 : regulation applying to renovation of existing building, reinforced every 5 years**
 - **energy performance applying to replacements of components and equipment**
 - **enhancement of global energy performance for large retrofitting**
 - **2007 : mandatory inspection of boilers and air conditioning systems**

A key-role to be played by the building sector

- **New incentives starting in**
 - **2005 : tax reduction, in force until 2009, for efficient technologies (renewable energy, insulation, glazing, energy management systems, heating systems, heat pumps...)**
 - **2006 : labelling for HEP (High Energy Performance) and VHEP (Very HEP) buildings**
 - **2006 : new buying tariff for electricity produced by integrated PV panels: 55 c€/kWh**
 - **2006 : financial tools in favour of energy savings and renewable energy sources**
 - **2007 : implementation through public and private initiatives of an Effinergy label for passive buildings**
- **New R&D national programme starting in**
 - **2005 : PREBAT (research and deployment programme for energy in buildings)**

3. Tunisia Energy Efficiency Policy

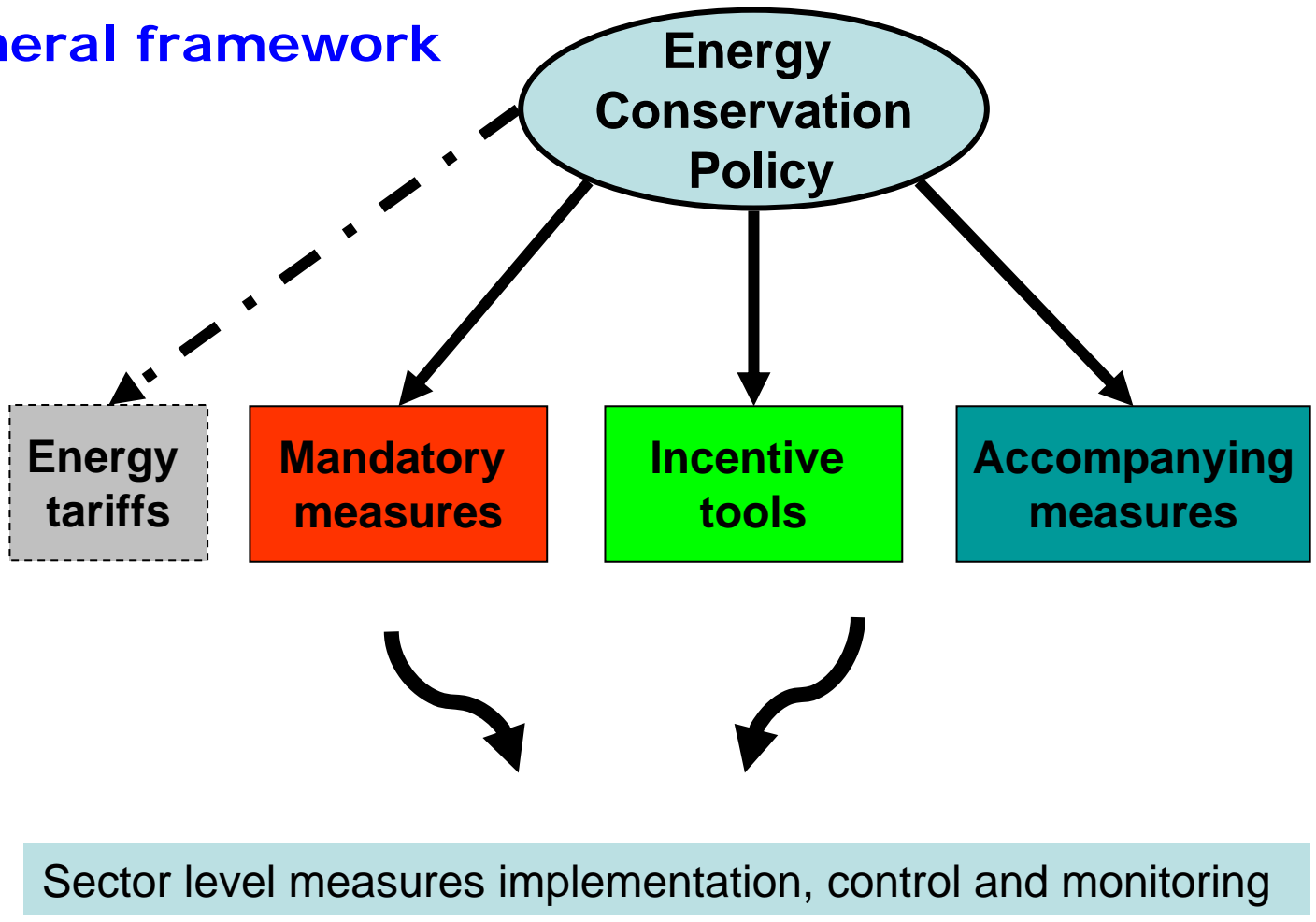
Tunisia Energy Efficiency Policy

<p>Macro level Policy</p> <p>Up to Down</p>	<p>2001 the “Twenty Presidential Decisions”</p> <p>Followed by the Priority National Program (10% from RE in 2010)</p> <p>2004 New Law amended the old law of 1990 related to energy conservation</p>
<p>Institutional support Implementation, monitoring and control</p>	<p>National Agency for Energy Conservation (ANME)</p>
<p>Micro level policy Action Plan</p>	<p>Energy Audits, Labeling, EE in planning, development of SWH</p>
<p>Micro level policy Financial incentives</p>	<p>Law 2005 creating the National Energy Conservation Fund</p>

State policy and public tools for EE and RE enforcements In Tunisia

General framework

Specific regulatory framework



Macro policy level
Micro policy level
implementation level

Specific institutional and organizational framework

4. Turkey Energy Efficiency Law

It was a long way up today

- Studies on energy efficiency mainly in industry and renewable started in the beginning of 1980's with the assignment of EIE for these tasks. EIE has established its own EE team having necessary equipment under international projects conducted with UNIDO, World Bank, JICA, EU.

Energy Efficiency Studies (Awareness, training, audit, policy)

UNIDO Worldbank I-II JICA I

Energy Conservation Project / JICA

Third Country Training Project / JICA

Projects in the scope of EU

Energy Efficiency Strategy/EU

Twinning Project / France-Netherland

- Energy Efficiency Strategy has been adopted in 2004.
- “Energy Efficiency Law n°5627” has been enforced on 2nd May of 2007.

