Energy Efficiency for Appliances in the MENA Region

RCREEE

Regional Center for Renewable Energy and Energy Efficiency

المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

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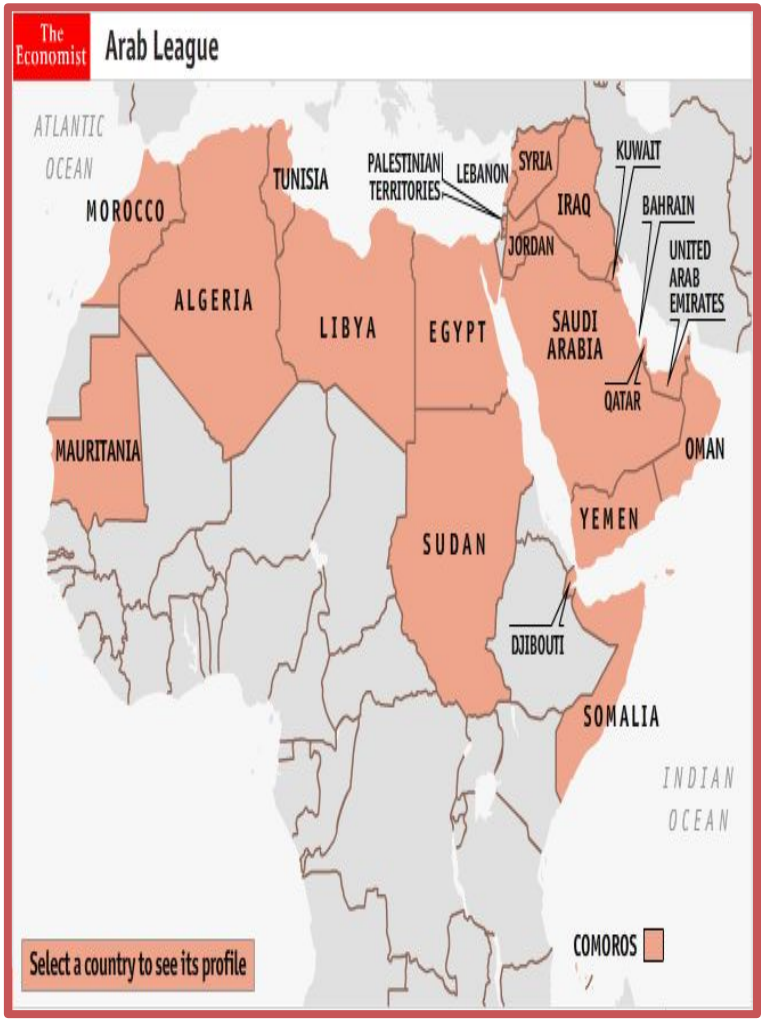
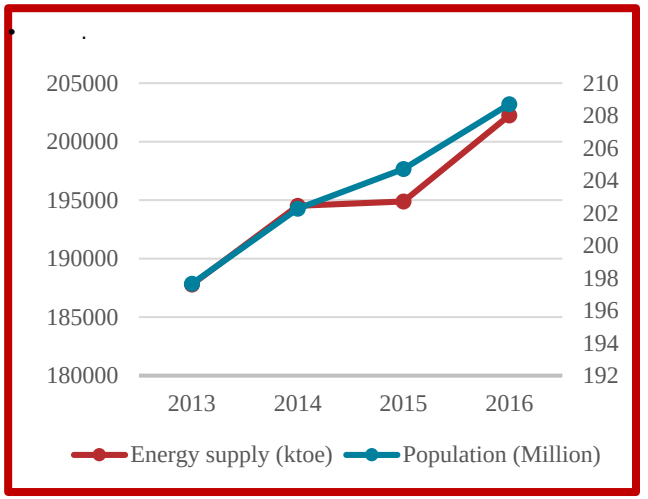
1. Overview of the MENA Region

