

Improving the effective use of EU Structural Funds, funding technical assistance good practices and experiences



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Funding Technical Assistance through the ELENA program

City of Paris

- Context
- The ELENA program
- Agenda and expected results



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I. Context

City of Paris:

- Member of the Covenant of Mayors
- Climate Action Plan : reduce GES emissions of Paris's public buildings by 30% by 2020
- 660 schools
- By refurbishing its schools, Paris could reduce by 20% the energy consumption of its public equipments.

Paris representatives adopted a large plan for refurbishing its 660 schools by 2019:

- 300 schools to be refurbished by 2014,
- the rest to be refurbished by 2019.

I. Context

660 Schools:

- representing a global surface of 1.300.000 m²
 - built in very different times from 1880 to nowadays and with various technical and architectural features
- ➔ **submitted to an energy performance diagnosis**

Conclusion

Average energy consumption by school: 224 kWh/m²/year
Average GES emission: 42 kgCO₂/m²/year

➔ In 2009, project of an Energy Performance Contract on 100 schools aiming at reducing 30% of energy consumption and GES emission.

II. The ELENA program

ELENA - European Local ENergy Assistance

Technical Assistance Facility supporting ESCO projects in Europe

EC-EIB cooperation to support local and regional authorities to reach 20-20-20 targets;

- Grant facility: managed by EIB; funded by EU budget (CIP/IEE program).
- Market replication focus;
- Investment leverage required (ratio 25).
- Budget: 2009: 15 Mio €
2010: 15 Mio €
2011: 19 Mio € (estimated)

II. The ELENA program

Eligible Investment Programmes/Projects

- **EE and RES investment in public and private buildings**, including social housing and street and traffic lighting;
- **Urban transport** to support increased energy efficiency and integration of renewable energy sources;
- **Local energy infrastructure** to support developments in previous sectors including smart grids, ICT, etc.

ELENA Project Development Services:

- Eligible activities
- Additional Feasibility studies
- Additional technical staff
- Technical studies
- **Procurement/tendering (e.g. for ESCO projects)**
- Financial structuring

II. The ELENA program

ELENA contract signed on 15 December 2010 for a programme of refurbishment of 100 schools (1st pool)

- Investment program for the 1st pool of schools:
 - *Improvement of the building envelope (roof insulation, windows...)*
 - *Energy management systems with control and monitoring of the energy devices installed*
 - *Energy efficient lighting and heating system*
 - *Installation of PV plants on school roof tops, where suitable and financial viable*
- Time frame: 2010-2013
- Expected investment: € 180 million
- ELENA contribution: € 1.377 million

II. The ELENA program

Project development services financed by ELENA:

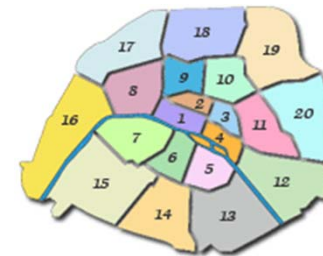
Preparation and implementation of investment program:

- *Choice of schools to be refurbished*
- *Preparation of energy performance contract approach, carrying out preparatory studies*
- *Preparation of energy base line for pooled schools (3 pools of ~ 100 schools each)*
- *Tender preparation and launch of tendering procedure*
- *Monitoring of signed contracts*
- *Targeted information actions towards teachers, pupils, employees and pupils' parents*

II. The ELENA program

Frame for the EPC:

- Implementation by ESCOs: pay investments costs, provide guarantee for energy savings (around 30%); the City reimburses debt through portion of energy savings (penalties/bonus).
- Optimal size for a pool: 100 schools (enough to pool the risks while allowing a large capacity of action in a short time)
- Sample of schools with various type of buildings (age, architecture, heating system, energy consumption...) to balance the risks, and spread on the 20 arrondissements of Paris.
- Global engagement (for the pool) of 30% reduction of energy consumption and CO2 emission
- Contract duration = 20 years



II. The ELENA program

Services realized by the EPC partner :

- Studies, project management, additional intellectual services
- Technical actions on equipments and buildings: improvement of the building envelope, efficient lighting...
- Exploitation actions: Maintenance, energy consumption follow-up,...
- Behavior actions: Training of actors and awareness campaign for users

III. Agenda and expected results

AGENDA

- Launching of the consultation: July 2010
- November 2011 : Contract signature
- First refurbishments: End of 2011
- Major refurbishments for the 1st lot : Summer 2012 / Summer 2013

EXPECTED RESULTS:

- Current consumption: **32,7 GWh/year**
➔ *Expected consumption reduction: **9,800 MWh/year (i.e. 30 %)***
- Estimation of annual economies: **0.85 M€/year**
➔ *Economies cumulated for 18 years: **15 M€***
- CO₂ emission reduction: **2,160 T CO₂ (i.e. 30 %)**
- High potential for market replication:
➔ *Large scale implementation of EPC scheme will encourage other municipalities to follow the way*

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