1981

1990

1995

2000

2001

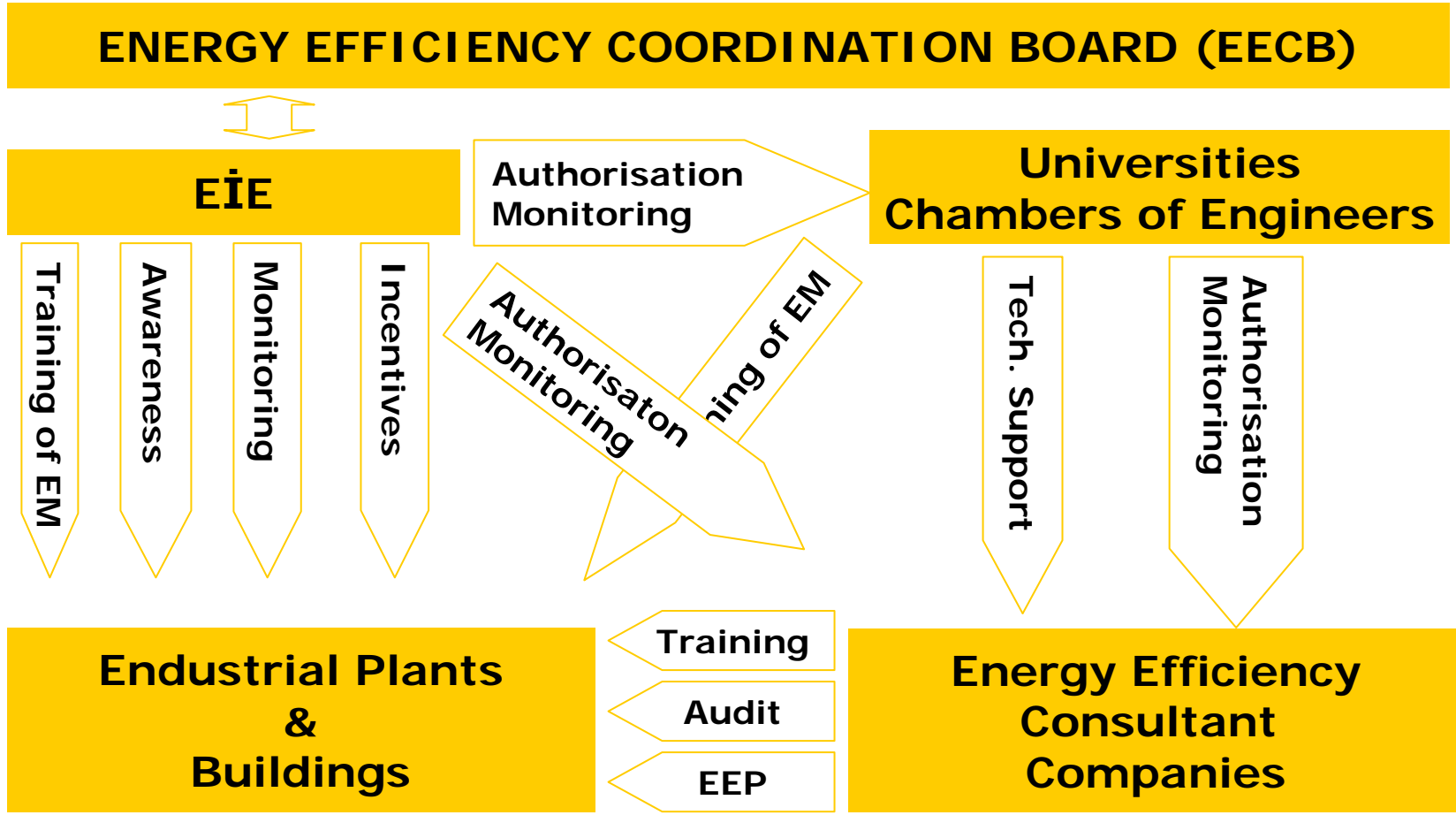
2002

2003

2004

2005

Administrative Structure of Energy Efficiency in Turkey





Energy Efficiency Measures in Industry and Trade

- Energy Management
- Incentives for EE Projects
- Voluntary Agreements
- Incentives for ECM's
- Giving priority to supporting EE R&D Projects

Energy Efficiency Measures in Buildings

- Energy Management
- Energy Efficiency Building Codes
- Energy Performance Certificate
- Control and Individual Metering for Central Heating Systems



Energy Efficiency Measures in Power Generation

- Demand Side Management
- Improvement of Energy Efficiency in Power Generation, Transmission, Distribution and Public Lighting
- Utilisation of Waste Heat of Thermal Power Plants
- Utilisation of Alternative Fuels in Power Generation

- **Utilisation of Small Scale Renewable Energy Sources**
- **Incentives and Supports for Co-Generation**
- **R&D**
- **Training and Awareness**
 - ↳ **Energy Efficiency in Primary and Secondary Schools**
 - ↳ **Media campaigns (TV, newspapers, etc.)**
 - ↳ **Information for Consumers by Energy Companies**
 - ↳ **Information in user's guide of equipments**
 - ↳ **Energy Efficiency Week**

Appointment of energy managers or establishment of energy management unit in industrial plants since 2007

	Energy Management Unit	Energy Manager
Industrial Plants	$\geq 50,000$ TOE	$\geq 1,000$ TOE
Organised Industrial Zones	X	
Buildings Public Commercial Service		≥ 500 TOE or $\geq 20,000$ m ²

5. Jordan Renewable Energy Promotion Law

Renewable Energy Promotion Law

The purpose of this Law is to

- (i) promote the use of electricity generated from Renewable Energy Sources,
- (ii) encourage investment therein by the private sector,
- (iii) diversify sources of energy resources in the Kingdom and reduce reliance on imported energy sources,
- (iv) reduce greenhouse gas emissions and protect the environment,
- (v) develop the Kingdom's expertise in the realization of these objectives, including expertise in the manufacture and assembly of equipment and plant related to the generation of electricity from Renewable Energy Sources, and
- (vi) authorize the establishment of a fund to be used to support the construction and operation of Renewable Energy Facilities.

Jordan Renewable Energy and Energy Efficiency Fund