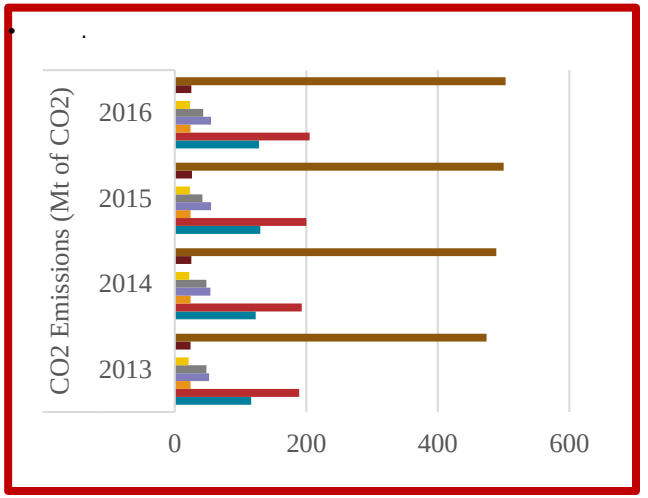
- The MENA region bridges between southern Europe and North Africa.
- The region's weather is a combination of both an African and Mediterranean climate with generally dry summers and rainy winters, characterized by high temperatures throughout the year and cooler nights.
- Most of the countries lie on the solar belt having high average annual solar irradiations.



1. Overview of the MENA Region Contd.

- The region is privileged with diversified conventional energy resources as well as natural resources.
- The ongoing socio-economic trend is annual growth of population accompanied with the excessive modernization and industrialization.
- Hence, increased power consumption that is accompanied with increased GHG emissions





2. Identification of the Problem and Proposed Solution

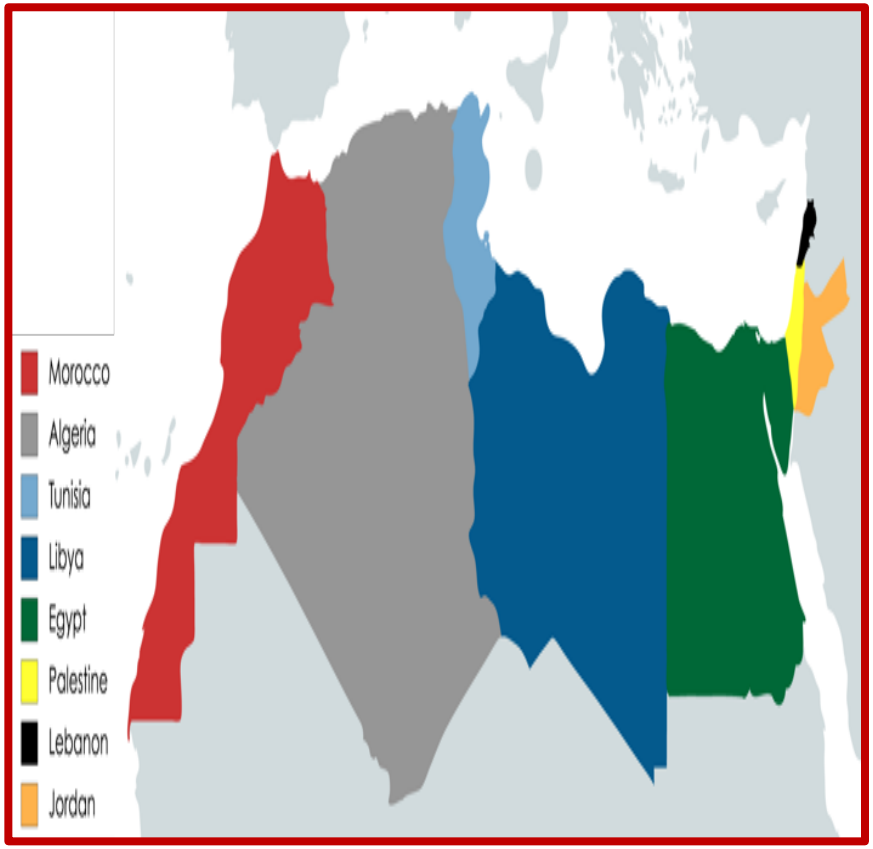
- Similar to the rest of the world, the region is thriving to ensure **energy security**.
- However, the rapid depletion of natural resources and ever-increasing population growth and modernization needs makes the region in constant quest to fulfill the **energy gap.**
- The increased importance of **Efficient Appliances** origins from the proven fact that *successful implementation of Energy Efficiency (EE) measures helps in the global energy security and contribute to economical growth world wide.*
- It can also be used as an effective tool by countries to deliver their announced SDG Targets (SDG 7 & SDG 13)and implement their climate change action plan.

3. Regional Status Quo

A number of **Analysis Factors** are identified in order to give a better assessment of the regional current status that include:

- Electrical Consumption of Residential Sector.
- Appliances share of residential electrical consumption.
- Existence of a NEEAP and dedicated EE Authority.
- List of appliances with Labels and Standards (L&S) and Minimum Energy Performance Standards (MEPS) set in place.

