



MINISTERO DELL'AMBIENTE  
E DELLA TUTELA DEL TERRITORIO E DEL MARE



LEBANESE CENTER FOR ENERGY CONSERVATION  
المركز اللبناني لحفظ الطاقة  
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# Overview of the National Initiative on Energy-Efficient Home Appliances

## Maximizing Energy Savings from Energy Efficient Home Appliances

Training of Salespersons

Monday, July 13, 2020  
Radisson Blu Martinez Beirut, Lebanon



LEBANESE REPUBLIC  
MINISTRY OF ENERGY  
AND WATER

# OVERVIEW

1. Lebanon's Energy Efficiency and environmental objectives
2. Presentation of key results from consumers surveys
3. Presentation of key results from retailers surveys
4. The cooperation between IMELS and LCEC

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# Lebanon's Energy Efficiency and environmental objectives



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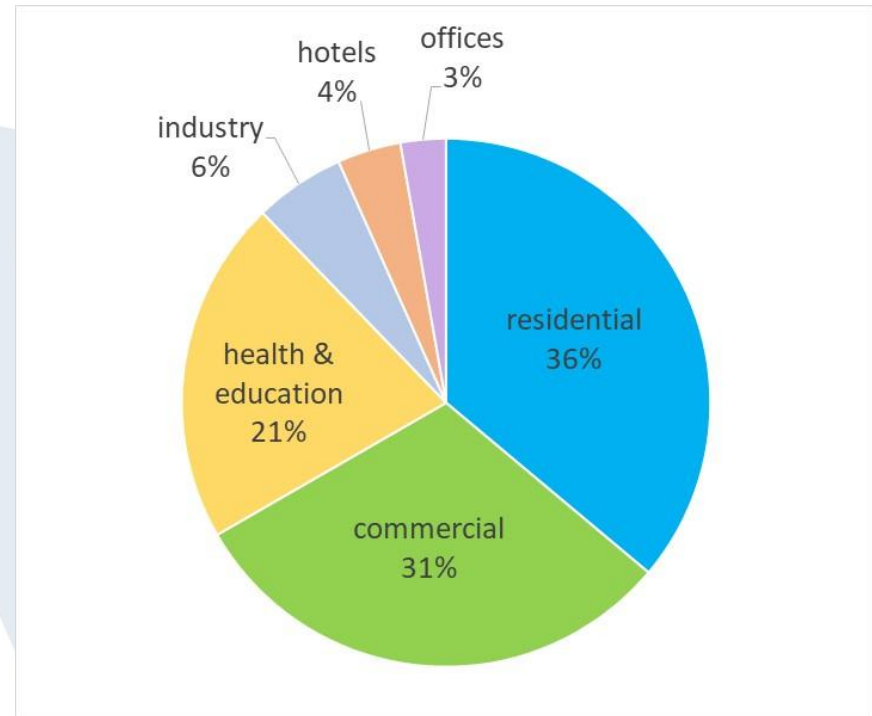


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# Lebanon's energy consumption in the building sector

The building sector accounts for almost **80%** of the total national energy consumption in Lebanon.

Among which **36%** is being consumed in **residential buildings** with a total demand for electricity of 5.8 GWh in 2014.



Estimated actual share of each type of building sector in the total energy consumption of the building sector in Lebanon in 2015

# A large potential for Energy Savings

In residential buildings, energy savings can be reached by having more energy-efficient equipment for:

- Cooling
- Heating
- Washing
- Lighting

**“With the introduction of Standards and Labeling program, national savings range between 10% and 25%”**

*“Achievements of appliance energy efficiency standards and labeling programs” IEA*

# Lebanon's Intended Nationally Determined Contribution



United Nations Framework Convention on Climate Change, Lebanon has defined its Intended Nationally Determined Contribution, including a reduction in power demand through energy-efficiency measures of:

- A minimum of 3% by 2030 (unconditional target);
- Up to 10% reduction by 2030 (conditional target - if additional international support is provided).