- **Article 21** - A fund to be known as the Jordan Renewable Energy and Energy Efficiency Fund shall be established. The Fund shall have juridical personality, and it shall be financially and administratively independent. In this capacity, the Fund may acquire movable and immovable property, conclude contracts, accept aids, donations, grants and funds, and perform all legal acts necessary to achieve its objectives. The civil attorney general or any attorney shall represent the Fund in legal proceedings.

Jordan Renewable Energy and Energy Efficiency Fund

- The Fund shall be a mixed public/private institution, overseen by a Board of Directors reporting to the Council of Ministers and comprised of the following nine members:

Jordan Renewable Energy and Energy Efficiency Fund

- **Members:**

1- The Minister of Energy and Mineral Resources, or any other person that he may nominate from the Ministry representing him.

2- The Minister of Environment, or any other person that he may nominate from the Ministry representing him.

3- The Minister of Planning and International Cooperation, or any other person that he may nominate from the Ministry representing him.

4- The Minister of Finance, or any other person that he may nominate from the Ministry representing him.

5- A Representative of the National Energy Research Center.

6- Four representatives of the private sector with the appropriate expertise and competence in the field of banking, industry and energy.

The Board members from the private sector shall be appointed by the Council of Ministers, upon recommendation of the Prime Minister, for a term of four years, with the possibility of renewal.

The financial resources of the Fund shall consist of the following:

- (a) Annual funds allocated by the Government of Jordan in the General Budget.
- (b) Charges on consumption of imported and fossil-based energy:
 - Electricity: a charge of JOD 0.003 (three Fils) shall be imposed on each kilowatt-hour (kWh) consumed by residential sector customers belonging to the Fourth Block (more than 500 kWh per month) effective [date TBD], and allocated to the Fund's account
 - Premium gasoline: a charge of JOD 0.001 (one Fils) shall be imposed on each liter of premium gasoline purchased at retail points throughout the Kingdom of Jordan effective [date TBD], and allocated to the Fund's account.