Note: This study covers only 8 countries which are the SEM countries (Algeria, Tunisia, Morocco, Libya, Egypt, Palestine, Jordon & Lebanon)



The SEMCs:
Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Palestine & Tunisia.

3. Regional Status Quo Contd.

- The study of the trend line (2010 -2016) analysis shows that the residential sector (42%) consumption is the highest followed by the industrial sector (27%).
- This highlights the importance to work on Home appliances in order to the residential sector consumption.

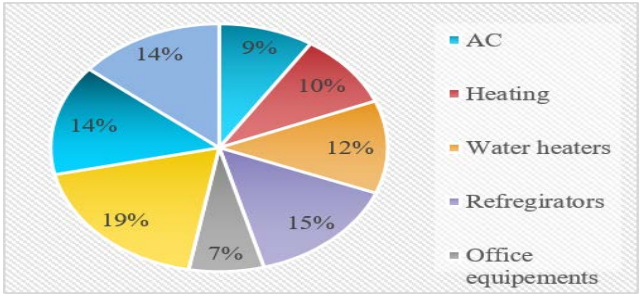
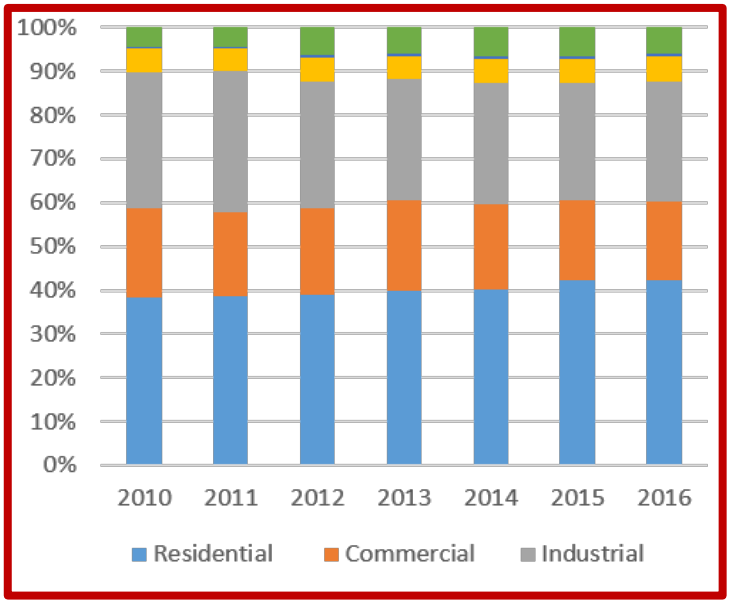
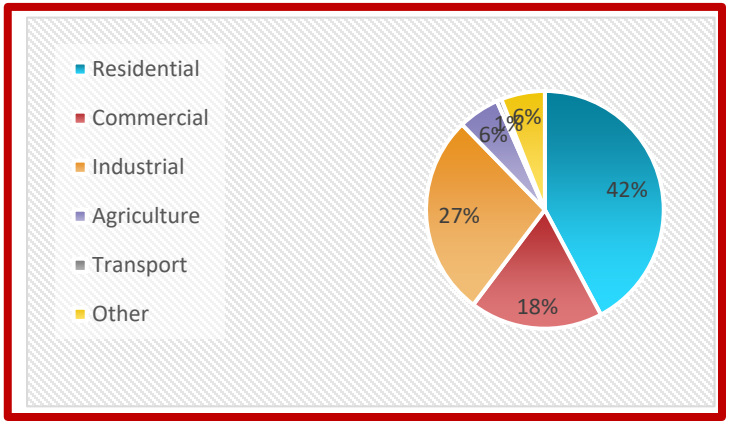


Figure:

Appliances share Of Residential Sector is as follows:
AC + Fans ~23% Res. Lighting ~19% Res.





4. Zoom into Regional MEPS and Labels

Country	Regulation	Lighting	Refrigeration	Air Conditioning	Washing machine	Solar Water Heater	TV	Fan
Algeria	MEPS				-	-	-	-
	Labeling				-	-	-	-
Egypt	MEPS						-	
	Labeling					-		-
Jordan	MEPS							-
	Labeling					-		-
Morocco	MEPS	-			-		-	-
	Labeling	-			-	-	-	-
Libya	MEPS		-	-	-	-	-	-
	Labeling	-	-	-	-	-	-	-
Lebanon	MEPS				-		-	-
	Labeling				-	-	-	-
Palestine	MEPS	-	-	-	-	-	-	-
	Labeling	-	-	-	-	-	-	-
Tunisia	MEPS				-	-	-	-
	Labeling				-	-	-	-

Voluntary
Mandatory
Under development

Policy type
Endorsement
Comparative

- It could be seen that Refrigerators and AC are most labeled in the region; followed by lighting and washing machines and finally TVs.
- Most countries apply Mandatory MEPS schemes.
- Most countries use Comparative Labeling System.

