

HORIZON  
2020

# LEMON Less Energy More OpportuNities

## Informe

### Información del proyecto

#### LEMON

Identificador del acuerdo de subvención:  
695863

[Sitio web del proyecto](#)

#### DOI

[10.3030/695863](https://doi.org/10.3030/695863)

Proyecto cerrado

#### Fecha de la firma de la CE

19 Enero 2016

#### Fecha de inicio

1 Febrero 2016

#### Fecha de finalización

31 Enero 2020

#### Financiado con arreglo a

SOCIETAL CHALLENGES - Secure, clean and efficient energy

#### Coste total

€ 628 855,00

#### Aportación de la UE

€ 628 855,00

#### Coordinado por

AGENZIA PER L'ENERGIA E LO  
SVILUPPOSOSTENIBILE  
ASSOCIAZIONE



Italy

## Periodic Reporting for period 3 - LEMON (LEMON Less Energy More OpportuNities)

Período documentado: 2019-05-01 hasta 2020-01-31

### Resumen del contexto y de los objetivos generales del proyecto

The European Union is asking for actions that help to deliver its target reducing the greenhouse gas emissions progressively up to 2050. The social housing sector manages over 26 million homes, about

11% of existing dwellings in Europe (Housing Europe data). In Emilia-Romagna the Social Housing companies (ACER) manage in total 78.703 dwellings in 6.404 buildings, whose energy demand ranges from 80 to 450 kWh/m<sup>2</sup> per year equivalent and average energy cost ranges from 600 € to 2500 € per year.

The LEMON project is funded under the European Horizon 2020 programme to provide technical, organizational and financial assistance to public and private entities for the preparation of tenders for the energy retrofitting of about 620 social housing units in the provinces of Reggio Emilia and Parma. LEMON increases saving opportunities, improves housing space quality and creates value for all the actors involved in the energy refurbishment of social housing buildings: from people living in the dwellings to the technicians who manage and keep high building's performances, from innovators to investors in the construction sector. LEMON focuses on a portion of social housing located in the Emilia-Romagna Region and has the ambition to be replicated in other contexts.

LEMON has the purpose of providing technical assistance to accelerate the investment in the energy retrofitting of social housing units, integrating different form of funding available, including regional and national loans and incentives, and apply forms of contract to govern the relations between Local Authorities, dwelling owners, tenants, ACERs (Social Housing Companies), ESCOs (Energy Service Companies) and financing institutions as to ensure a return on investment within 15 years from the retrofitting.

The overall project objectives are:

- To experiment innovative financing models for social housing retrofit through the implementation of new contracting models and EPC contracts, mobilising 15,290 million Euros of investments in energy retrofitting, in order to reduce the buildings energy demand and guarantee the energy performance of the retrofit.
- To develop and implement energy efficiency projects in private and public dwellings involved in the energy retrofit programme, reaching at least an average 40% energy reduction.
- To develop a new lease based on the energy performance of the housing unit, called EPTA - Energy Performance Tenancy Agreement, that will allow the Social Housing Company to charge the 30% of the investment on the tenant renting fee.

By the end of the project LEMON, the social housing companies ACER Reggio Emilia and ACER Parma delivered an investment programme of 9.453.428 € (VAT included) in 626 dwellings with an energy savings, developing a pipeline of bankable aggregated project and financial schemes combining the retrofit project of a consistence stock of social housing dwellings with an EPC contract that will involve the ESCOs in the realization of the interventions and in the management of the retrofitted dwellings. The innovation is based on the integration of different financing instruments available.

In total 626 dwellings have been included in Lemon programme, among them 149 are in Parma Province and 477 in Reggio Emilia Province. The investment programme of 9.453.428 € will reduce by 4.039 MWh/y the energy consumption and avoid 794 tons of CO<sub>2</sub> per year.

Trabajo realizado desde el comienzo del proyecto hasta el final del período abarcado por el informe y los principales resultados hasta la fecha



The work performed in LEMON include:

