

PROJECT IMPLEMENTATION GUIDELINES

Technical implementation

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EU4Energy



**Covenant of Mayors
for Climate & Energy**

**Demonstration Projects
Eastern Partnership**



Introduction

While all of the Demonstration projects financed from the CoM programme are different, they all have to go through the same phases of technical implementation:

1. Preliminary design of EE/RE measures (Energy audit and selection of EE/RE measures)
2. Final design of EE/RE measures (Technical design, financial analysis, final selection of EE/RE measures, Bill of Quantities development)
3. Obtaining authority approvals and legal permits
4. Procurements for the implementation of the EE/RE measures
5. Contracting
6. Implementation of EE/RE measures (works, including supervision)
7. Acceptance of works
8. Operation and maintenance of the EE/RE measures

These Guidelines will describe for each of the above-mentioned phases the logical sequence of sub-steps, role/tasks of project team, deliverables/outputs per phase, suppliers/service providers sub-contracted by the project, Support Team and EU Delegation. On the next page, this process is summarized in a table, for easy reference.

It is of utmost importance to the EU that the demonstration projects can serve as demonstration projects. This means that the projects, as a minimum, should be implemented technically in a proper way.

For this reason, before a project moves to a next phase, it is crucial that the quality of deliverables is guaranteed. For this purpose, the Support Team was created. The Support Team is there to review your deliverables in each phase of technical implementation (before you move to the next phase), so you will end up with a true demonstration project: a project that you are proud to share with other cities!

Table: Overview technical

implementation process

1. Energy Audit	Sub-steps	Task of project team (PT)	Role of Support Team (ST)	Role of EU Delegation	Comments
	Development of Terms of Reference (ToR) for Energy Audit (template is provided by Support Team)	Draft the ToR and sends to Support Team	Review ToR (to ensure a comprehensive energy audit will be carried out). Optional: Support the PT in the preparation of the ToR		<p>Timeframes of services and penalties for its delay, outputs/deliverables should be clear identified in the contract.</p> <p>As the EA report was prepared for the project proposal development and contains reliable and relevant information, it (EA) can be used for the purpose of the project implementation. However, the energy auditor should be able to adjust the EA report in accordance to the ST's recommendations.</p>
	Procurement of Energy Audit services	Prepare documentation and launch tender. Selection of best offer.	Review procurement report (optional)		

	Review energy audit report	Initial review of delivered energy audit report and sends to Support Team	Review of energy audit report and presents findings to project and EU Delegation (within 10 working days)	In case of serious concerns raised by the Support Team, letter by EU Delegation (optional)	In case energy auditor report is of insufficient quality or lacks information, the project will have to ask the energy auditor to upgrade the report. The Support Team foresees it needs on average 10 days to review an energy audit report and provide the assessment report
	Decision on EE measures to be implemented	Project team to indicate which EE measures it wants to move forward (and get approval for this from decision-makers). Sends to Support Team	ST to verify if this would fit the budget and meets energy savings targets as per Application, and informs project and EUD of recommendation. Optional: support to the PT in the selection process	EUD to decide if proposed measures are OK, or changes have to be made (either to EE measures or Contract)	The Steering Committee meeting is mandatory to be organised for this purpose. The ST should approved the set of measures that will be implemented in each object. The decision should be well-justified and base on cost effective criteria.
2. Technical design	Development of Terms of Reference (ToR) for Technical design (template is provided by Support Team)	Draft the ToR and sends to Support Team	Review ToR. Optional: Support the PT in the preparation of the ToR		Timeframes of services and penalties for its delay, outputs/deliverables should be clear identified in the contract.