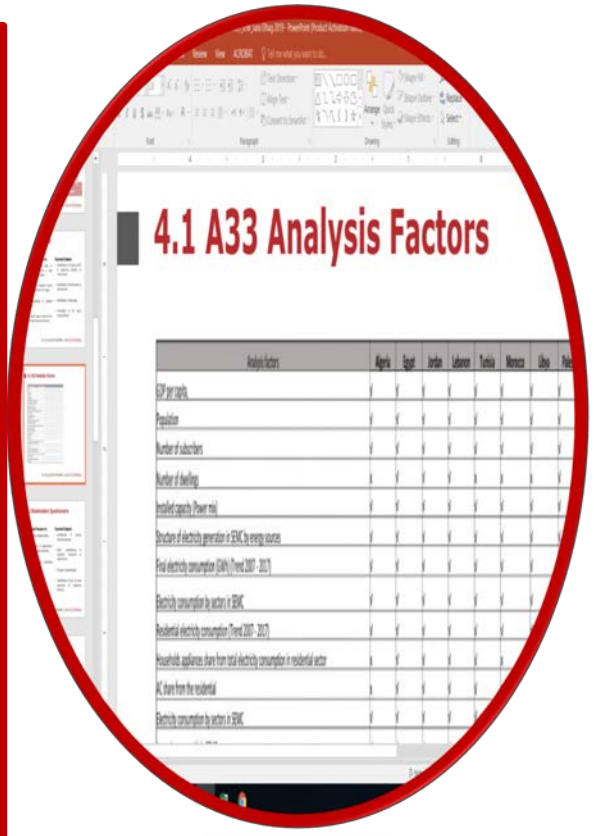
5. The Main Pillars for the Success of EE Measures

- In order identify the key factors that influence the **successful implementation of EE measures**, the pre-identified Analysis factors were revisited and 2 main pillars were identified.
- **Planning Factors:**

Authorization of MEPS and Labels, NEEAP, Regulatory framework, dedicated authority, announced EE targets.