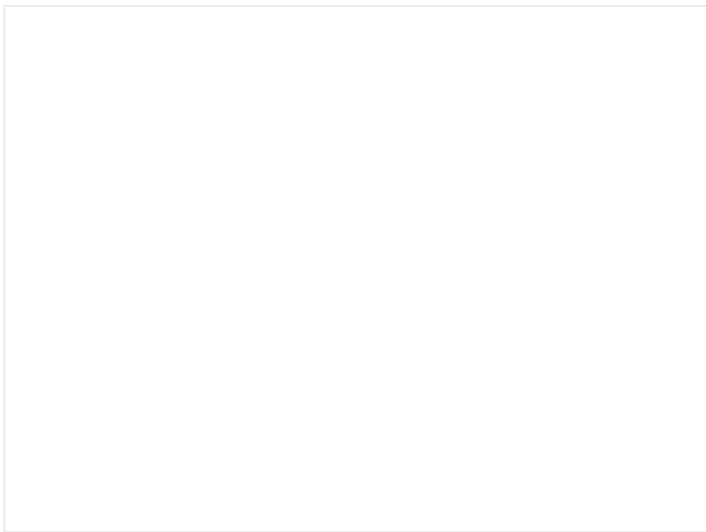
- The scouting of innovative solutions provided by local small enterprises to be implemented in the social housing retrofit;
- The dwelling energy retrofit programme development, which include the energy audit, the feasibility studies and the business plan of the energy investment for 850 dwellings.
- The development of the economic and financial plan and the approval of the retrofit programme by 16 City Councils and 59 landlords.
- The engagement of regional stakeholder in 4 meetings to share the project outcome and the investment scheme, and to receive support to overcome the barriers and replicate the initiative in other contexts.
- The development of two different tenders: 18 works tenders in buildings mostly with autonomous boilers managed by the ACER to achieve the energy performance objective and 2 EPC tenders that include investment in buildings with mainly centralized heating system. Through the EPC tender the ACERs are therefore selecting an ESCO that support them in co-finance and achieve the energy saving included in the energy saving programme agreed between the Local Authorities, dwelling owners and the ACERs. The first Lemon EPC tender, was published on the 27th of July 2018, expired the 15th of October 2018 and got desert. The tender that was addressed to the deep energy retrofit of 395 dwellings got desert. The second LEMON EPC tender was published on the 2nd July 2019, closed on 16th September 2019 and had 1 participant.
- The recognition of financial institutions interested in financing the ACERs LEMON project through a 'Competitive dialogue tender' and negotiation activities with 3 banks.
- The introduction of the Energy Performance Tenancy Agreement (EPTA) as Regulation approved by the Municipalities of Parma and Reggio Emilia and by the Union of Tenants on July 14, 2017. With the formal approval the agreement has been transformed into a scheme for tenants that set out the energy efficiency sharing saving (70% ACER and 30% tenants) approach. This provides the possibility to increase the tenants renting fee in the retrofitted dwellings according with the EPTA fee identified in LEMON business plan.
- The organization of 2 capacity building events national and regional decision makers and 3 capacity building events for the social housing companies tenants, presenting the LEMON Dwelling Energy management Manual.
- The project communication and dissemination: the LEMON Dwelling Energy Management Manual is available in Italian ([https://drive.google.com/file/d/1MAMb9pp0uBr\\_0-ZwiFPOPGcneYAEEnVvV/view](https://drive.google.com/file/d/1MAMb9pp0uBr_0-ZwiFPOPGcneYAEEnVvV/view)) and English (<https://drive.google.com/file/d/1NjnOGKyljttD1O4IMa2scuB5Ts9XUFq0/view>) and other training material were developed to support the capacity building activities. Media dissemination and participation of the partners at National and EU events and initiatives ensured a proper dissemination of the project.

Avances que van más allá del estado de la técnica e impacto potencial esperado (incluida la repercusión socioeconómica y las implicaciones sociales más amplias del proyecto hasta la fecha)

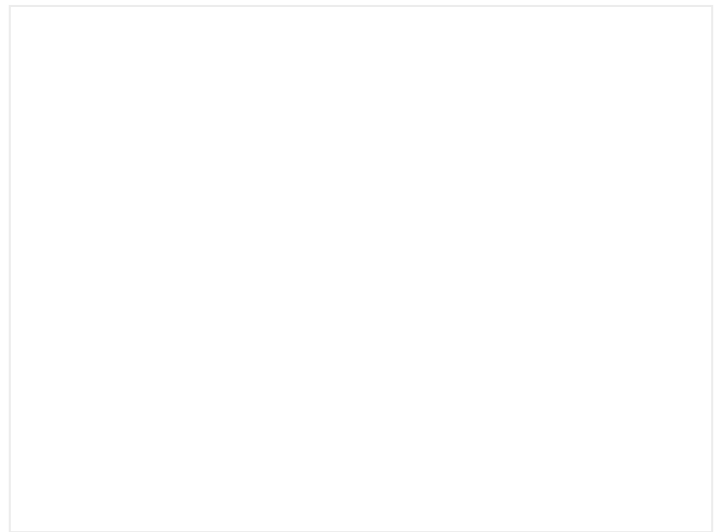


The progress beyond the state of the art in the reporting period are:

- Set up a large retrofit programme, interesting for the for the ESCO.
- Engage the regional stakeholder
- Design the energy performance guarantee scheme to launch the investment
- Engage the Local Authorities in the LEMON programme
- Launch investments to achieve a deep retrofit of social housing buildings
- Publish 2 EPC tenders
- Develop and implement the EPTA
- Screen and select the financing products available for energy efficiency investment through a tender and a negotiation to select the bank for the loan
- The organization of capacity building events and wide project communication and dissemination
- The organisation of the final event and the participation at the Ecomondo fair with a LEMON stand



Leaflet image



Logo

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**Permalink:** <https://cordis.europa.eu/project/id/695863/reporting/es>

European Union, 2025