	Procurement of Technical design services	Prepare documentation and launch tender. Selection of best offer	Review procurement report (optional)		
	Review technical design documentation	Initial review of draft technical design documentation and sends to Support team	Review of technical design documentation and presents findings to project and EU Delegation		In case technical design documentation is of insufficient quality or lacks information, the PT will have to ask the company to upgrade the report. The ST foresees it needs on average 10 days to review technical design documentation and financial analysis
	Elaboration of investment costs (Bill of Quantities), operational costs, energy/cost savings (by company carrying out technical design work)	Initial review and sends to Support Team	Review and reports findings to project and EUD		
	Update of financial analysis	Project team updates the financial analysis and sends to Support Team	Review and reports findings to project and EUD (within 10 working days)		

	Decision on EE measures to be implemented	Project team to indicate which EE measures it wants to move forward (and get approval for this from municipality). Sends to Support Team	ST to verify if this would fit the budget and meets energy savings targets as per Application, and informs project and EUD of recommendation	EUD to decide proposed measures are OK, or changes have to be made (either to EE measures or Contract)	In case if the budget is not sufficient to implement all measures, TD can be divided into phases: some of them to be financed in the framework of the projects, others – by municipality later
3. Authority approvals, legal permits	Obtaining needed permits and approvals from authorities	Project team (or technical design company) to elaborate and obtain permits/approvals and informs Support Team			The project can include this task in ToR of technical design company (optionally)
	Elaboration of final design documentation (by technical design company)	Project team to review and send to Support Team	Support Team reviews technical design documentation and sends findings to project and EUD	EUD to decide documentation is OK and procurement documents can start being prepared, or changes have to be made (either to EE measures or Contract)	
4. Procurement	Elaboration of procurement documentation (technical part)	Project team prepares			The project team can use EU rules (PRAG) for procurement procedures if it is eligible according to the national legislation
	Elaboration of procurement documentation (general part) and tender procedures	Project team prepares			The project team can use EU rules (PRAG) for procurement procedures as if is eligible according to the national legislation

	Review by Support Team of procurement documentation	Project sends full procurement documentation to Support Team (THIS IS OBLIGATORY !!!). NO tenders over 60.000 EUR to be launched before a go-ahead is received from Support Team/EUD	Support Team reviews and sends findings to project and EUD (within 10 working days)	Support team sends go-ahead and procurement can be launched, or asks the project team for changes to be made to the tender documentation	The Support Team foresees it needs on average 10 days to review procurement documentation
	Launching of tender	Project team launches and sends copy of invitation letters (competitive negotiated procedure)/advertisement (open tender) to Support Team			
	Establishment of procurement committee	Project team prepares (and gets municipal approval) and sends to Support Team	Support Team provides suggestions for changes if needed.		
	Evaluation of submitted bids	Procurement Committee to evaluate submitted bids and drafts Procurement Evaluation report	Support Team/EU Delegation as a minimum to be included as observer	Possibly participate as observer	

	Review of Procurement Evaluation report	Project team sends to Support Team	Support Team reviews (only the completeness of the report, it will NOT give an opinion on the eligibility of procurement or procurement process as it was carried out)		
5. Contracting company for implementing EE measures	Preparation and signing of contract	Project team prepares contract and gets it signed by the parties to the contract			Timeframes of works/services and penalties for its delay, outputs/deliverables should be clear identified in the contract.
6. Implementation of EE measures	Setting up implementation structure	Project team to develop structure, procedures, and identify members of works implementation team			
	Initial meetings of project implementation team	Project team to produce minutes of meetings	Participation of expert from Support Team		Planning has to be shared with Support Team and Support Team to be provided with sufficient time (7 working days) to be able participate
	Development of Terms of Reference (ToR) for Site Supervision (template is provided by Support Team)	Draft the ToR and sends to Support Team	Review of ToR. Optional: Support the PT in the preparation of the ToR		

	Procurement of Site Supervision services	Prepare documentation and launch tender. Selection of best offer	Review procurement report (optional)		
	Project management, coordination of implementation, supervision	Regular meetings of project implementation team during implementation. Project team to produce minutes of meetings, to collect side diaries and reports from supervisors, produces monthly progress reports	Possible participation of expert from Support Team in key meetings. Additional quality control to be organised by the ST		Planning has to be shared with Support Team and Support Team to be provided with sufficient time (7 working days) to be able participate
7. Final acceptance	Organizing acceptance of EE/RE measures	Site Supervisor and Project Team to verify finalization of works			
	Final acceptance	Verification of EE measures (testing), preparation of final acceptance report by Site Supervisor and Project Team	Participation of expert from Support Team in key meeting(s)		
	Warranty issues	PT has to ensure that the warranty contract is signed by the construction company			
	Financial management	Project Team will verify invoices and supporting documents. Final payment			