**COP 21**  
PARIS

30/11/2015 - 12/12/2015

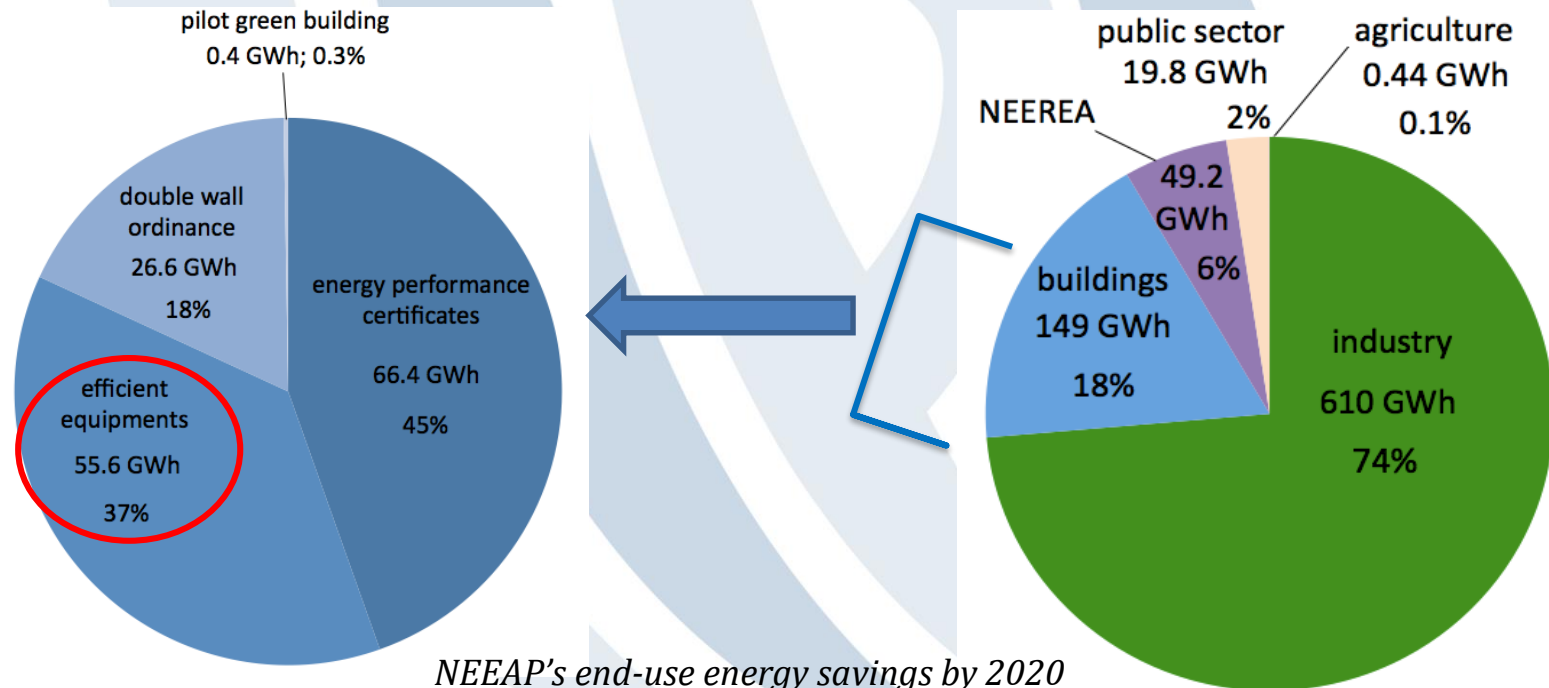
# Lebanon's targets of energy savings

The second National Energy Efficiency Action Plan sets the following targets of **energy savings** by 2020:

A total of **1.5 TWh**

↳ **149 GWh** of savings in buildings:

**55.6 GWh** from **more energy efficient equipment**



*NEEAP's end-use energy savings by 2020*

# Key next steps for Lebanon

1. Build up the local manufacturers' capacity on producing highly energy-efficient equipment;
2. Define Minimum Energy Performance Standards (MEPS) for home appliances in Lebanon, then set them as mandatory standards;
3. Set restrictions on imports of non-compliant equipment, as well as promote highly energy-efficient ones;
4. Design a National Labeling Scheme.



