

MAYORS IN ACTION

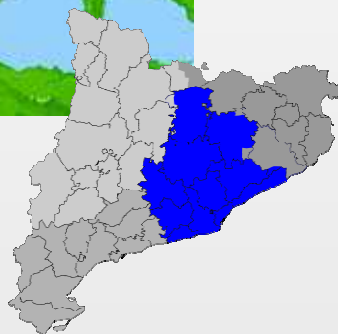
2nd centralized training for Covenant of
Mayors Coordinators and Supporters

ELENA initiative in Barcelona: REDIBA results

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Barcelona Provincial Council – Diputació de Barcelona

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Diputació Barcelona

Barcelona Provincial Council (DIBA) is a **sub regional authority** whose mission is to promote the progress and welfare of citizens, acting in the territory and in cooperation (technically and economically) with municipalities.

**311 municipalities, with a population of 5.6 m
inhabitants. Area: 7,719 km²
Budget 2013: 690 m EUR**

The Scenario that our Municipalities were and are facing



City Council

- Obligation to provide basic services, (public lighting, schools energy expenditures, sports centers, swimming pools, public building energy consumptions ...)
- Reduction of income
- No investment capability
- No borrowing capacity
- Energy price increases
- Commitment to carry out SEAP actions

Covenant of Mayors initiative

EU 20-20-20 policy commitment goes local

Barcelona province

November 2008: DiBa becomes first territorial coordinator

210 Municipalities signed the Covenant

95% Population of the province

Currently : **195** SEAP finished with **3 M€** cost for DiBa

More than **972 M€** potential investments identified municipal owned facilities



How can they implement actions to reduce energy consumption?



By their own funding
resources

Grants from other
authority

Campaigns based on
behavioural changes
from users and
workers (almost no
investment costs)

Public-Private
Partnership

**“Projects that create
enough incomes or
savings to finance
themselves with a
reasonable payback
period”**

The ELENA initiative in Barcelona Province is called :

REDIBA: RENEWABLE AND EFFICIENCY DIPUTACIO DE BARCELONA



Co-funded by the Intelligent Energy Europe
Programme of the European Union



Initiative started: May 2010

And ended : June 2014 (1 year
extension)



TECHNICAL SUPPORT:
Executive projects
Feasibility studies

LEGAL SUPPORT:
Tendering clauses



2,6 M€

DiBa Contribution : 0,6 M€

EC Contribution : 2 M€

Staff costs are: 586.000€

External engineering :