8. Operation and maintenance	Establishing Operation and Maintenance structure	Project Team together with Beneficiary to set up the structure			
	Operation and maintenance	Responsible (municipal) institution to operate and maintain the object(s)			
	Staff trainings	Project Team should foresee the trainings (at least 1-day training) for the staff in the contract with construction company			
9. Project report	Project summary	Project Team to write final report on project (technical) implementation			

1 Phase 1: Preliminary design of EE/RE measures

During this phase:

- Objects will undergo an **energy audit** to identify possible EE/RE measures to be implemented at the object
- **EE/RE measures will be identified** to be further worked out (technical design) and will be agreed on by project, municipality and EU

Duration: 2-3 months

1.1 Developing Terms of Reference for Energy Audit

The Terms of Reference (ToR) for the energy audit describes the scope of work for the energy auditor, such as which objects it concerns, minimum activities to be carried out by the energy auditor, timeframe for carrying out the energy audit, contents of the energy audit report and requirements which the energy auditor should meet in order to be considered. The template ToR to be used is attached as Annex.

Please note that the ToR is the basis for the contract with the energy auditor. The energy auditor only has to do what is described in the ToR, for anything additional that they are asked to carry out, he/she will ask for additional money. Therefore, make use of the template that was developed by the Support Team.

The Project Team develops the ToR as the basis for tendering an experienced company for conducting Energy Audits for each object, or a set of objects. Furthermore, clear and transparent selection criteria should be developed by the Project Team. The quality of the energy auditor in many EaP countries is a concern: there is no certification system for energy auditors, so everybody can call him/herself an energy auditor and bid. In order to avoid ending up with a person who has no experience with energy audits, you need to put requirements in the ToR (such as x energy audits carried out in the past z years of objects similar to the object that you want to be audited in the project).

It is absolutely crucial that the energy audit is a so-called comprehensive audit. This means an audit which views all possible EE/RE measures which can be implemented, not only those which are described in the Application !!!

Often the Application is written by someone without an engineering background and they may have made, for example, the following mistakes/omissions:

- Forgotten to include EE/RE measures which are absolutely necessary (for example ventilation)
- Included 'standard' or commonly known EE/RE measures, while other more suitable EE/RE measures are not included
- Too optimistically estimated energy savings which can be achieved by the EE/RE measures
- Underestimated the costs of the EE/RE measures



These type of mistakes would all be revealed during a comprehensive energy audit, and therefore the ToR should clearly describe that a comprehensive energy audit has to be carried out by the energy auditor. **A comprehensive energy audit is therefore a must.**

Please make sure that the energy auditor **is independent** from any of the companies that will later bid on the works to be carried out as well as from the project team (event if the PT has the professional energy auditor on board). If this is not followed, this might be considered as a conflict of interest, which might result in the project being closed prematurely.

1.2 Review of the ToR for Energy Audit

Each project is expected to use the template ToR for energy audit, developed by the Support Team. In case you do not use this template, and develop a ToR using another template which deviates from the one developed by the Support Team, you should send the ToR to the **Support Team for review**. The Support Team will then provide you with comments for improvement or give the go-ahead to launch the procurement for the energy audit. In case you use the template ToR as developed by the Support Team, you should submit the ToR to the Support Team for filing, and you will get the go-ahead for the next step (1.3.).

1.3 Tender of a company/expert for conducting Energy Audits

The **project will launch the procurement** for the Energy Audit, and select and contract an experienced company, according to the tender selection criteria. Often the amount involved makes it possible to carry out a single tender, however you are strongly advised to solicit bids from at least 3 companies/experts.

