

Annex I : Description of the Project Development Services and the planned Investment Programme

1. Location and Beneficiary Details
Location of the Project Development Services [country, region, province etc.]
The Project Development Services and the Investment Programme will be realised predominantly in the Metropolitan City of Genoa, Liguria Region, Italy.
Description of the Final Beneficiary [Local or regional authority, municipality, groupings of them, public body,...]
The beneficiary will be the Municipality of Genoa.
Role of the Final Beneficiary in the Investment Programme to be prepared
The Municipality of Genoa will manage and supervise the whole ELENA Technical Assistance facility on behalf of a group of participating Municipalities (currently there are 26 participating Municipalities within the Metropolitan Area of Genoa). The Municipality of Genoa has a specific mandate already officially approved by each of the participating municipalities.
2. Description of the Project Development Services
Aims and objectives of the Project Development Services and the main justification as to why support is needed [Needs to be addressed in form of e.g. management capacity or studies or legal advice etc.);]
<p>The Project Development Services (PDS) financed by ELENA will provide support to the Municipality of Genoa. This support will accelerate the implementation of the energy efficiency plan in the Metropolitan Area of Genoa, which is focusing on buildings and public lighting.</p> <p>The programme has a commitment to innovation through the application of domotics¹ in the buildings, as a tool for increasing saving, improving users' comfort, and facilitating management and maintenance issues. Most of the foreseen buildings for the implementation of the energy efficiency measures are schools.</p> <p>ELENA TA will also provide support in the preparation of the investments of two small district heating systems for public buildings: one located in the city centre of Genoa, the other located in the far western district of the City, named Voltri.</p> <p>The Municipality of Genoa, through public tenders, will select the ESCOs that will implement the works and deliver the foreseen savings. The tenders will be launched by the Public Procurement Office of the Municipality of Genoa. The ELENA TA will allow the Municipality of Genoa to precisely define the number of tenders and the lots as well as the amount of saving that can be offered immediately to the public entities involved. Currently there are four main tenders foreseen to be prepared and launched:</p> <ul style="list-style-type: none"> • indoor lighting with domotics – related to interventions in the management of the systems in buildings • street lighting • energy efficiency in buildings – related to the interventions in the buildings (e.g.: interventions on the insulation and heating system) • district heating

¹ Domotics is building automation for the home. It involves the control and automation of lighting, heating (such as smart thermostats), ventilation, air conditioning (HVAC), and security, as well as home appliances

Indicative activities included in the Project Development Services (personal costs, external services, etc.) indicating the link between the Project Development Services and the Investment Programme

Estimated total budget for the assistance including a detailed budget breakdown according to activities

The implementation of the investment programme will require specific technical and legal/financial know how to deliver the detailed technical information as well as prepare the tender documentation and to select the ESCOs.

The ELENA Project Development Unit (PDU) team will be composed of three in-house consultants² - a jurist, an engineer and a financing/administrative expert. These in-house consultants will be hired externally. It is expected that the hiring process will take four months, so that these experts will be working full time for the remaining 32 months of the ELENA project at an estimated cost of EUR 322,000 (VAT included).

The ELENA PDU will undertake stakeholder engagement, the technical and business case development and will subcontract external technical, financial and legal services to provide any necessary energy audits and to prepare the procurement and the design of the investments. External subcontractors will provide assistance to the PDU with approximately 1,750 man-days, equal to 3 FTE working for the whole duration of the ELENA project, for an expected cost of EUR 1.1m (VAT Incl.). These external services will include mainly technical, legal and financial experts. The expected daily rates for the external experts vary from EUR 450 – 750 (VAT Excl).

A communication expert will also be subcontracted at an estimated total cost of EUR 20,000.

