

THE LEBANESE CENTER FOR ENERGY CONSERVATION: **AN OVERVIEW**

# EFFICIENT RESOURCES, SUSTAINABLE ACHIEVEMENTS



**LCEC**

LEBANESE CENTER FOR ENERGY CONSERVATION  
المركز اللبناني لحفظ الطاقة

## WHO WE ARE

The Lebanese Center for Energy Conservation (LCEC) is the national energy agency for Lebanon. LCEC is a governmental organization affiliated to the Lebanese Ministry of Energy and Water (MEW) with a financially and administratively independent statute. LCEC acts as the technical arm of the Lebanese Government, specifically the Ministry of Energy and Water in all issues related to energy efficiency and renewable energy.

Although a young institution, LCEC has succeeded in establishing itself as the national point of reference in sustainable energy matters for both the public and private sectors in Lebanon.

The main role of LCEC is to setup national action plans and strategies to develop the sustainable energy sector in Lebanon. LCEC role also expands to the implementation of national projects and initiatives undertaken by the Lebanese Ministry of Energy and Water.

WHO WE ARE

## WHAT WE DO

LCEC is a specialized entity in the promotion and development of energy efficiency, renewable energy, and green buildings in Lebanon. In addition, LCEC works on the application and implementation of national projects in the mentioned sectors. In a period of less than 5 years of operation, LCEC was successful in achieving a positive nationwide impact in the energy conservation sector in Lebanon.

The work of LCEC includes a multi-layer approach: technical support, legal and institutional development, awareness raising, capacity building, and financial mechanisms and incentives. Under the leadership of the Ministry of Energy and Water, LCEC has succeeded in placing Lebanon on the right path towards sustainability, with major pioneering achievements in the Arab World.

Today, LCEC continues to play its role as the national energy agency for Lebanon with expanded responsibilities and tasks with major energy-related entities in Lebanon. LCEC is also responsible for the development and implementation of the National Energy Efficiency Action Plan (NEEAP) in cooperation with more than 40 public entities. LCEC also acts as the national focal point for many regional and international initiatives.





## **HISTORY OF LCEC**

Back in 2002, the Ministry of Energy and Water and the United Nations Development Programme (UNDP) signed a joint 5-year project to promote energy efficiency and renewable energy in Lebanon with funding from the Global Environment Facility (GEF). One major objective of this project was “to create the Lebanese Center for Energy Conservation (LCEC)”.

In 2007, the Ministry and UNDP signed an agreement to continue their cooperation towards the setup and institutionalization of LCEC. Following this agreement, the LCEC was created as an independent governmental organization affiliated to the Ministry of Energy and Water in 2011. UNDP continued the financial and administrative support of LCEC until 2013. During that same year, the Ministry of Energy and Water committed to sustain the LCEC financially. The European Union (EU) also offered its support to LCEC through the Prime Minister Office with a grant to “Support LCEC to Strengthen its Role as the National Energy Agency for Lebanon”.

Today, LCEC is a sustainable organization having a total staff of 19 full-time employees, in addition to a number of part-time consultants and advisors. The LCEC is financially healthy with a 5-year business plan being implemented. The Lebanese Government through the Ministry of Energy and Water covers a main share of the budget of LCEC (around 70%) while international donors and funding agencies cover the remaining share, notably through the work being done with the European Union (EU) and the Central Bank of Lebanon (BDL).

# HISTORY

## IN PARTNERSHIPS WE BELIEVE

The work of LCEC is characterized by various partnerships with national and international private and public entities. LCEC is successful in establishing partnerships and in aligning efforts towards the achievement of national objectives in energy efficiency and renewable energy.

The Ministry of Energy and Water is the central public organization in charge of the energy sector in Lebanon. LCEC is affiliated to the Ministry of Energy and Water in all major decisions, initiatives and projects related to energy efficiency and renewable energy.

LCEC is also the technical partner of the Central Bank of Lebanon (BDL) in the review and evaluation of all technical applications to low-interest energy loans submitted to the BDL.

In addition, LCEC keeps productive relationships with the Ministry of Finance, the Ministry of Environment, the Ministry of Industry, and the Council for Development and Reconstruction (CDR). LCEC has excellent work partnerships with Electricité Du Liban (EDL), the Industrial Research Institute (IRI), the Lebanese Standards Institution (Libnor), the Order of Engineers and Architects in Beirut, ESCWA , and UNIFIL.

At the international level, LCEC is the national focal point of the International Renewable Energy Agency (IRENA), the Energy Department at the League of Arab States (LAS), the Mediterranean Solar Plan (MSP), and the Energy Charter.