In case you do not know which energy auditor to contact to submit a bid (and if not there is no need to be embarrassed, without a certification system it is difficult to know who has the right quality), you can contact other municipalities, which have already carried out energy audits for objects similar to the one that you want to carry out. Also, in most countries there is an association of energy auditors which you can contact for information on what auditors could do the job.

Your main objective is to get a qualified and experienced energy auditor for the job. The energy audit is of crucial importance for the success of the project, and mistakes made here might result in being send back later to redo the energy audit. The more offers, the more chance you have for finding the right candidate to do the job.

Do not take references to earlier work experience by energy auditors for granted. In the procurement documentation ask them to provide proof of claimed energy audits, including contact details of a person who you can contact to check the quality of the work performed.



If you wish to, you can ask the Support Team to comment on your report on the evaluation of the procurement (Procurement Report). Please note that such comments only serve to advise you on obvious mistakes/omissions. **Under no circumstances, can this be seen as approval of the procurement by either the Support Team or EU (Delegation).**

1.4 Energy Audit

The **Energy Audit Company/Expert will conduct a detailed Energy Audit** of the object(s) as identified in the ToR. The main objective of the Energy Audits is to identify and elaborate potential EE/RE measures (preliminary design). Western European standards and practices shall be considered in order to secure the sustainability of the measures. Furthermore, as mentioned earlier, it is crucial that a comprehensive energy audit is carried out (this is also called integrated planning approach¹) rather than carrying out an audit of individual single measures (e.g. changing of some windows) or only those measures which were described in the Application.

It is highly recommended that the project engages a structural engineer (this is an engineer specialized in construction structures), who will work jointly with the energy auditor. This is especially important for older buildings. The structural engineer will be able to tell the energy auditor whether EE/RE measures proposed by the energy auditor are actually possible, taking into account the structure of the building. For example, if the roof is able to hold solar panels, if it is possible to drill holes in a specific wall etc. In case such a structural engineer has not been foreseen in the budget of the project, you are advised re-allocate funds from other budget lines, or make use of contingencies.

1.5 Review of the Energy Audit Report by the Support Team

The outcome of the energy audit is the Energy Audit Report, which should provide a solid basis for the selection of the best EE/RE measures.

The Energy Audit report should be sent for review to the Support Team, which will provide feedback in writing to the Project Team, Beneficiary and EU Delegation. Based on the findings/assessment by the Support Team, the outcomes can be the following:

1. The Support Team immediately agrees on the contents of the report and will inform the project and EU Delegation that this is the case (and the project can move to 1.6.)
2. The Support Team identifies obvious errors/omissions in the energy audit report: the project will have to ask the energy auditor to correct the errors and then resubmit the report to the Support Team for review
3. The Support Team has minor comments on the report: the Support Team will provide the project and EU Delegation with the assessment and suggested changes. After the

¹ An integrated planning approach is the key for realising sustainable buildings with low energy consumption and a high quality standard for building users. An integrated planning approach for building refurbishments requires the consideration of all relevant building elements (walls, windows, roof, basement), rain water system, the building's heating system and ventilation system, etc. Furthermore the building user behaviour should be considered.

recommended changes have been made by the project, the EU Delegation will be informed by the Support Team that the project can move to 1.6.

4. The Support Team has substantial concerns about the implementation of the project as per the original project design, and there is a possible need for a change to the contract: the Support Team will provide the project and EU Delegation with the assessment, identified risks and recommended action. This will be followed by a visit of the Support Team (and possibly EU Delegation) to the project, to discuss the issues/problems with project team, energy auditor and mayor, and find possible ways out. In the end, it will be up to the EU Delegation to decide in such cases of how to solve the issue. This can result in the need for changes to budget, activities or contract, but also more severe measures such as temporarily freezing the project.

Please note that in most cases, the Support Team will visit a project to discuss the Energy Audit Report with the Project Team, Beneficiary (municipality) and energy auditor.