2.080.500 €

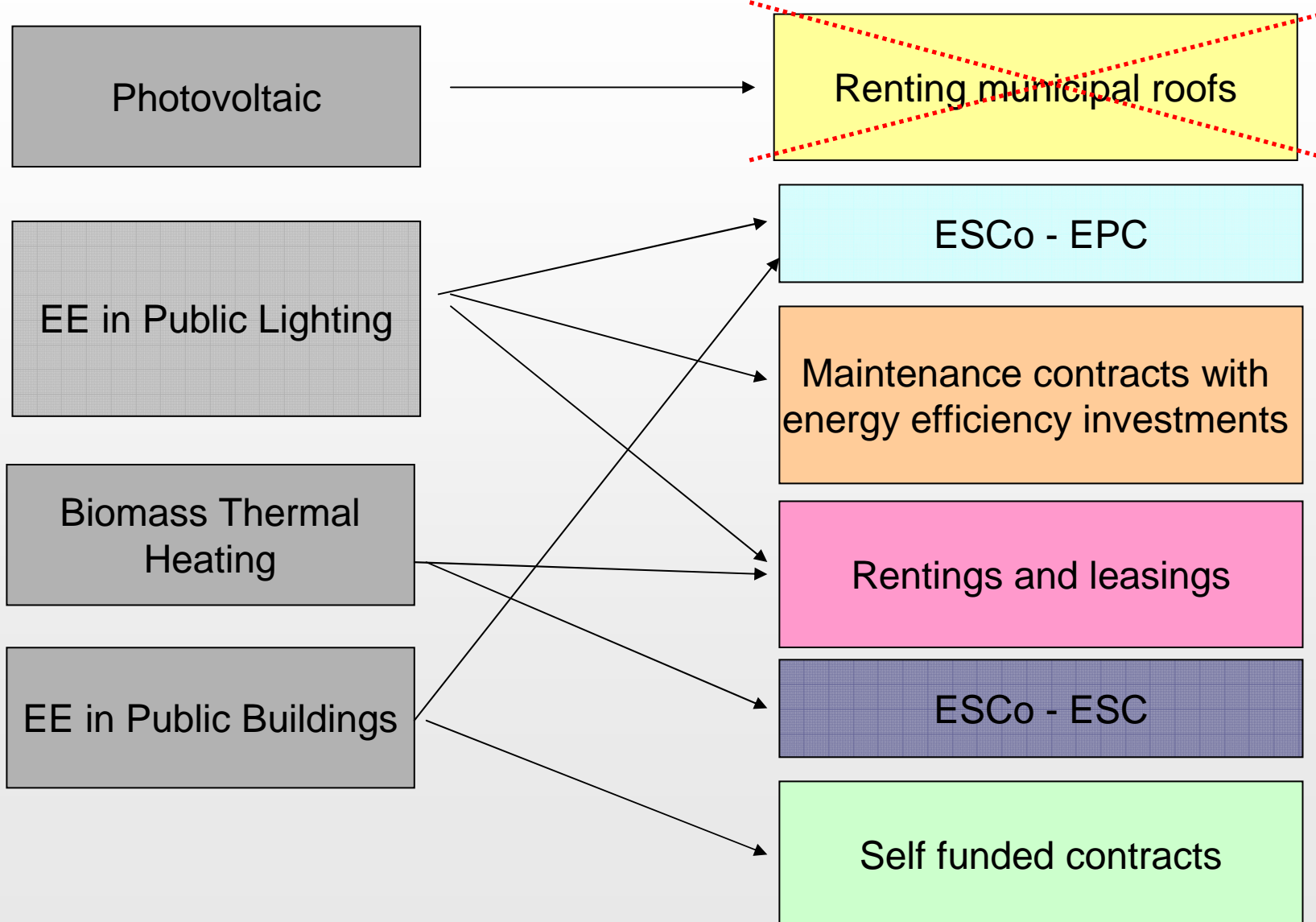


Leverage 'x25'

50 M€

INVESTMENT TARGET

REDIBA investments vs legal form



RD 1/2012 cancels feed in tariff scheme for RES and CHP in Spain



How REDIBA initiative has been working

280 applications from
212 municipalities

1. Municipalities apply for support. We send them an initial questionnaire

2. REDIBA feasibility analysis

3. Meeting with the city council

4. Mayors Commitment letter

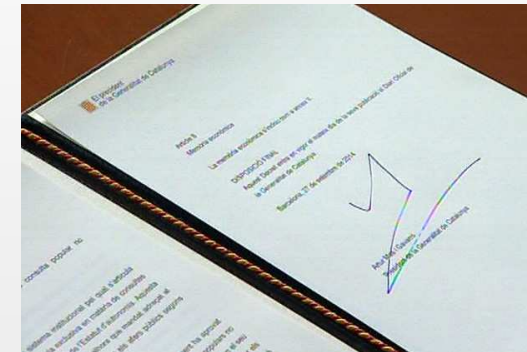
5. External studies or internal support from REDIBA TA staff.