Furthermore, LCEC benefits from the coordination with many EU-funded projects and initiatives, namely TAEIX, MED-ENEC, CES-MED, SISSAF, SHAAMS, MED-SOLAR, EDILE, and SUDEP. LCEC is also implementing an EU-funded ENPI-CBC-MED project called MED-DESIRE.

LCEC represents the national committee of the World Energy Council (WEC) and is a founding member and member of the Board of Trustees of the Regional Center for Renewable Energy and Energy Efficiency (RCREEE).

Finally, the LCEC is developing partnerships with international entities like the World Bank, the International Finance Corporation (IFC), the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), and the United Nations Industrial Development Organization (UNIDO).

*“in partnerships  
we  
believe”*

## **Working with municipalities to join the Covenant of Mayors**

LCEC is collaborating with the EU-funded project CES-MED to support Lebanese municipalities to develop Sustainable Energy Action Plans. LCEC would be the technical focal point for the Covenant of Mayors initiative in Lebanon.

## **MED-ENEC support extends to ESCOs, NEEAP, and energy efficient equipment**

In partnership with MED-ENEC, LCEC works on the development of the ESCO market in Lebanon, minimum energy performance standards, and the NEEAP. MED-ENEC (Mediterranean Energy Efficiency in the Construction Sector) is a successful regional project based in Cairo, Egypt and funded by the EU.

## **MED-DESIRE gathers Italy, Tunisia, Spain, Egypt, and Lebanon**

LCEC is a main partner in the EU-funded project MED-DESIRE. It is funded by the ENPI CBC MED programme and aims at spreading energy efficiency all over the Mediterranean area through the use of innovative financial schemes and market stimulation tools. The project joins the efforts of nine institutions from five different countries.



## **Lebanon Committee of the World Energy Council (WEC)**

Founded in 1923, the World Energy Council is a global and inclusive forum for thought leadership and tangible engagement committed to have a sustainable energy future. Since 2012, LCEC acts as the secretariat of the WEC Lebanon Committee. The WEC Lebanon Committee gathers more than 50 corporate and individual members.



## **Working with RCREEE and LAS for a better energy system in the Arab World**

The Regional Center for Renewable Energy and Energy Efficiency (RCREEE) is an independent not-for-profit regional organization based in Egypt, gathering 17 Arab countries. RCREEE aims to enable and increase the adoption of renewable energy and energy efficiency practices in the Arab World. LCEC is a founding member of RCREEE. LCEC is also involved in the work of the energy department of the League of Arab States (LAS).

## **The French FASEP Initiative for a Solar Photovoltaic Educational Platform**

The “Educational and Demonstration Platform for Renewable Energies in Lebanon” project aims at the installation of an educational platform to be used by researchers, educational institutions, university students, as well as professionals in the solar photovoltaic sector. The project is funded by the French Government under the FASEP initiative.

1 Development of the National Energy Efficiency Action Plan (NEEAP 2011-2015) for Lebanon, adopted by the Council of Ministers on 25 November 2011.

■ **Lebanon is the first country in the Arab World to adopt a NEEAP.**

2 Under the leadership of BDL, development and implementation of the financing mechanism National Energy Efficiency and Renewable Energy Action (NEEREA). Energy loans under NEEREA exceeded 250 million USD until date, making

■ **NEEREA one of the best financing mechanisms worldwide.**

3 Distribution of 3 million compact fluorescent lamps (CFLs) to 1 million Lebanese houses

■ **introducing efficient lighting to around 60% of all houses in Lebanon.**

4 Conceptualization and construction of the Beirut River Solar Snake (BRSS),

■ **the first solar photovoltaic farm in Lebanon, a landmark in the heart of the capital Beirut.**

5 Under the leadership of UNDP Lebanon, implementation of the national programme for the development of the solar water heaters market (2009-2014),

■ **making the Lebanese market among the top 10 countries in the world according to the International Energy Agency (IEA).**

*efficient*  
*resources...*  
*sustainable*  
*achievements*

ACHIEVEMENTS





6

- Implementation of the national strategy for efficient public street lighting, including the installation of more than 3,500 solar photovoltaic street lighting systems.



7

- In partnership with UNDP Lebanon and IRI, installation of the first testing facility for solar water heaters in Lebanon thanks to a grant by the Greek Government.

