



Lebanon Energy Efficiency & Renewable Energy Finance Facility



SUPPORTED BY **Banque du Liban**

Sustainable Energy Investment ➔ *Improved Business Results*



WHAT IS LEEREFF?

LEEREFF stands for 'Lebanon Energy Efficiency & Renewable Energy Finance Facility'. LEEREFF is a dedicated credit line for sustainable energy investments in:

- Renewable energy
- Green Buildings
- Energy Efficiency in business and industry

Investing in energy efficient or renewable energy technologies, companies benefit directly from energy cost savings as well as modern technologies, whilst making a contribution to lowering the overall energy demand in Lebanon. LEEREFF offers investment support through loans from The European Investment Bank (EIB) and Agence Française de Développement (AFD), with interest rate subsidies provided by the Banque du Liban (BDL), for investments in energy efficiency and in renewable energy, and free technical assistance provided by an international team of engineers, financed by the EU.

WHO CAN APPLY?

All private enterprises formed under the laws of Lebanon and operating in Lebanon:

- Production companies, ranging from large factories through to bakeries, small technical and crafts workshops
- Service businesses, ranging from media companies, tourism companies through to hair dressing salons and dry cleaners
- Sole proprietors

Any other private legal entities, including Energy Service Company (ESCO). ESCOs should ensure that the energy performance contract includes a guarantee for a certain percentage of energy savings and that the loan incentives made available to the ESCO are at least partially passed on to the end-user.

Excluded from LEEREFF financing are residential and public sector projects as well as companies that conduct business in:

- Gambling
- Real estate with the aim of making profit on sales in the short and medium term
- Manufacture, supply or trade in arms
- All other activities excluded by the EIB and/or AFD (see this link for details: <http://www.eib.org/about/documents/excluded-activities-2013.htm>)

WHICH LEEREFF LOAN IS BEST FOR YOUR COMPANY?

LEEREFF offers two different loan types to meet the varying investment needs of companies. A **STANDARD LOAN** (€40,000 - €250,000) for standard equipment selected from our List of Pre-Assessed Technologies and **NON-STANDARD LOAN** for investments >250,000 - €15 million, for all non-standard technologies.

STANDARD LOANS:

Loans for standard investments are designed for clients who are planning to implement more simple energy efficiency or renewable energy measures, with an investment volume from €40,000 to €100,000 for single measures and up to a maximum of €250,000 for multiple measures.

Standard investment loans are restricted to devices and models, which have been pre-assessed by the LEEREFF team of experts.

This list currently covers the following technologies:

- Thermal insulation and windows
- HVAC systems
- Monitoring and Control Systems
- Pumps, compressors and Motor systems
- Renewable Energy systems (PV, SWH)

All items on the List of Eligible Technologies (LET) were selected on the basis that they meet the LEEREFF requirement of saving **at least 20% energy**.

The full LET is available on our website: www.leereff.com, or upon request from info@leereff.com. For items currently not listed, please contact the project office with product details and our team of engineers will evaluate the technology for possible inclusion.

ENERGY SAVING EXAMPLES:

- Energy efficient LED lighting and save up to 40-70% per lighting unit (Based on LED T8 or T12)
- Energy efficient ventilation systems and save up to 50%
- Installing variable speed drives on motors can achieve energy savings of 50- 80%.
- Fitting a Greenhouse with a Thermal Blankets can achieve 20%-50% energy savings
- Solar Water Heaters can reduce the operating cost of water heating by more than 50%

NON-STANDARD LOANS:

These are for investments of >€250,000 - €15 million. Eligible investments include:

- General energy efficiency investments in industrial and commercial companies
- Green Buildings (Commercial)
- District Heating and Cooling Systems
- Co-generation of Heat and Power
- Renewable Energy, including:
 - Wind
 - Biomass
 - Hydro Power
 - Solar energy
 - Geothermal Energy

LEEREFF loans can cover up to 80% of the investment cost. LEEREFF loans can be supplemented by companies' own funds, a NEEREA loan or a conventional bank loan.

ELIGIBILITY CRITERIA

For investments to be eligible for LEEREFF financing, the project should meet certain technical and financial eligibility criteria:

STANDARD investments should generate energy savings of at least 20%. Technologies included in the LEEREFF List of Eligible Technologies were pre-assessed and selected by the LEEREFF team of consultants in order to meet this goal.

NON-STANDARD investments are very diverse and the eligibility criteria for non-standard investment projects vary depending on the project type.

Green Buildings (Commercial):

- LEED (or equivalent) Platinum standard: LEEREFF can finance up to 36%
- LEED (or equivalent) Gold standard: LEEREFF can finance up to 28%

General Energy Efficiency Projects (Non-Standard Investments)

- Project generates >20% energy savings OR energy savings cover 50% of investment costs over the project lifetime, using 5% discounted rate. Investments aimed at replacing production equipment have to comply with the 50% coverage ratio.

District Heating / Cooling:

- Heat mainly produced from high efficiency co-generation or RE
- Must be competitive vis-à-vis individual boilers in buildings

High Efficiency CHP

- Meets EU Directive 2004/8/EC

Renewable Energy:

- Solar: certified technology; site-specific irradiation yield assessment for >0.5 MWp.
- Hydro: Electricity generation cost base load <€120/MWh based on 5% real discount rate and 20 years economic lifespan. Large hydro-dams are excluded.
- Biomass: uses sustainable resource; Electricity generation cost base load <€120/MWh based on 5% real discount rate and 15 years economic lifespan. Biofuels are excluded.
- Geothermal: Electricity generation cost base load <€120/MWh based on 5% real discount rate and 20 years economic lifespan. Drilling excluded from LEEREFF financing.
- Wind: On-shore only; >1 year on-site wind measurements; Electricity generation cost base load <€120/MWh based on 5% real discount rate and 15 years economic lifespan.

A complete and detailed overview of the technical and economic eligibility criteria for non-standard investments can be found on the LEEREFF website (www.leereff.com).



BENEFITS FROM SOLAR PV INVESTMENT EXAMPLES

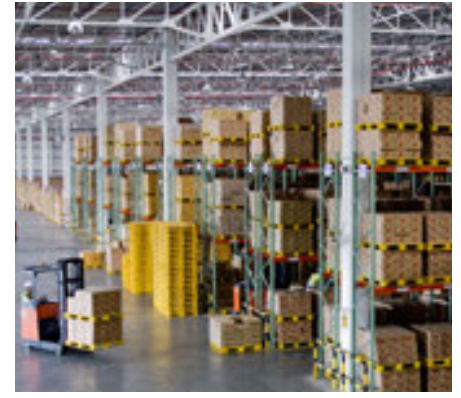
A winery installed 517 kW DC rooftop system and generates 80% of the power needed for their production facility and hospitality center. The annual electricity production is 827,000 kWh, enough electricity to power 86 homes.

Industrial company installed 801 kW DC system on their factory roofs. Annual production is 1,116,000 kWh DC. This covers 60% of their annual energy needs.



BENEFITS FROM BIOMASS INVESTMENT

Wood furniture company turns waste into a heating source by investing in a Woodchip Heating System. The new 540,000 kW (1.8 MMBtu/hr) boiler now heats the 2,790 square meter facility and uses practically all of the wastewood the operation produces—scraps, shavings, and sawdust, solving the wastewood problem at the same time.



How to Apply for a LEEREFF Loan?

Please contact one of the LEEREFF Partner Banks with your application. The current list of LEEREFF Partner Banks and more information is available on our website — www.leereff.com. If you need any assistance, please contact our project office at +961 1 389 588 or email us at info@leereff.com



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