180 studies for the
municipalities

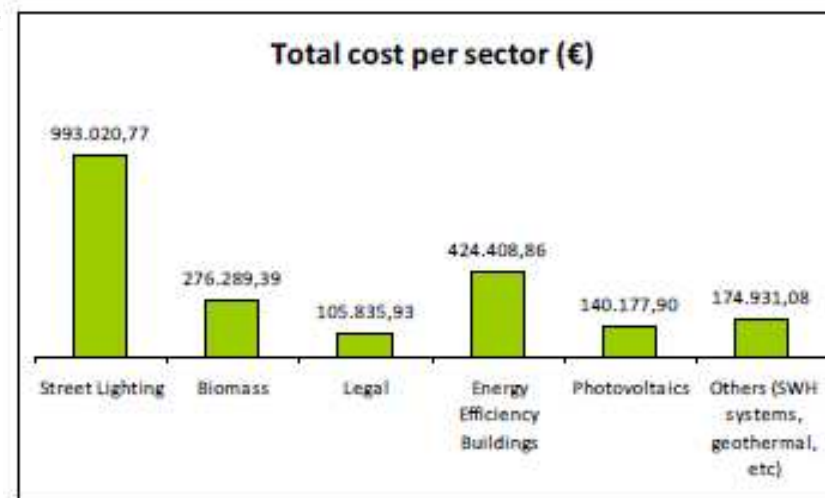
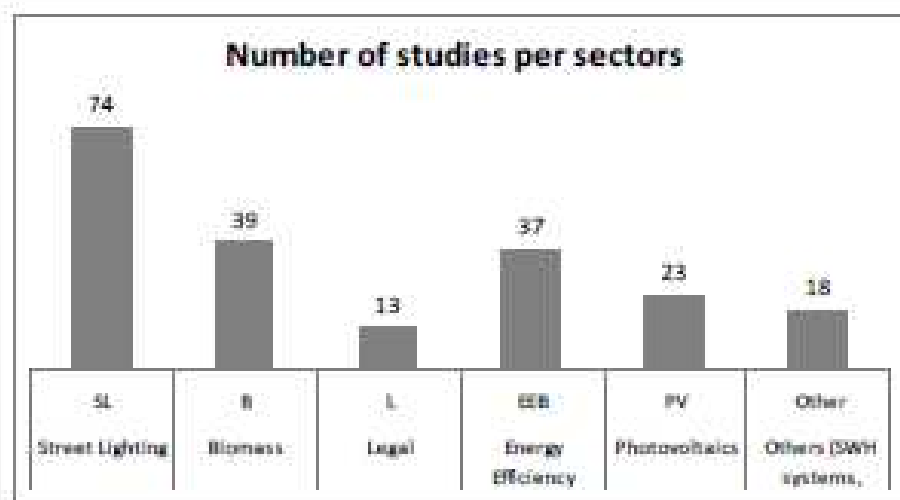
Energy
audit/Executive
project

Feasibility studies
(technical/economical)

Specifications for the tender
/ legal support



Figures on expenditure



	Number	Total amount	average cost / study
Street Lighting	74	993.020,77	13.419,20
Biomass	39	276.289,39	7.084,34
Legal	13	105.835,93	8.141,23
Energy Efficiency Buildings	37	424.408,86	11.470,51
Photovoltaics	23	140.177,90	6.094,69
Others (SWH systems, geothermal, etc)	18	174.931,08	9.718,39
	204	2.114.663,93	10.366,00

RESULTS (pending on EIB final approval)

Economical Impact

108 Tenderings in EE and RES
Investments according to ELENA-EIB
criteria:

96 M €

(**190%** REDIBA minimum investment
target)