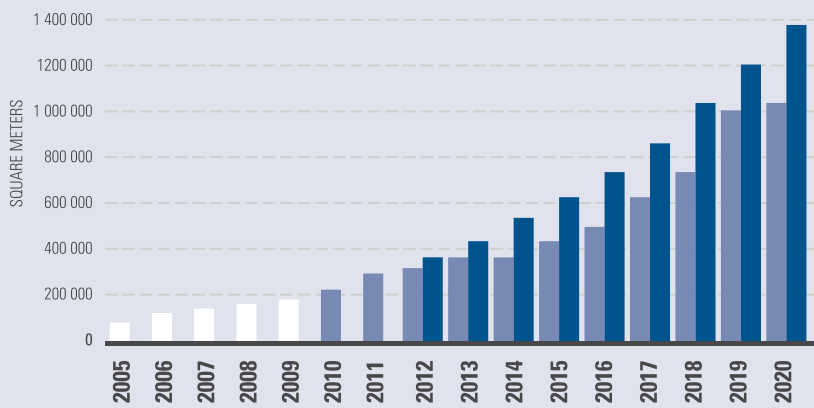
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- Supervision of more than 120 energy audits creating the first market momentum for energy service companies (ESCOs) in Lebanon.



**EFFICIENT RESOURCES**  
**SUSTAINABLE ACHIEVEMENTS**

# ACTIVITIES



■ SURVEYED MARKET (2010)  
■ PROJECTED MARKET (2010)  
■ SURVEYED MARKET (2014) AND PROJECTIONS

# HMS

- Under the leadership of MEW and BDL, LCEC has set and is implementing the national subsidy program for solar water heater (SWH). From 2009 to 2014, more than 190,000 square meters of solar water heaters (SWHs) are installed in Lebanon. The market is witnessing a continuous yearly increase.
- In coordination with EDL and the UNDP CEDRO project, LCEC has succeeded in the adoption of net metering on the national grid, allowing exchange of electricity to and from the grid.



- LCEC developed the energy conservation law for Lebanon adopted by the Ministry of Energy and Water. The law is currently under review by the Lebanese Government.

**قانون حفظ الطاقة**  
 وإشاعة المركز اللبناني لحفظ الطاقة

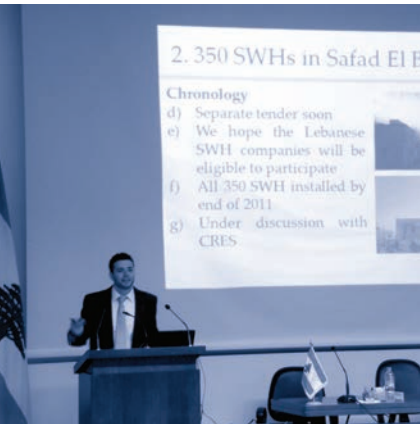
**الفصل الأول: المصطلحات - التعريف**

**المادة الأولى: المصطلحات:**

يتمتع بالكتابة والتدابير الآتية حيثما وردت في هذا القانون، المعنى المقابل لها كالتالي:

- الوزير : وزير الطاقة والمياه.
- المركز : المركز اللبناني لحفظ الطاقة.
- حفظ الطاقة : الإجراءات والتدابير المتخذة لتبني نواحي إنتاج وإستهلاك أكثر كفاءة.
- الطاقة المتجددة : الطاقة المستدامة.
- المحصول : ...
- ...

efficient  
 resources...  
 sustainable  
**achievements**



- LCEC collaborates with more than 50 players to conduct trainings and capacity-building activities targeting more than 3,500 persons (engineers, technicians, students, NGOs, ESCOs).



- LCEC team is continuously working on mass media involvement. LCEC appearances in the media are as high as 4 to 5 times per month (TV channels, radio stations, newspapers, magazines).

- Under the leadership of MEW, LCEC awareness raising campaigns are covered by most Lebanese media completely free-of-charge. Awareness campaigns target TVs, radio stations, and street billboards.



- In partnership with MCE Group, LCEC is the conference organizer of the Beirut Energy Forum event held yearly in Beirut. The Forum has imposed itself as the one of the most respected energy events in the Mediterranean region.

## ■ The Council of Ministers of Lebanon approved the National Energy Efficiency Action Plan 2011-2015 for Lebanon (NEEAP) on 10 November 2011.

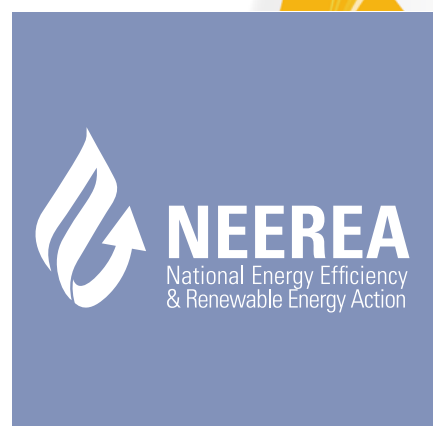
The NEEAP includes 14 initiatives summarizing all national objectives, programmes and policies in the energy efficiency and renewable energy sectors.

