

# Renewables and Energy Efficiency Diputación de Barcelona - REDIBA

## Province of Barcelona – Spain

OWNERSHIP	PUBLIC
<b>Program authority</b>	Diputación de Barcelona (Barcelona Provincial Council)
<b>Program Delivery unit</b>	REDIBA TA (REDIBA Technical Assistance Unit)
<b>Implementation Model</b>	Energy Performance Contracting (EPC) Energy Supply Contracting (ESC)
<b>Operating Services</b>	Marketer Facilitator Financial advisor Assessor
<b>Type of projects</b>	Public Lighting Solar Thermal Energy District Heating Biomass Energy Efficiency (building retrofits)
<b>Ambition/targets</b>	Implementation of sustainable energy measures in the Province of Barcelona at no cost or debt to the municipalities with an investment objective of 50M€.
<b>Beneficiaries</b>	Municipalities and provincial authorities within the Province of Barcelona
<b>Funding Vehicle</b>	ESCOs Property Owners (Municipalities)
<b>Financial Instruments</b>	EPC Financing ESC Financing Renting/Leasing Grants

## Summary

REDIBA, which stands for Renewables and Energy Efficiency Diputación de Barcelona, is a project created by the Barcelona Provincial Council (DIBA) to support the local and provincial authorities in the Province of Barcelona carrying out their committed Sustainable Energy Action Plans (SEAP). It started in a setting where the municipalities had the duty to provide basic services, with reduced income, no investment nor borrowing capacity, increasing energy prices and the commitment to carry-out SEAP actions. Its purpose was to identify actions or measures that could generate enough income (e.g. Renewable Energy Resources (RES) production) or enough financial savings (e.g. energy efficiency) to finance the energy saving investments within a reasonable payback period, i.e.

sustainable energy actions or measures in the Province of Barcelona at no cost or debt to the municipalities.

A technical assistance unit (REDIBA TA) was set-up to provide technical support and legal advice to municipalities related to the public tendering of energy savings investments in order to achieve their commitment of CO<sub>2</sub> emission reduction by means of public-private cooperation (ESCO, i.e. EPC and ESC, renting). In the REDIBA programme the REDIBA TA acts as project marketer, project facilitator, financial advisor and assessor.

It really started in May 2010 after having secured an ELENA (European Local Energy Assistance) grant of 2,0M€, seeking to reach 50M € investments by the end of the programme in June 2014.

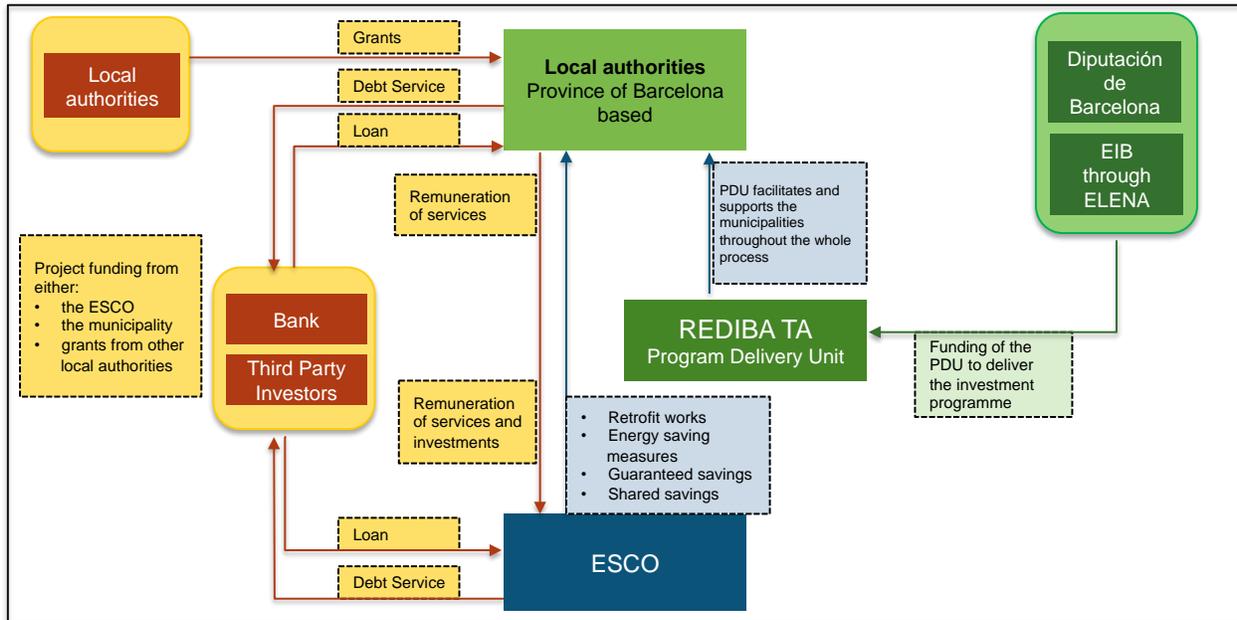
It first focused on solar photovoltaic, but had to reinvent itself after a year due to the abolishment of the feed-in tariff scheme for RES in Spain. It realigned its efforts towards energy efficiency and biomass for heating.