1.6 Decision on EE/RE measures to be implemented

Based on the results of the Energy Audit, **the Project Team should propose EE/RE measures** or a functional set of EE/RE measures which meet the overall project objectives (energy savings and/or cost savings committed to) to the greatest extent possible. Furthermore, the updated investment costs (as identified in the energy audit report) of the proposed EE/RE measures should fit the original budget.

Before formal approval of this list of measures is asked from the municipality where the objects are located, the project should send the list of proposed measures and financial analysis behind them to the Support Team for review. The Support Team will review the suggested measures suggested to ensure that they do indeed fit the budget and will result in savings as mentioned in the Application. If so, the Support Team will give the go-ahead to go to 1.7. and inform the EU Delegation of the list of suggested EE/RE measures. If not, The Support Team might advise the project to consider alternative measures, which fit the budget and targeted savings, and in case of failure to find such will organize a discussion between project, EU Delegation and Support Team about how to solve the problem. This might take the form of changes to the contract, budget or original proposal.

1.7 Approval of the selected EE/RE measures by municipality

The selected EE/RE measures shall be **formally approved by the municipality**² where the object audited is located, and the municipal decision shall be send to Support Team and EU Delegation. The decision should be well-justified and base on cost effective criteria. Only after this document has been received by Support Team and EU Delegation, can the project start with phase 2 (Final design). This also applies for those cases where the Applicant is a NGO.

² Or Project Steering Committee, in case such includes the municipality concerned and the Committee is formally mandated in its Terms of Reference to make this decision

Milestones and deliverables of Phase 1

Milestones:

1. Energy Audits finalized (preliminary design)
2. EE/RE measures selected and approved by the EU Delegation

Key deliverables/outputs:

1. Energy Audit Reports for each object produced by auditor, and reviewed by Support Team
2. list of proposed EE/RE measures proposed by project team and subsequently reviewed by Support Team/EU Delegation, and approved by municipality

2 Phase 2: Final design of EE/RE measures

During this phase:

- The ***final design of each EE/RE measure will be worked out in detail*** (technical drawings, technical specifications, cost estimations)
- ***Final set of EE/RE measures will be identified*** and will be agreed on by project, municipality and EU. This set will be included in the procurement documentation under Phase 4 (given that all necessary authority approvals and permits are received (Phase 3))

Duration: 3-6 months

2.1 Development of the ToR for the final design

The Terms of Reference (ToR) for the final design describe the scope of work for an engineering company for the elaboration of the final design of each EE/RE measure that was identified during the energy audit, and finally selected. The **Project Team will develop the Terms of Reference**. Furthermore clear and transparent selection criteria should be developed by the Project Team.

Please make sure that the selected company is independent from any of the companies that will later bid on the works to be carried out. If this is not followed, there will be a conflict of interest, which might result in the project being closed prematurely.

The Terms of Reference should be based on the template provided in the Annexes.

2.2 Review of the ToR for the final design

It is expected that your project uses the template ToR for final design, developed by the Support Team. In case you do not use this template, and develop a ToR using another template which deviates from the one developed by the Support Team, you should send the ToR to the **Support Team for review**. In this case, the Support Team will provide you with comments for improvement or give the go-ahead to launch the procurement for the final design. In case you use the template ToR as

developed by the Support Team, you should submit the ToR to the Support Team for filing, and you will receive the go-ahead for the next step (2.3.).

2.3 Tender and contracting of an engineering company for the final design of EE/RE measures

The **project will launch the procurement** for the Final design, and select and contract an experienced company, according to the tender selection criteria. Often the amount involved makes it possible to carry out a single tender, however you are strongly advised to solicit bids from at least 3 companies/experts.

In case you do not know which companies to contact to submit a bid, you can contact other municipalities.

You can also ask the Support Team to comment on your report on the evaluation of the procurement (Procurement Report). Please note that such comments only serves to advise you on obvious mistakes/omissions. **Under no circumstances, can this be seen as approval of the procurement by either the Support Team or EU (Delegation).**

2.4 Final design of the EE/RE measures

The contracted **engineering company will elaborate the final design of each EE/RE measure** according to the Terms of Reference and in close cooperation with the Project Team. Furthermore, a detailed project implementation schedule for each EE/RE measure or set of measures will be elaborated. The engineering company should contact the relevant authorities in advance to introduce the intended projects and to receive preliminary comments.