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# Presentation of key results from consumers surveys



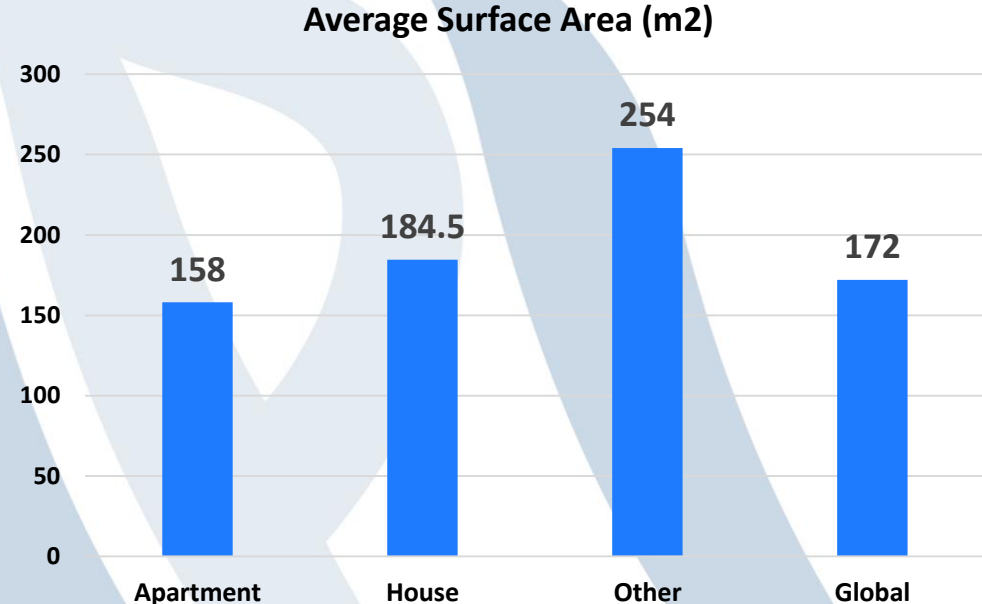
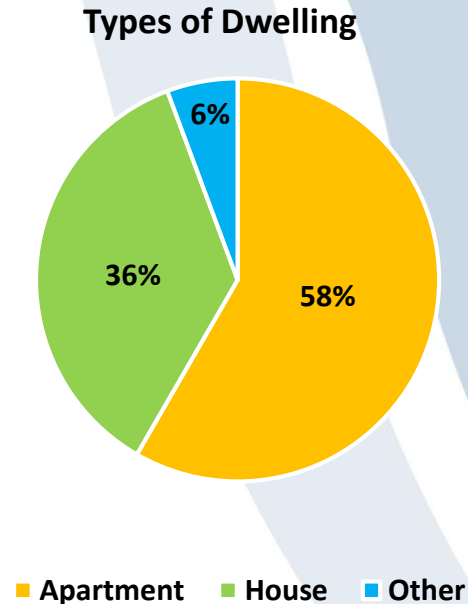
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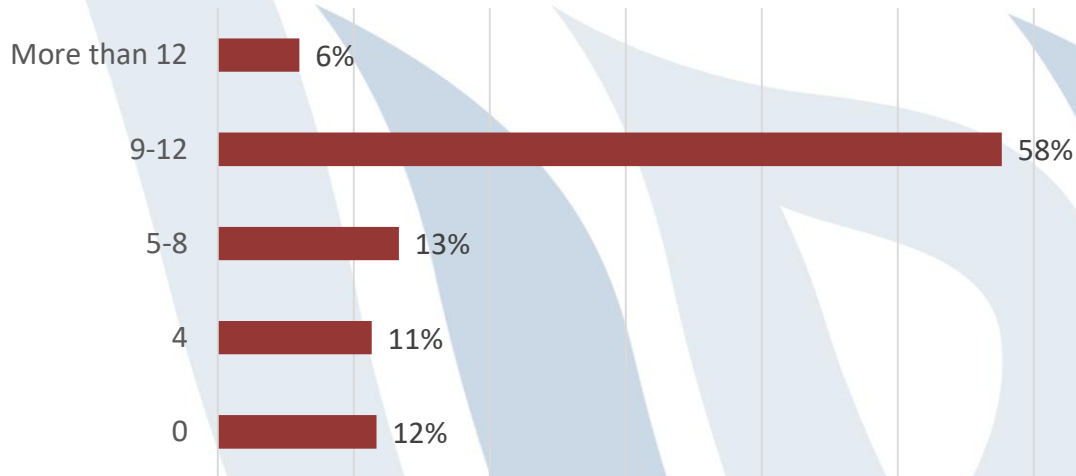
# Lebanese dwellings