The link between the technical assistance activities and investment programme is summarised in the following table:

² In-house consultants: experts who deliver external services and are self-employed natural person (not companies), who are paid against an invoice, but who work under the direct supervision of the entity they work for and the work results are owned by that entity

Technical Assistance activity	Investment component being supported	Details of how Technical Assistance activity will support Investment component
Legal and financial services	ALL	Preparation of the tender documents to select the ESCOs, selection procedure support, support to negotiation and contract assignment procedure, preparation of the contracts, and management of any legal controversy that might happen. Support to all involved public entities in legal/procurement issues. The main financial tasks will be the update of energy cost baselines, support to tender documentation with regards to the financial aspects, support to bids evaluation and contract negotiations, support to Municipalities in their budget management in relation to the investment programme, financial monitoring and auditing of the overall process and investment implementation, etc.
Technical: indoor lighting (with domotics)	Indoor lighting and domotics	Updated inventory of indoor lamps and consumption levels, preparation of updated baseline of energy saving potential and of energy efficiency lighting and domotics interventions; assessment of current O&M contracts; update of baselines; technical support to the elaboration of tender documentation; support to bids evaluation procedure, support investment performance monitoring.
Technical: energy efficiency in buildings/district heating	Energy Efficiency in Buildings and District Heating	Technical energy efficiency services: update/elaboration of energy audits and energy saving potential calculation; update of energy efficiency interventions; assessment of current O&M contracts; update baselines; technical support to the elaboration of tender documentation; support to bids evaluation procedure, etc. Technical detail and update of existing DH preliminary studies, preparation of technical tender specifics, tender technical support. Support investment performance monitoring.
Technical: public lighting	Public lighting	Updated inventory of lampposts and consumption levels, preparation of updated baseline of energy saving potential and of energy efficiency lighting interventions; assessment of current O&M contracts; update of baselines; technical support to the elaboration of tender documentation; support to bids evaluation procedure. Support investment performance monitoring.
Indicative implementation timetable for the Project Development Services, indicating the link between the Project Development Services and the Investment Programme [Present the main milestones for the requested assistance and their relation with the Investment Programme, see attached table milestone presentation for measuring leverage factor]		
<p>The ELENA support is planned to be carried out between December 2017 – November 2020 It is expected that the implementation of the Investment Programme supported by the ELENA TA will commence during Summer 2019 and investments will be completed under this assistance in the following 24 months.</p> <p>Main milestones:</p> <ul style="list-style-type: none"> - PDU settled and working: April 2018 - External experts contract start: June 2018 - Public lighting and indoor lighting & domotics tenders launch: December 2018 		

- Buildings retrofitting tender launch: February 2019

Description of the existing or planned structure/organisation of the Project Development Services supporting the preparation of the Investment Programme

The Municipality of Genova will install a dedicated governance structure, defining the roles, responsibilities, decision making processes and procedures needed for the efficient and effective functioning of the programme. This management structure is formed by a Project Coordinator (PC), a Steering Committee (SC), and a Project Development Unit (PDU) composed of the ELENA funded team.

Governance structure

Project Coordinator

The Project Coordinator (PC) - Supported by the PDU, he will be responsible for the administrative, financial and organizational management of the programme as a whole and will be the main point of contact with the EIB.

The PC will have as his main responsibilities:

- overall responsibility for the project, ensuring its continuity and consistency and adequate allocation of resources
- timely delivery of foreseen activities and of tenders
- staff coordination
- handling of any conflict within the project which could not be handled at lower level
- monitoring compliances by all parties involved in the project
- risk management
- act as the spokesperson for the project in all interactions
- organizing meetings, proposing decisions and preparing the agenda of the Steering Committee.

Steering Committee

The highest project decision making structure is the Steering Committee (SC), chaired by the Project Coordinator and including representatives from all municipalities, the Metropolitan City and other entities involved in the project. The SC will deal with key decisions such as major work program changes, strategic difficulties (e.g. major delays, changes to the investment programme) or serious conflicts of any kind that might arise. It will also contribute to smoothing the overall investment implementation process by keeping the communication going between the technical work and the strategic political level. The SC will meet on average four times a year. Decisions will be taken with the majority of the votes.

The Steering Committee will be established through a Memorandum of Understanding signed by all involved parties, which will describe rights and duties of each member.