Leverage achieved **x48**

Environmental impact

Energy saved

**52.2 Million
kWh/year**

Renewable Energy production

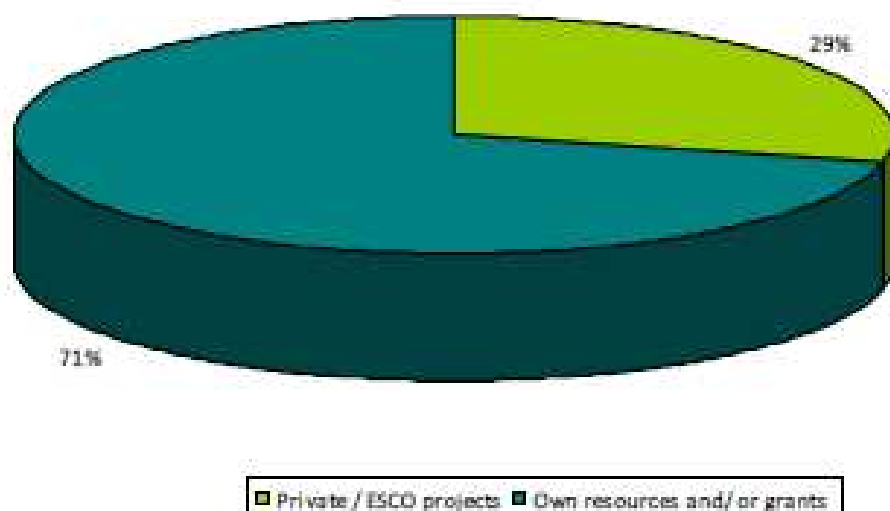
**9.8 Millions
kWh/year**

CO₂ emissions saved

more than **21,6 t/year**

Results by source of funding

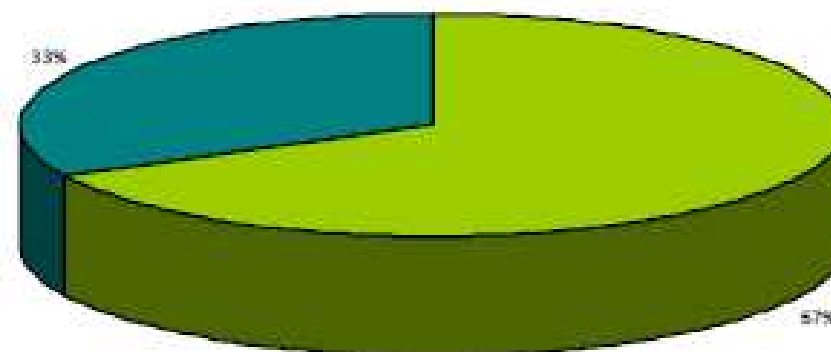
Number of CPP / own resources and grant projects



CPP means Public-Private cooperation (partnership) and it includes EPC, ESC, leaseings, etc..

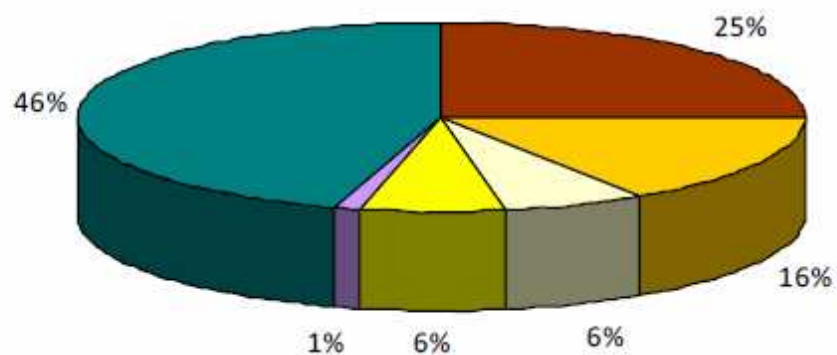
22 ESCO contracts (20 EPC and 2 ESC) accounts for 61M€, (63,5%)