Most dwellings live in an apartment, of 158 sq. including 4 persons



# Lebanese dwellings

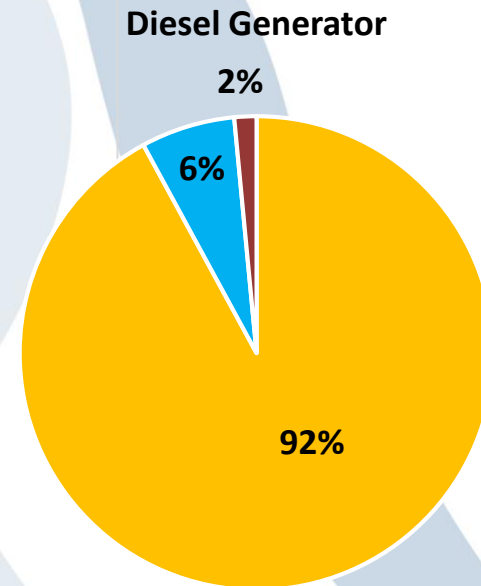
Experienced Hours of Blackout per dwelling



The average electricity shortage experienced by households is

**8.9 hours per day**

Covered by Diesel generators



■ Rent ■ Own ■ None

# Lebanese dwellings

The average monthly electricity bill (Operator - EDL) is

**52.9 USD**

The average monthly electricity bill from Diesel generators is

**67.2 USD**

# Characteristics of appliances available at households'

Appliances	# per household	Most common size	Average daily use (based on annual values)
Clothes washers	1	7 and 8 kgs	1.25 hours
Clothes dryers	0.4	7 and 8 kgs	1 hour
Refrigerators	1.1	15 to 25 Cuft	24 hours
Freezers	0.25	x	24 hours
Small electric ovens	0.3	x	23 minutes
Air conditioners	1.4	9,000 and 12,000 Btu/h	<b>Cooling:</b> 5 hours per day from June to September (incl.) <b>Heating:</b> 4.5 hours per day from December to February (incl.)
Dishwashers	0.1	13 or 14 place settings	37 minutes
Microwaves	0.8	x	9 minutes
Televisions	2.2	40 inches	6.5 hours

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# Presentation of key results from retailers surveys