Project Development Unit

A Project Development Unit (PDU) will be set up with the responsibility to act as secretariat for the overall investment programme and for the SC. The PDU will be composed of newly selected in house consultants with the following profiles:

- legal expertise
- technical-engineering expertise
- finance-administrative expertise.

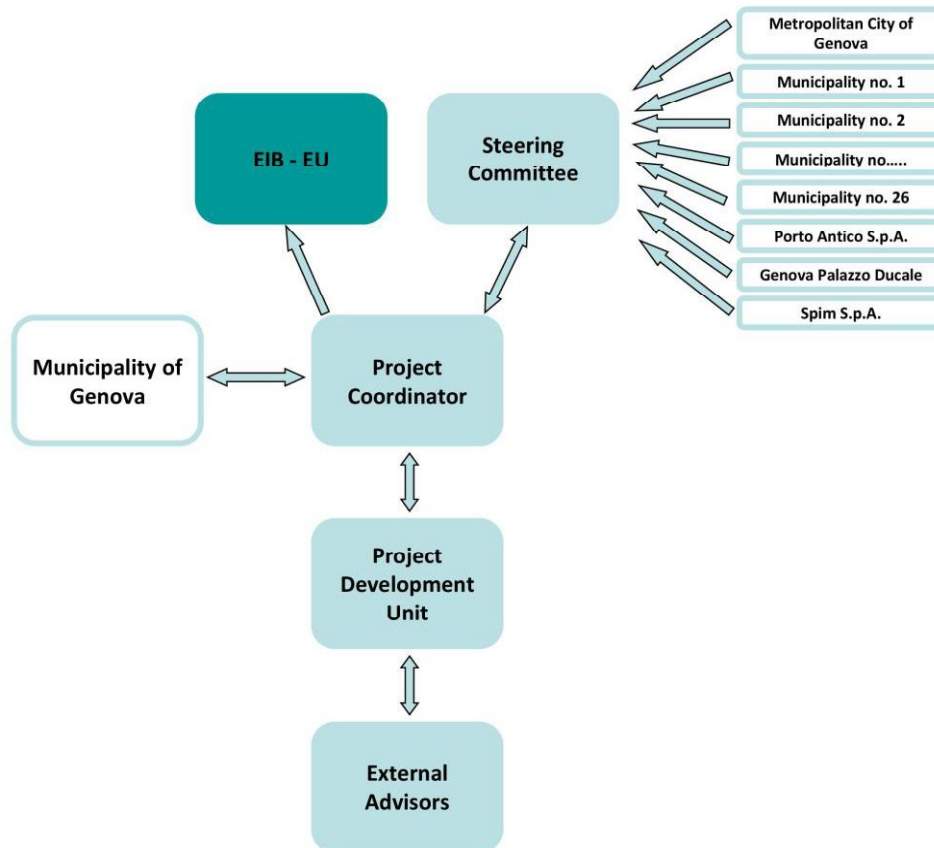
The PDU will be coordinated by the Municipality of Genoa and responds to the PC.

The main tasks of the PDU will be:

- day-to day programme management
- organisation of meetings and communication activities
- keep contacts with the consortium members to get necessary data, permissions, etc.
- coordination of all the technical work delivered by the advisors
- set up a monitoring system for the whole programme
- reporting to the EIB
- identification of the potential technical barriers that may hinder the project's

technical evolution
 - technical risk management
 The PDU is expected to work at Genoa Municipalities premises.

The picture below shows the interaction between the parties and the organisational chart



Applicant's commitment to facilitate dissemination of experiences and results

The Municipality of Genoa as well as the consortium members are aware of the fact that such a comprehensive investment programme has to be supported by a robust communication activity pursuing the following objectives:

- raising awareness on ELENA and EU funds support system
- facilitate investment programme implementation
- inform on tenders
- inform on project results
- further promote energy policies take-up
- involve companies and local stakeholders
- promote replication.