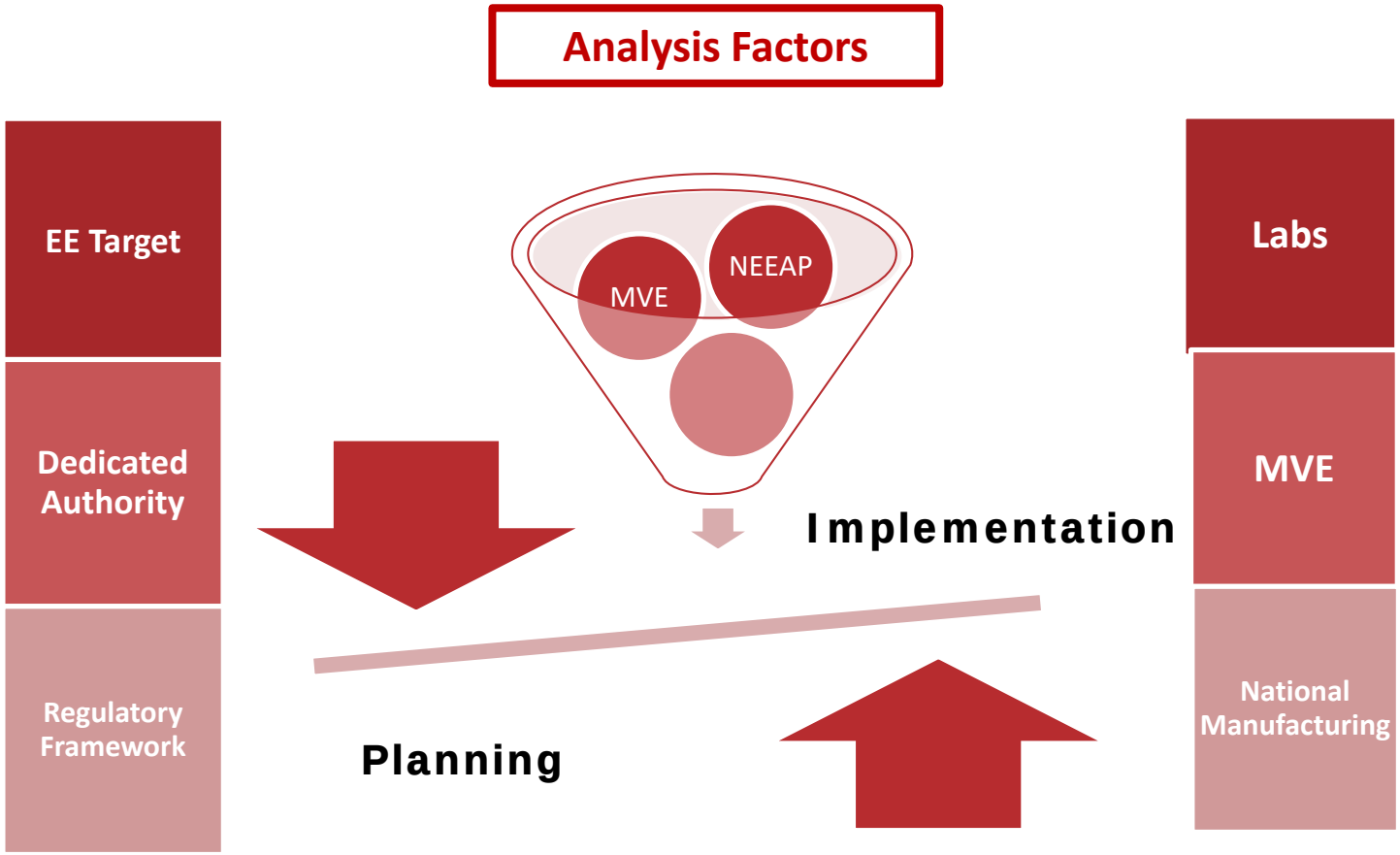
- **Implementation Factors:**

National manufacturing, existing test labs, MVE schemes.



Zoom into Analysis Factors

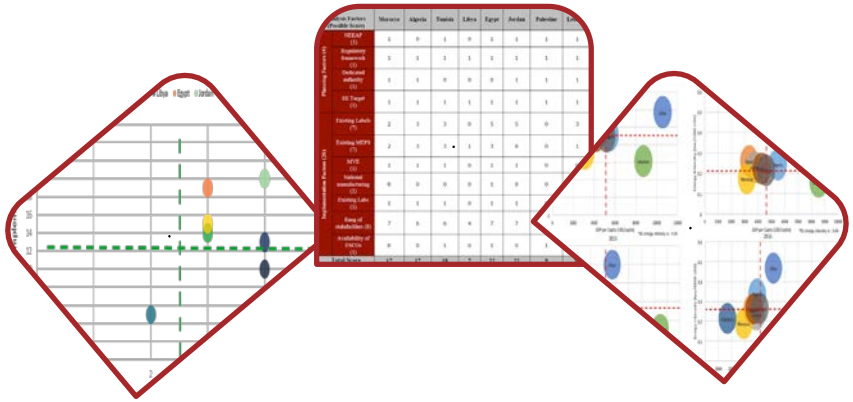
6. Planning & Implementation Factors Contd.



The success of any EE Action plan / Scheme requires balancing between the Planning and Implementation measures

7. Country Categorization and Steps Forward

Category I	Countries of **advanced progress** in the adaptation of EE measures which include *Egypt and Tunisia*
Category II	Countries of **Medium Progress** in the adaptation of EE measures which include *Palestine*
Category III	Countries of **Minimum progress** in the adaptation of EE measures which include *Libya*



- Based on their achieved progress in both planning and implementation of EE measures , countries were grouped into 3 categories :

advanced, medium and minimum progress countries.

Steps Forward would be to:

- Identification of obstacles at national level.
- Develop customized recommendations for individual countries.
- Capacity needs assessment / Capacity building at institutional as well as policy-makers' level.
- Work on planning awareness & media campaign for public at national level

8. Recommendations

- **Create a regional directory of updated appliances data.**
  (e.g. MEPS national data, labs & testing facilities)

- **Conduct a detailed Regional Market Study**
  (e.g. appliances' market size, market penetration, effect of black market)

- **Alignment of regional policies that support acceleration of adopting EE measures**
  . (e.g. incentives, regional trade/commerce laws)

- **Make available testing facilities at regional level**

- **Adopting/encouragement of emerging energy saving technologies**

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Time for …

Thank you !☺

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