Investment generate by CPP / own resources and grants projects

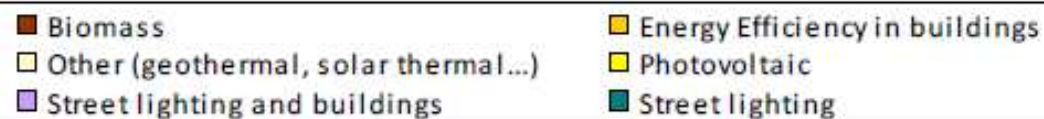
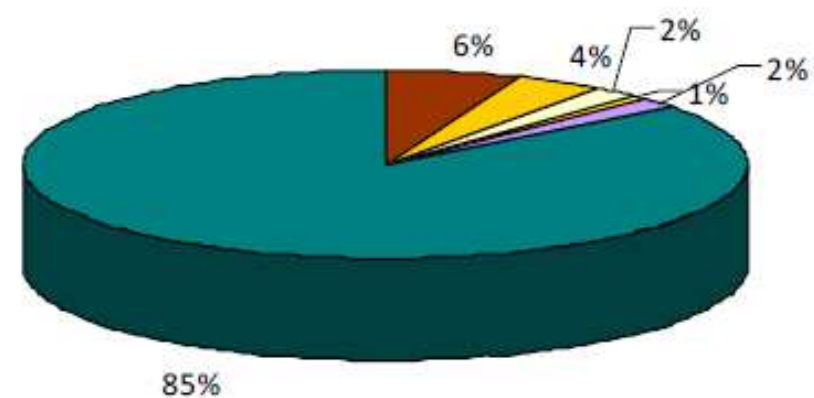


Results by type of technology

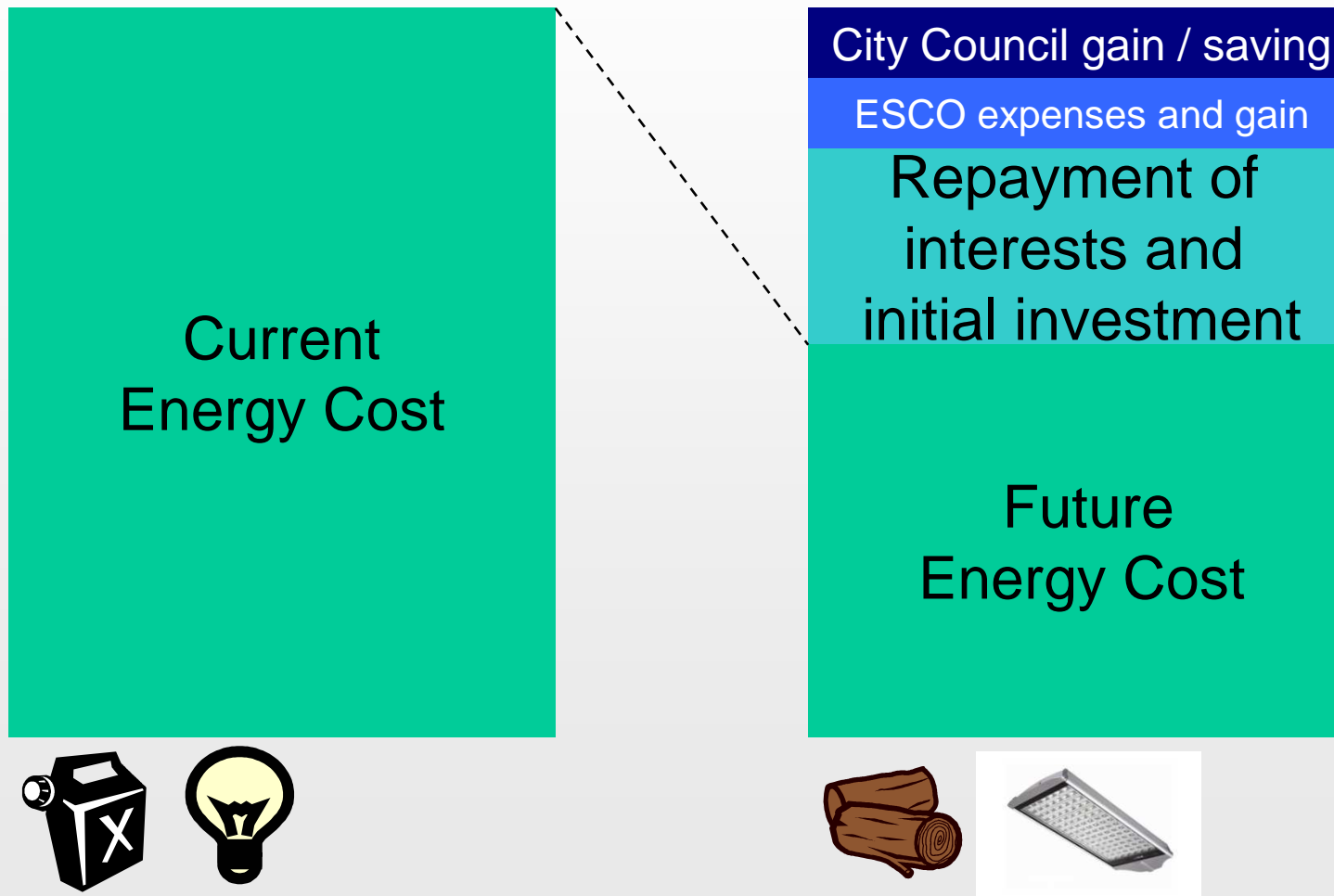
Number of investment projects per sector