At the end of the programme REDIBA got investment applications from 183 out of the 311 municipalities. It supported 108 implemented projects representing around 96M€ of investment and a CO<sub>2</sub> reduction of 21,6K tonnes per year.

## How does it work?

- Municipalities seeking to invest in reduction of energy consumption through ESCO Third Party financing can apply for technical and facilitation support from REDIBA TA. Based on a specific questionnaire REDIBA TA performs a technical assistance analysis allowing it to distinguish between viable or non-viable projects. The ELENA grant leverage requirement of x25 (1€ grant must result in 25€ investment) induces to be very strict in the selection and evaluation of projects to whom support will be given.
- If a project gets support based on the questionnaire the Mayor of the municipality needs to sign an engagement letter clearly committing to implement the project and invest the necessary amount if the technical and financial feasibility study determines that the project is viable.
- From this moment on the project becomes executable and the facilitation of the project by REDIBA TA starts up to the tendering of the project. Each municipality launches its tenders with the assistance of REDIBA TA.
- Depending of the type of EPC or ESC contract the chosen ESCO carries out the retrofit works or installs the energy efficiency measures, delivers the service and has carried out the measurement and verification by an external party during the agreed contract or payback period
- REDIBA in its role as financial advisor assists municipalities and ESCOs to agree on how the investments will be paid back to the ESCO. Funding of the investments are partially made in a traditional way through bank loans taken up either by the ESCO (almost all of the projects) or by the Municipality, and partially by the ESCO's own funds. In some cases the municipality received grants or loans from other local authorities or Government Energy Agencies.
- REDIBA TA is offering its services to the municipalities for free as a result of the 2,0M € ELENA funding and the 0,6M € funding from Diputació de Barcelona.

Fig 1. Operational and financial model



## The program delivery unit

REDIBA TA is the program delivery unit of the Renewables and Energy Efficiency programme of the Barcelona Provincial Council (REDIBA). The programme is being managed by the Local Energy Management Support Division of the Barcelona Provincial Council.

The unit operates as programme marketer, applications assessor, project facilitator and financial advisor.

Its core activities include:

- Development of transverse instruments such as technical models for PV installation, ESCO models for public lighting and biomass heat generation or cogeneration, renting models for EE or RES and EPC models, market studies, energy efficiency measures studies, evaluations of actions and measures of SEAPs drafted by the Provincial council.
- Facilitation, including technical (feasibility studies) and legal advice (call for tender templates) to the municipalities and project management of the implementation of the EE and RES projects.
- Financial advice and assistance in the search of financing, contacts with financial institutions and investment funds
- Communication, capacity building and networking

To assure the working of the delivery unit funds of a total amount of 2,6M € have been made available for the period 2010-2014. Of this total funding amount 2,0M € has been provided by ELENA (European Local Energy Assistance run by the EIB) and 0,6M € by the Barcelona Provincial Council.

From 2010 to 2014 an amount of 2,08M € has been spent on external advice and studies. Approximately 586K€ was the cost of the direct staff members.

<b>Legal structure</b>	None
<b>Shareholder description</b>	N/A
<b>Equity</b>	N/A
<b>Shareholders</b>	N/A
<b>Program dedicated staff</b>	Moderate
<b>Program operational costs</b>	Moderate

## Organization and partnerships

**Barcelona Provincial Council** : program owner and political initiator, drives the programme delivery unit and supports part of the operating costs of the delivery unit.

**REDIBA Technical Assistance Unit**: developed the staff, procedures, tools and services for the program. Offer the program delivery unit services: marketer, project facilitation, projects aggregation, financial advice.

**European Local Energy Assistance (ELENA)**: is part of the European Investment Bank's broader effort to support the EU's climate and energy policy objectives. This joint EIB-European Commission initiative helps local and regional authorities to prepare energy efficiency or renewable energy projects.

## Beneficiaries

<b>Beneficiaries</b>	Municipalities of the Province of Barcelona
<b>Type of projects</b>	Public Lighting Solar Thermal Energy District Heating Biomass Energy Efficiency (building retrofits)
<b>Operational support</b>	Projects facilitation through the project delivery unit
<b>Financial support</b>	Projects facilitation costs free of charge

## Funding mechanism

<b>Program delivery unit funding</b>	REDIBA TA has been funded by ELENA (2,0M €) and the Barcelona Provincial Council (0,6M €)
<b>Projects Funding</b>	Projects are mostly being funded by the ESCOs and sometimes by the municipalities' own funds
<b>Funding Vehicle</b>	ESCOs Municipalities (own funds)