The final design of the EE/RE measures shall consider Western European standards and practices in order to secure the sustainability of the measures. In particular, thermal refurbishment projects should consider advanced Western European energy performance standards for materials and approved installation practices.

In the event that additional projects (e.g. ventilation system, refurbishment of the roof, etc.) will be implemented by third parties at the same construction site, the Project Team and the Engineering Company should coordinate the EE/RE measures with those projects in order to ensure a smooth and efficient implementation.

2.5 Elaboration of investment costs, operational costs, energy/cost savings

The **engineering company will estimate the investment costs and the operational costs for each of the EE measures** (energy consumption, maintenance, etc.) based on the final design of each of the measures. The investment costs will give you the information if the proposed measures fit within the budgeted amount. The operational costs give you information about the costs that you have to include annually in the municipal budget for maintenance and operations. The reliability of the cost

estimation should be in the range of +/- 15%. Furthermore, the engineering company should provide the basic data for the calculation of the **expected annual energy and cost savings**.

2.6 Update of the financial analysis

Based on the information provided under the previous step (2.5), **the Project Team should recalculate the annual energy and costs savings and updates the financial analysis for each EE/RE measure** or a functional set of EE/RE measures. The expected energy savings will show you if the proposed measures will fit the target that you have committed to in your Contract with the EU.

2.7 Decision by on the EE/RE measures to be implemented

Based on the results of the updated financial analysis the **Project Team should propose EE/RE measures** or a functional set of EE/RE measures for the implementation.

These proposed measures together with financial analysis, technical drawings etc. (i.e. the whole final design file) should be **sent by the Project to the Support Team for review**. The Support Team will review if the proposed EE measures are in line with the budget allocated for it in the Application, if the expected savings are in line with committed targets, and of course check if the final design does not contain mistakes and is of sufficient quality. The Support Team will provide feedback in writing.

The outcomes can be the following:

1. The Support Team immediately agrees on the contents of the documents and will inform the project and EU Delegation that this is the case (and the project can move to 2.6.)
2. The Support Team identifies obvious errors/omissions in the documents: the project will have to ask the engineering company to correct the errors and then resubmit the documents to the Support Team for review
3. The Support Team has minor comments on the report: the Support Team will provide the project and EU Delegation with the assessment and suggested changes. After the recommended changes have been made by the project, the EU Delegation will be informed by the Support Team that the project can move to 2.6.
4. The Support Team has substantial concerns about the implementation of the project, and there is a possible need for a change to the contract: the Support Team will provide the project and EU Delegation with the assessment, identified risks and recommended action. This will be followed by a visit of the Support Team (and possibly EU Delegation) to the project, to discuss the issues/problems with project team, engineering company and mayor, and find possible ways out.

2.8 Approval of the EE/RE measures by municipality

The selected EE/RE measures shall be **formally approved by the municipality**³ where the object is located, and the municipal decision shall be sent to the Support Team and EU Delegation. Only after

³ Or Project Steering Committee, in case such includes the municipality concerned and the Committee is formally mandated in its Terms of Reference to make this decision

this document has been received by the Support Team and EU Delegation, can the project start with phase 4. This also applies for those cases where the Applicant is a NGO.

2.9 Milestones and Deliverables of phase 2

Milestone phase 2: Final design for each of the selected and approved EE measures

Key deliverables phase 2: Final design of each EE/RE measure (technical drawings, technical specification, cost estimations) by the Engineering Company; list of proposed EE/RE measures by the Project Team

3 Phase 3: Authority approvals, legal permits

During this phase:

- The ***necessary permits and approvals from authorities*** will be obtained by the project

Duration: 1-3 months

3.1 Elaboration of the required documents

The **engineering company** hired for the final design and the **Project Team** will elaborate the documents which will be required by the relevant authorities (beside the final design of the EE/RE measures). As the list of required documentation differs per country, and often changes, you are advised to check on the necessary permits and approvals carefully. Normally the engineering company that worked out the final design can help you with the list of required permits/authorities.