At project start, a communication plan will thus be prepared by the PDU, taking into consideration the varied target audiences (identified through a preliminary stakeholder analysis), the tailored messages to convey, the media to be used for each communication activity and the timing of each activity.

The following dissemination resources will be used in particular:

- website: a dedicated page on the Municipality of Genoa's website will be created and maintained, incorporating the elements listed below – the same will happen on the Metropolitan City website;
- press releases: to inform the general public, business, policy makers and other

- stakeholders that have a vested interest in the project;
- workshops and meetings: to disseminate information on the project to key stakeholders and also facilitate the involvement of companies in the investment plan
- conferences: the Municipality of Genoa will actively participate in outside conferences and events relevant to the project's activities. This will provide an opportunity to exchange experience and ideas about the all aspects of the project and disseminate project results.

In addition, a number of relevant networks of which the Municipality of Genoa and the other consortium members are active members will also be leveraged for communication activities. Among them:

- Genova Smart City Association: created in 2010 in order to foster the city's transformation process towards becoming a Smart City. The association is chaired by the Mayor of Genova and currently counts over ninety members including institutions; SMEs and large companies, research and academia, banks and the civil society.
- ANCI: the association of Italian Municipalities and Provinces, for a total of over 7.000 institutions
- The Regional Steering Committee for the implementation of Covenant of Mayors
- Covenant of Mayors network
- Eurocities network

3. Presentation of Investment Programme

Location of the planned Investment Programme
[country, region, province etc.]

The investment programme is located in Italy, Liguria Region, Metropolitan area of Genoa.

Description of the planned Investment Programme
[Energy efficiency investments, investments in the production of renewable energy, freight and urban transport, a mix of them,...]

The activities supported by the ELENA GEN-IUS project focus on supporting implementation of an Investment Programme thorough energy efficiency measures in building, the use of renewable energy sources, upgrade of street lighting, adherence to increased energy efficiency and better management of energy demand. The supported investments will be in the four key areas:

- public buildings: insulation, heating system and indoor lighting (schools, offices, museums, libraries, etc.) for ~250 buildings representing approx. 766 000 m²
- domotics: heating system and indoor lighting (same buildings as before)
- public street lighting: about 18,500 lampposts (all directly owned by the municipalities)
- district heating (one traditional CHP, one wooden biomass fuelled)

Description of the approach to implement the Investment Programme

The Investment Programme will be delivered through third party financing, by means of ESCOs to be selected through public procurement process. The investments will be implemented through the Energy Performance Contracts with guaranteed savings in place. The ESCOs will therefore be in charge of the investment as well as of the O&M issues throughout the EPC contracts.

The Municipality of Genoa will ensure that these investments will if necessary be implemented in accordance to the EUROSTAT guidance note concerning the treatment for off balance sheet investments.

The ELENA TA will deliver in-depth assessments and calculations of the parameters to be required for the calls for tenders to be able to launch them. The remaining preparatory activities to be performed by the ELENA TA team before the tender launch are:

- for buildings: finalise technical assessment of the buildings and costs/saving potential, assess O&M costs and contracts in place, revise baselines, define technical specifications to be inserted in the calls
- for lighting: finalise lamps inventories, define costs/saving potential, assess O&M costs and contracts in place, revise baselines, define technical specifications for the tenders
- for district heating: finalise the feasibility studies, assess O&M costs and contracts in place, revise baselines, define technical specifications for the tenders

Each tender will be divided in lots that will be defined during the ELENA TA period

Expected results in terms of increase in energy efficiency, decrease in energy consumption, renewable energy production and reduction of greenhouse gas emissions
[estimation requested in absolute annual figures (e.g. MWh or t CO₂eq) before and after implementation of Investment Programme]

The total estimated contributions are:

- RE generation – Annual total renewable energy generation by 2.25 GWh_{th}
- Energy Efficiency – Annual total savings in the final energy consumption of 20 GWh_{el} and 14.64 GWh_{th}
- CO₂ reductions – Annual total emission reductions of 9,300 t CO₂ eq.

Expected other relevant results

[e.g. in terms of employment, capacity building etc.]

