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Energy Sector Capacity Building

International Energy Audit Programs and Complementary Policies for Jordan

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Outline

- Regulatory policies to promote energy efficiency
- Complementary policies in support of regulations
- Mandatory energy audit programs in select countries
- Preliminary recommendations: Complementary policies for Jordan



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Regulatory Policies Promoting Energy Efficiency

- **Governments** drive energy efficiency through laws and regulations requiring consumer actions, such as:
 - **Energy audits**
 - Energy performance targets
 - Certification of Energy Professionals
 - Reporting of data, measures taken, and results
 - Adoption of standards such as ISO 50001



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Complementary Policies

- **Mandatory energy audits work best in combination** with complementary policies, such as:
 - **Subsidies** to reduce the cost for energy audits
 - **Inducements** for appointment of Energy Managers
 - **Tax Exemptions** on EE equipment & services
 - **Financial support** – for investments and implementation
 - Recognition **labels and awards.**



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International Examples



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Energy Efficiency Law in Tunisia

- Enacted **Law on Energy Efficiency** in 2004, and amended in 2013.
- **Mandatory energy audits** for large energy-consuming facilities – buildings and industry (Designated Consumers).
- **Thresholds** for designated consumers:
 - Industrial sector – **800 toe**
 - Transport, commercial & residential sectors – **500 toe**
- Designated consumers are required to engage **certified energy auditors** to conduct periodic mandatory energy audits.





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Fiscal and Financial Incentives in Tunisia



- **Subsidy scheme** for EE projects:
 - 70% of energy audit costs
 - 70% of “immaterial” investments
 - 20% of “material” investments
 - Consumers must cost-share and achieve energy savings, with subsidies paid after investments have been made.
- **Tax incentives:**
 - Reduction of tariffs (at least by 10%) for the import of energy efficient equipment / materials.
 - VAT exemption on the purchase of energy efficient equipment / materials.
- **Financing** of solar water heaters, cogeneration and the use of natural gas.



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Law on Economical and Efficient Use of Energy in Vietnam

- Since January 2011.
- Designated enterprises:
 - **Industrial**, agricultural production and transport entities larger than **1,000 toe**;
 - **Commercial** establishments and public facilities larger than **500 toe**





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Key Provisions in Vietnam

- Submit annual energy use data **on-line** to Ministry.
- Prepare, implement and report on **annual** and **5-year action plans for** economical and efficient use of energy;
- **Appoint energy managers**
- Conduct **energy audits** every **3 years**;
- **Ministry of Industry and Trade (MOIT)** provides support through **training** and certification of **energy managers / auditors.**





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Energy Conservation Act in India

- Since 2001
- All sectors.
- More than 700 consumers from **8 energy intensive sectors** are **designated, according to different consumption thresholds:**
 - Thermal Power plants, Railways, Fertilizer Industry, Cement Industry and Pulp & Paper industry – **30,000 toe**;
 - Chlor-Alkali Industry – **12,000 toe**;
 - Aluminium Industry – **7,500 toe**;
 - Textile Industry – **3,000 toe**;
- **Mandatory energy audits every 3 years** by accredited Energy Auditor.
- **Appoint** an Energy Manager
- Report annually





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Certification of Energy Auditors & Managers in India



- Bureau of Energy Efficiency (BEE) supports industries to comply
- **Annual certification examinations for energy auditors and managers.**
- 16 Certification examinations conducted and **8,543 Energy Auditors** are certified.



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Energy Conservation Promotion Act in Thailand



- Since 1992 and amended in 2007.
- **Energy audits** and implementation of energy management plans for **buildings and factories** that consume **≥ 478 toe.**
- **Annual reporting on implementation progress.**
- Annual measurement and verification by government appointed inspector is required.



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Energy Efficiency **Revolving Fund** in Thailand



- Energy Efficiency Revolving Fund (EERF) facilitates EE investments through low-interest loans. 11 national banks are participating.
 - The Department of Alternative Energy Development and Efficiency (DEDE) **provided zero interest loan funds to commercial banks.**
 - Banks charge up to 4% on lending (to cover bank's costs and risk)
- The **key lessons** from the program:
 - **Capacity building** of commercial banks;
 - **Low interest finance** to encourage compliance;
 - Quick and **simplified appraisal and processing**;
 - Building **creditworthiness** of consumers.



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Energy Conservation Law in Lebanon

- Lebanon proposed **Energy Conservation Law** in 2016:
 - **New consumers and projects larger than 400 toe must obtain an energy policies compliance license** from Lebanese Centre for Energy Conservation (LCEC).
 - **Existing large consumers (>400 toe) must conduct energy audits.**
 - Mandatory **certification** for ESCOs.
 - **Mandatory** audits for **public buildings.**
 - **Incentives** for green buildings.





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Recommended Complementary Policies for Jordan



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Preliminary Recommendations: Complementary Policies for Jordan



- **Subsidize Energy Audits** – MEMR through JREEEF should offer cost-sharing for energy audits for designated energy consumers
- **Develop Improved Procedures for Administration** in cooperation with JCI, ACC and NERC.
- **Prepare and Disseminate Information Package** explaining the program
- **Require Energy Suppliers** to Report Energy Consumption Data for large customers



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Additional Complementary Policies for Jordan



- **Concessional financing** for energy efficiency implementation (through JREEEF).
- An **energy saving information program** for large energy consumers.
- **Training and Capacity Building Program** to scale-up the number of certified energy auditors.
- Document and share **success stories**.
- **Develop Incentive or Award Schemes** to encourage compliance.



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Thank You

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