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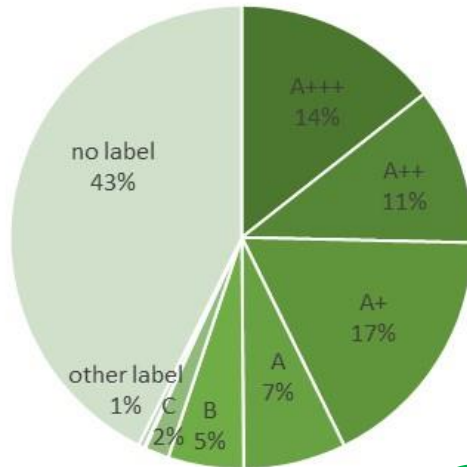
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# Italian products available at Lebanese retailers'

Appliances	Share of Italian brands	Share of products made in Italy*
Ovens and cookers	44%	34%
Dishwashers	16%	19%
Washers-dryers	13%	12%
Refrigerators-freezers	3%	4%
TVs	0%	0%
ACs	0%	0%

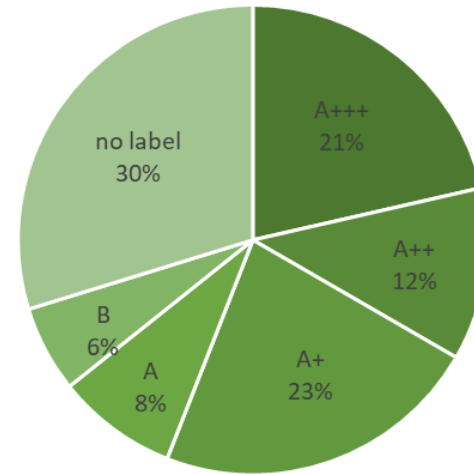
\* Italian and non-Italian brands for which the equipment tag was showing Italy as country of origin. Products of Italian brands, are either made in Italy, or in another country or sometimes the origin couldn't be checked.

# Energy ratings of home appliances available on the market (except for ovens and cookers)

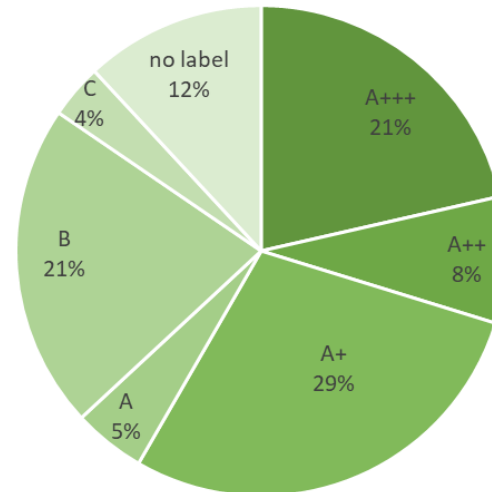


43% of the appliances have no label  
 57% have the **EU** label  
 0.4% have another label

- 14% A+++
- 11% A++
- 17% A+
- 7% A
- 5% B
- 2% C



Energy labels of equipment coming from Italy



Energy labels of equipment from Italian brands



# Best-available energy ratings of home appliances in the EU and in Lebanon (zoom on Italian Products)



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Appliances	BAT in the EU scheme	BAT in Lebanon for Italian brands only	BAT in Lebanon (all brands)
Air conditioners	A+ as of 1st of Jan. 2015 A++ as of 1st of Jan. 2017 A+++ as of 1st of Jan. 2019	Not available	A++
TVs	A++ as of 1st of Jan. 2017 A+++ as of 1st of Jan. 2019	Not available	A+
Refrigerator-freezers	A+++ as of 1st of Jan. 2011	A++	A++
Washing machines	A+++ as of 1st of Jan. 2011	A+++	A+++
Dryers		A++	A+++
Dishwashers		A+++	A+++
Electric and/or gas ovens		A+	A+

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# The cooperation between IMELS and LCEC



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# Cooperation between IMELS and LCEC



## ➤ *Our common concerns*

- Support the Lebanese Government in achieving its environmental commitments by generating energy savings and reducing GHG emissions;
- Foster innovation in the sector and promote energy-efficient and environmentally-friendly technologies;
- Transfer Italian know-how to local manufacturer;
- Incentivize the Lebanese retailers and importers of home appliances to shift towards highly energy-efficient technologies;
- Raise awareness on energy savings and environmental impacts.