3.2 Submission of the EE measures project to the relevant authorities

After thorough checks by the municipality's legal department, and other relevant personnel (construction department, public company), **the municipality will officially submit the documents** to the various authorities for approvals and permits. Please note, that obtaining such approvals and permits might take considerable time (especially not those issued by the municipality).

3.3 Elaboration of the final project documents

The **engineering company** will (if needed) adapt the **final design of the EE/RE measures** according to the comments from the authorities (and prepare an updated **project implementation plan**).

3.4 Milestones and deliverables of phase 3

Milestone phase 3: Authority approvals and permits for each EE/RE measure

Key deliverables phase 3: Documents for authority approvals; project implementation plan for each EE/RE measure by the engineering company

4 Phase 4: Procurement - implementation of the EE/RE measures (works)

During this phase:

- The **procurements for implementation of works/supplies** will be carried out
- Supplier/works implementer will be selected

Duration: 1-6 months

The project team can use EU rules (PRAG) for procurement procedures if it is eligible according to the national legislation. All issues that are related to the procurement are strongly recommended to be discussed with the Contracting Authorities (EUDs).

4.1 Elaboration of the procurement documents (technical part)

The **engineering company** for the final design normally will also **elaborate the technical part of the tender documents**, according to the final design of the EE/RE measures. Properly prepared tender documents are crucial for the implementation of a successful project. The “technical specification document” beside technical drawings is a key element of the tender documents. Each component of the EE/RE measures must be described in all details incl. their technical specifications and installation practices.

A Bill of Quantity in most cases is NOT sufficient. Detailed technical specifications are normally needed, as well as clear instructions on installation.

EE/RE measures in similar fields (e.g. construction measures such as windows, roof, etc.) should be included into one tender. In the event of measures in similar fields but on different construction sites, these can be included in one tender, but the Support Team recommends using separate lots. EE/RE measures in different fields (e.g. EE measure 1: refurbishment of a building, EE measure 2: refurbishment of the street lighting system) should be tendered separately.

Furthermore, it is highly recommended not to separate procurement of supplies/materials from the works, as in case of any defects found there is no clear responsibility that can be pointed (supplier will say that materials were fine but were incorrectly used/installed, the company that installed/used materials will say that the materials were not of good quality). It is better, therefore,



to have materials/supplies and works in one tender, so there is one clear party responsible for everything

4.2 Elaboration of the procurement documents (general part) and the procurement procedures

The **Project Team will elaborate the general part of the tender documents** (general terms and conditions) and the tender procedures (type of tender, selection criteria etc.).

4.3 Review of the tender documents

The tender documents (technical part, general part) and the tender procedures will be sent by the Project team to the Support Team for review. The Support Team will send comments on the tender documents to the EU Delegation, Beneficiary and the Project team, and in case of any deficiencies, the Project Team will have to rework the tender documents and resubmit to the Support Team. Only after the Support Team gives the go-ahead, is the project allowed to launch procurement.

This process applies to all procurement over 60,000 EUR, irrespective of the type of procurement procedure to be used by the project (competitive negotiated procedure, open tender).

Please note that you are OBLIGED to send the procurement documentation to the Support Team for review. You cannot launch the procurement before you get the formal go ahead from the Support Team.

Please also note, that when you have not followed recommendations by the Support Team on the energy audit, technical design and/or selection of EE/RE measures to be implemented, this will show up in the technical part of the procurement documentation, and can be a reason for the Support Team to send you back to rework the energy audit report, technical documentation, list of EE/RE measures selected (as applicable). It is therefore crucial that you follow the advice of the Support Team in the previous phases.