<b>Fund size</b>	Not applicable
<b>Fund type</b>	Not applicable
<b>Fund sources</b>	
<b>Financial Instruments</b>	EPC Financing ESC Financing Rents/leasing Grants

## Achievements

Today REDIBA has achieved the following:

108 projects executed

96 M € achieved capital investment

52,2 GWh/year energy savings

21,6K tonnes CO2 saved/year

312 applications from 183 municipalities (out of 311)

Some results in details:

<b>Municipality</b>	<b>Project Type</b>	<b>Financial instrument</b>	<b>Investment M€</b>	<b>Energy savings Kwh</b>	<b>Duration</b>
<b>Santa María de Palautordera</b>	Solar Thermal Energy	Own Funding			
<b>Sabadell</b>	Public lighting	EPC/ESCO + ICAEN	5,4	30%	10
<b>Tona</b>	Public lighting	EPC/ESCO + ICAEN	1	52%	13
<b>Polinyà</b>	Public lighting	EPC/ESCO	0,1	48%	10,5
<b>martorelles</b>	Public lighting	EPC/ESCO	0,6	49%	8
<b>Cànoves i Samalús</b>	Public lighting	Renting	0,7		10
<b>Premià de Dalt</b>	Public lighting	Own Funding + ICAEN Grant	0,4		
<b>Corbera Llobregat</b>	Public lighting	EPC/ESCO	2,8		
<b>Santa Susanna</b>	Public lighting	EPC/ESCO	1,9	53%	10,5
<b>Tordera</b>	Public lighting				
<b>Sant Just Desvern</b>	Public lighting				
<b>Sentmenat</b>	Public lighting				
<b>Dosrius</b>	Public lighting		1,4	73%	8
<b>Montornès del Vallès</b>	Public lighting				
<b>Sallent</b>	Public lighting				
<b>Alella</b>	Public lighting				

<b>Vilassar de Mar</b>	Public lighting				12
<b>Granollers</b>	Public lighting			60%	
<b>Igualada</b>	Public lighting				
<b>Premia de Dalt</b>	Public lighting	Own Funding	0,3		
<b>VIC (Trinitarios buildign complex)</b>	District Heating biomass	EPC/ESCO	0,5		10
<b>Sant Salvador de Guardiola</b>	District Heating biomass	EPC/ESCO	0,37		13
<b>Caldes de Montbui</b>	District Heating biomass	Leasing	0,4		7
<b>Les Masies de Roda</b>	District Heating biomass	Own Funding	0,07		4
<b>Folgueroles</b>	District Heating biomass	Own Funding +Xarxa Barcelona support	0,16		
<b>Sta Maria de Corcó</b>	District Heating biomass	Own Funding +Xarxa Barcelona support	0,29		
<b>Montmajor</b>	District Heating biomass	Own Funding +Xarxa Barcelona support	0,1		
<b>Navas</b>	District Heating biomass	Own Funding +Xarxa Barcelona support	0,2		
<b>Villafranca del penedes</b>	District Heating biomass	Own Funding +Xarxa Barcelona support	0,1		
<b>Sant Adrià del Besòs.</b>	EE Buildings	ESC			
<b>Sabadell</b>	EE Buildings	ESC			
<b>Sentmenat</b>	EE Buildings	EPC			
			<b>16,79</b>		

## Contact details

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## Factsheet

### General Info

Country	Spain
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Model Name	Renewables and Energy Efficiency Diputación de Barcelona - REDIBA
Date of creation	2010

### Model Description

Onwership	Public
Program authority	Barcelona Provincial Council
Program delivery unit	REDIBA Technical Assistance Unit
Operating services	Marketeer Assessor Facilitator Financial Advisor
Implementation model	Energy Performance Contracting (EPC, ESC,)
Types of projects financed	Public Lighting Solar Thermal Energy District Heating Biomass Energy Efficiency (building retrofits)
Beneficiaries	Municipalities within the province of Barcelona Other local authorities within the province of Barcelona
Geographical coverage	Regional (5,6 million inhabitants)

### Financial Mode Description

Project funding	Public
Project funding vehicle	ESCOs Property Owners (Municipalities)
Financial instruments	EPC Financing ESC Financing Renting/Leasing Grants
Repayment model	Shared Service Agreement Guaranteed savings agreement

### Project risk Profile

Performance risk	ESCOs
Recourse	Unknown
Financial risk	ESCOs Property Owners

### Model Requirements

Staff Requirements	Moderate Less than 10 FTE
Equity Requirements	No equity required
Funding Requirements	Moderate Less than 5 million €

### Model Key indicators

Investment volume since creation	96 millions €
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Size of project (or project portfolio)	
Level of average energy savings	

### Development maturity

Development/implementation stage	Mature
Operational development maturity	Mature
Financial development maturity	Mature

### Model Qualification

Level of establishment	Well established
Growth of potential	Large
Scalability of the model	High
Replicability of the model	High
Impact on public balance sheet	Low

## Sources

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