Euros invested per sector



Energy Service Companies' Scheme



Standard parts of an ESCO contract in Street Lighting

- **P1:** Energy supply, energy management.
- **P2:** Maintenance.
- **P3:** Total guarantee.
- **P4:** Investments necessary for Energy efficiency
- **P5:** Other investments related to energy efficiency
- **P6:** Complementary works.

Main Barriers in Spain for RES and EE

1. Incomes from renewable were and still are, **uncertain.**
2. Credit crunch: high **difficulty to access** to conventional **financing**
3. **Low debt capacity** by local governments
4. **Low previous experience** of the energy services market for the public sector and **lack of clear legal models** to promote ESCOs
5. **Resistance** to change the mentality of public ownership and ESCO's managing public energy contracts
6. Lack of clear public accounting rules regarding ESCO projects

Lessons learned with REDIBA

1. It is important to **keep the know-how** internally instead of depending on external engineering or consultancies
2. The **cost** of each external study **has been reduced** significantly as the REDIBA moved forward.
3. It is important to take into consideration the **elections calendar** at the city councils in the investment programme.
4. It is very important to have **alternatives** to investments and **much more investment forecasted** in-line rather than just the required amount.

5. A **tailor suit** for every tender and initiative it is of great significance. REDIBA Technical staff HAS TO stand next to the councillor and the council technical staff in order to help the council against the lack of knowledge and the influence of private companies. **Technical and legal assistance from the very beginning to the very end.**
6. Although all our efforts to fit all the city councils investments within the ELENA period, at least 20 public lighting and biomass projects will be tendered during the 6 months period after June

Final conclusions from REDIBA project

- The energy saving **potential** in public authorities is **high**.
- Although the difficulties in financing City Councils , REDIBA has mobilized investments in EE and RES.
- New **Contract** models in public works, services and goods requires time. Once we have many reference, it is easier to replicate.
- Financing is not enough. City councils need **tailored assistance** throughout the process.

- When public money is scarce, the **Public-Private cooperation** is an efficient way to invest in public authorities
- Although the technical part of the project is very important, the key for the P-P is the legal and public accounting part. A clear statement from EC regarding ESCo contracts not counting as liability is needed.
- TA based on economical leverage is very useful to make European initiatives more efficient, but sometimes “force” you to forget about low investment/high energy saving projects. May be a solution could be to set a Climatic (CO₂) leverage? Energetic leverage (kWh)?

What about the future? Beyond REDIBA...

- The future challenges are :
 - Self consumption of solar power in small and medium sized public buildings .
 - Biomass heaters or small district heating
 - Energy efficiency in buildings.
 - Public lighting efficiency
- There is a great potential on saving energy trough low cost initiatives : energy meters, energy management and final users participation.