LCEC is updating and developing the NEEAP 2015-2020 while preparing the Renewable Energy Strategy for Lebanon 2015-2020. The Lebanese NEEAP is prepared in conformance with the Arab EE guideline (based on the EU directive 2006/32/EC on energy end-use efficiency and energy service).

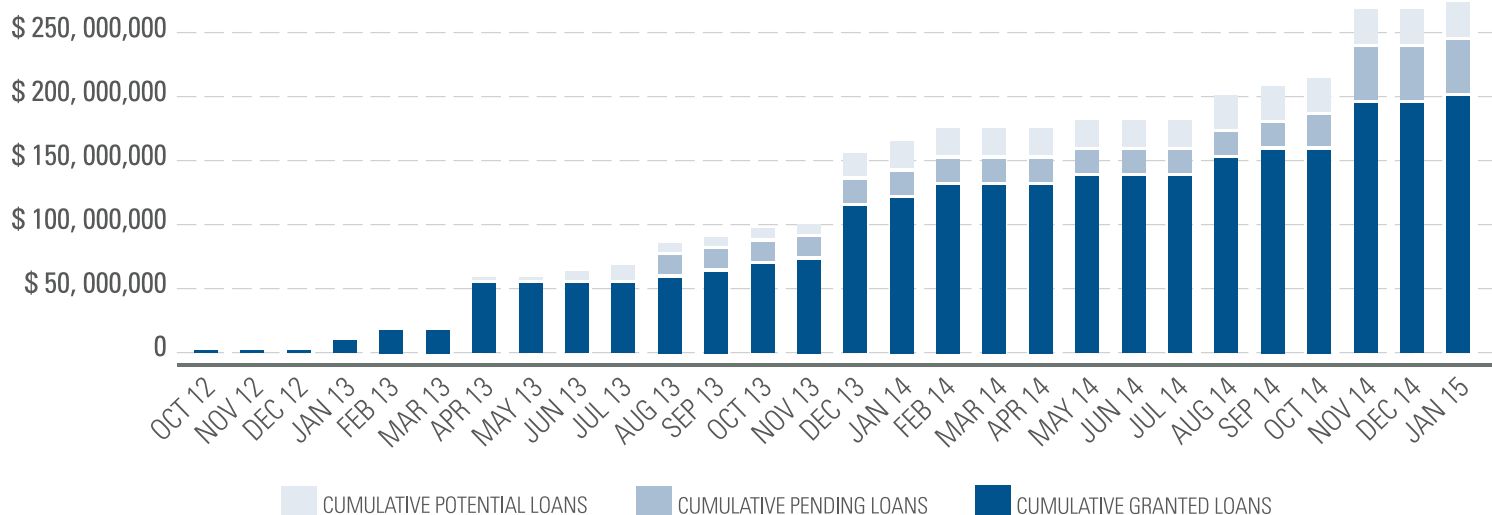


## ■ The National Energy Efficiency and Renewable Energy Action (NEEREA)

is a national financing mechanism that allows private sector entities to get subsidized loans for any type of energy efficiency and renewable energy projects. NEEREA is active through all Lebanese commercial banks under the leadership and management of BDL. By January 2015, more than 200 projects were approved under the NEEREA financing mechanism with a total amount of more than 250 million USD.



### CUMULATIVE LOANS SINCE OCTOBER 2012



■ **The Beirut River Solar Snake (BRSS) is the first pilot project in Lebanon to produce electricity from solar photovoltaic energy.**

BRSS was launched by the Ministry of Energy and Water (MEW) in 2013 and is under the supervision and management of LCEC. The project will be extended over a distance of 6.5 Km on the top of the Beirut River and will have a 10 MW installed capacity, being the first grid-connected solar farm in the history of Lebanon. The implementation of the first phase of the BRSS of 1 MW is completed.



# THE LEBANESE CENTER FOR ENERGY CONSERVATION



# EFFICIENT RESOURCES... SUSTAINABLE ACHIEVEMENTS





/LCECTWEETS



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/THE-LEBANESE-CENTER-FOR-ENERGY-CONSERVATION-LCEC

**Ministry of Energy and Water**

Corniche du Fleuve ■ Beirut, Lebanon ■ 1<sup>st</sup> Floor ■ Room 303  
**Tel** +961 (1) 565 108 ■ **Fax** +961 (1) 569 101 ■ **Email** energy@lcecp.org.lb

**Badaro Back Office**

240 Badaro ■ Beirut, Lebanon ■ 5<sup>th</sup> Floor ■ Karam Building  
**Tel** +961 (1) 389 189 ■ **Fax** +961 (1) 389 589



[www.lcec.org.lb](http://www.lcec.org.lb)