# Cooperation between IMELS and LCEC



## ➤ *Details about the program*

- Assess the current technology available in the Lebanese market;
- Identify new opportunities for suppliers of energy-efficient home appliances;
- Design a new financing mechanism leading to the distribution of rebates to end-users, directly or through local retailer shops, improving end-users' access to highly energy-efficient technology;
- Organize trainings aimed at retailers' staff on highly energy-efficient technology and energy savings;
- Launch a global awareness campaign.

# Cooperation between IMELS and LCEC

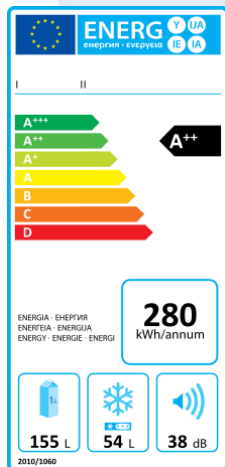


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## ➤ *Details about the program*



- Promote Italian home appliances that have the best-available energy rating according to the European labeling scheme
- The direct beneficiaries of the program are Lebanese end-users who buy their appliances at retailers' stores and will benefit from a rebate



# Eligible appliances and brands

Italian brands and/or non-Italian brands with products made in Italy

**Hoover** **FULGOR MILANO** **Hotpoint**

**CANDY** **GLEM** **Ariete**

**Tecnogas** **DeLonghi** **LA GERMANIA**

**BRAUN** **ZEROWATT** **ARISTON**

**smalvic** **INDESIT** **ROSIERES**

**KENWOOD** **smeg** **Baumatic**

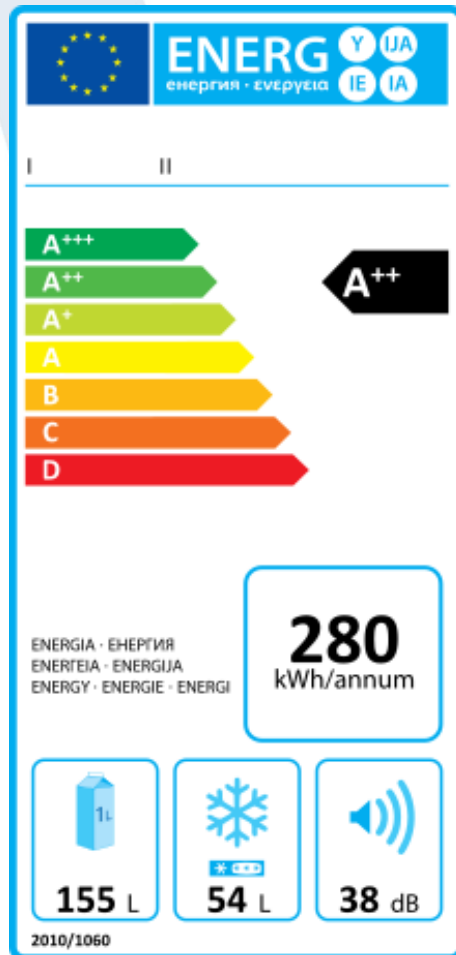
# Main criteria: Energy rating based on the European Energy Label



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Example of an energy label for a refrigerator

Appliance	Eligible energy ratings
Washers	A+++
Dryers	A+++
Washer-dryers	A++ and A+++
Refrigerators and freezers (starting 10 CFT, approx. 283 L)	A++ and A+++
ACs	A+
Dishwashers	A+++
Electric and/or gas ovens	A+, A++ and A+++

# Local partners of the Program



*Four retailers & One financial partner  
covering all of Lebanon*



AGHASARKISSIAN





# Q&A

# Thank You!

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