The financial resources of the Fund shall consist of the following:

- (c) Aids, donations, grants, funds or any financial support from any entity or national, Arab and international institution received by the Fund, provided that they be approved by the Council of Ministers if the source is non-Jordanian.
 - (d) Proceeds generated from the Fund's activities.
 - (e) Any other resource received or allocated to the Fund approved by the Council of Ministers upon the recommendation of the Minister.
- The Fund shall enjoy the exemptions and facilities provided for Ministries and government departments.

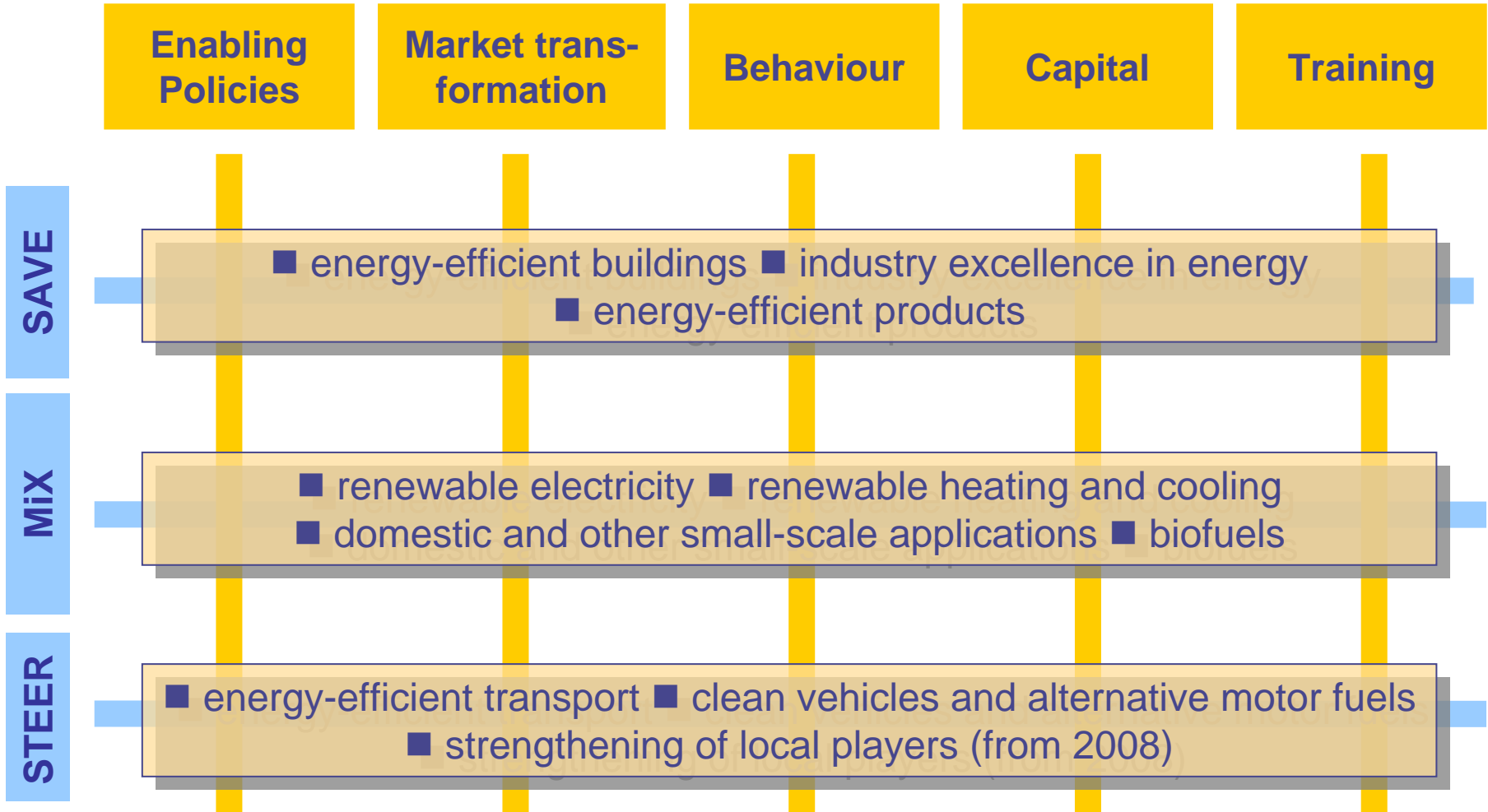
6. How to develop an Energy Efficiency Policy

How to develop an EE policy?

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

EE law and By-laws setting

Energy Efficiency Policy



Thank you for your attention

ecotech@inco.com.lb