It is expected that the investment programme will generate around 60 direct new FTE.

The planned Investment Programme hopes to bring forward not only energy saving and public budget savings, but also to promote innovation in terms of new methodologies and technologies to be deployed throughout the metropolitan area. Working conditions in public buildings will be improved thanks to the better energy performance of buildings, installed energy management systems and installed domotics.

In addition, the public technical and administrative personnel working in the municipalities and in other involved entities should gain new expertise thanks to the Investment Programme. The qualifications of the workers involved in the implementation of the Investment Programme are also expected to improve as their expertise in new technologies will grow.

Expected overall investment cost

[indicating the share of investment dedicated to energy efficiency and RES in buildings, urban transport, local infrastructure...]

The expected investment is estimated to be EUR 39.2m. The investments per key area can be defined as follows:

Type of investment	Investment Cost [EUR]
Energy Efficiency in buildings including domotics in buildings	24,355,500
Replacement of Boilers	2,280,500
Energy Efficiency in street lighting	10,157,400
Energy Efficiency in District Heating	2,405,250
	39,198,650

Preliminary financing plan for the Investment Programme
<p>The preliminary financing plan identifies one main source for investments funding: ESCOs will finance the investments. The Municipality of Genoa intends to ask the EIB to make available a credit line through a financial intermediary for the sake of this investment programme implementation. The ESCOs would have access to this credit line through the financial intermediary. Such a request by the Municipality will need to go through the usual evaluation and approval procedure of the Bank.</p>
Preliminary implementation timetable for the Investment Programme [start and end-date]
<p>September 2019 – October 2021</p> <p>It is expected that the implementation of the Investment Programme supported by the ELENA TA will commence in September 2019.</p> <p>The achievement after the first year of TA are expected as follows: in depth technical analyses ongoing with 2 tenders ready to be launched</p> <p>After the second year of the TA the achievements expected are: 4 tenders launched and contracts signed representing 100% total investment costs.</p> <p>The total investment programme will be completed in the following 26 months.</p>

4. Overview table: Milestones presentation for measuring leverage factor

Reporting time (end of year)	Estimated budget Project Development Services			Milestones for Investment Programme implementation (indicate here the part of the total Investment Programme which is planned to be launched at the indicated reporting time)						Leverage factor
	Staff costs [in EUR]	External experts / Sub-contracts [in EUR]	Annual Sub-total [in EUR]	Short description of area, technologies concerned ^[1]	Identification of investor ^[2]	Estimated total costs (of energy saving investment measures) [in EUR]	Estimated annual final energy saved for EE projects ^[3] [in GWh]	Estimated annual final energy production by RES ^[4] [in GWh]	Estimated annual reduction of CO ₂ eq [in t]	(Estimated total costs) / (0.9 x Annual Sub-total)
Year 1	-	900,438	900,438	-	-	-	-	-	-	-
Year 2	-	360,656	360,656	EE, DH, Street Lighting	ESCOs	36,790,000	11.48 GWh _{th} and 18.72 GWh _{el}	0.7 GWh _{th}	8,055	113
Year 3	-	180,656	180,656	EE, DH, Street Lighting	ESCOs	2,410,000	3.15 GWh _{th} and 1.28 GWh _{el}	1.55 GWh _{th}	1,256	15
TOTALS [4]	-	1,441,750	1,441,750	EE, DH, Street Lighting	ESCOs	39,200,000	14.63 GWh _{th} and 20 GWh _{el}	2.25 GWh _{th}	9,311	30
Interim report (month 18)	-	1,080,500	1,080,500	EE, DH, Street Lighting	ESCOs	-	-	-	-	-

^[1] Specifying which main area concerned (i.e. EE, RES, transport or urban infrastructure) and which technology(ies) / measure(s) implemented

^[2] Indicate the final investor, the one who will order the work to be carried out

^[3] Indicate the main type of energy saved or produced (thermal or electrical)

^[4] Total of estimated budget should be the same as in budget table or in Investment Programme presentation