4.4 Launch of the procurement

After review of the tender documents by the Support Team and the formal go-ahead by the Support Team, the procurement will be launched by the project (Contracting Authority). In the event that you decide to use the competitive negotiated procedure, you are strongly advised to solicit not just three bids but 4-6, in order to ensure competition, as the approached companies will not always submit. The project should aim to receive three bids. In case of open tenders, the more publicity and portals used to announce the tender the better.

Please note that Annex IV to your Contract with the EU specifies minimum requirements that must be followed for procurement. In terms of the reaction time to be given to bidders (time between the announcement of the procurement (invitation letters/publication) and the deadline for submitting bids), it is crucial that sufficient time is given to bidders. To be on the safe side, it is best to use the reaction times as prescribed by the EU in the PRAG, namely 30 days for competitive



negotiated procedures and 60 days for open tenders. Failure to give sufficient reaction time, might result in the procurement being considered as ineligible!

It is highly advised to give potential bidders the possibility to visit the object, and this is normally included in the tender documentation, specifying date, time and place where potential bidders will be expected (pre-tender meeting).

4.5 Evaluation of the received offers

The Contracting Authority's **Procurement Committee⁴** will assess the received bids and evaluate the bids according to the selection criteria that were mentioned in the tender documentation. Both the EU Delegation and Support Team have the right to participate in the evaluation of submitted bids as observer, and should be informed about the dates of the meetings of the Procurement Committee and be invited to participate

4.6 Review of the Procurement Evaluation Report

The procurement evaluation report and the proposed selection of the Construction Company will be reviewed by the Support Team and comments will be sent to the Contracting Authority, Project Team and the EU Delegation. In case of mistakes/omissions in the Evaluation Report, the Support Team will inform the Project Team, and the Project Team will have to rework the document and to resubmit for review.

4.7 Milestones and deliverables of phase 4

Milestone phase 4: Tender procedure launched

Key deliverables phase 4: Tender documents of the EE/RE measures (technical part) by the Engineering Company; Tender documents of the EE/RE measures (general part and tender procedures) by the Project Team; Tender evaluation report by the Contracting Authority/Project Team

5 Phase 5: Contracting of company for the implementation of the EE/RE measures

Duration: up to 1 month

⁴ The Committee will have to be formally established by a Municipal Decision or in case of the Applicant being a NGO by decision of the authorized (as per the NGO's Procurement policy) person/body within the NGO

5.1 Contracting of the Construction Company

The **Contracting Authority (municipality, NGO) will contract the selected Company** for implementation of the EE measures, within the period as described in the tender documentation. Also, the unsuccessful bidders will have to be informed formally about the outcomes of the procurement.

5.2 Milestones and deliverables of phase 5

Milestone phase 5: Contract with the Construction Company

Key deliverables phase 5: contract with the Construction Company by the Contracting Authority.

6 Phase 6: Implementation of the EE/RE measures

Duration: 3-9 months

During this phase:

- The **implementation structure for implementation of work** will be established
- **Site supervision** will be arranged

6.1 Establish the implementation structure for the EE/RE measures

The **Project Team will elaborate the implementation structure for the implementation of the projects**. The following issues should be considered:

- Establishment of the project implementation team for the Site Supervision of EE/RE measures. The project implementation team should meet regularly (e.g. weekly) at the construction site to discuss and decide on the actual construction issues. It is recommended that the team includes at least the following members:
 - Project Manager of the Construction Company
 - Site Supervisor
 - Delegated person from the Beneficiary
 - Expert of the Project Team responsible for the implementation of project
 - Representative of the building users/facility operators - on demand
 - Expert from the Support Team - on demand (will not participate in all meetings)
- Clear definition regarding who is leading the project implementation team
- Definition of the tasks and responsibilities for each member
- Clarification of the decision-making powers at the construction site



Each member shall have the mandate, on behalf of the organization he/she represents, to make decisions at the construction site regarding actual and urgent issues. Decisions will be recorded in the minutes of the meetings.

- Administration and reporting procedures (coordination of meetings, preparation of minutes, etc.)

6.2 Development of the ToR for the Site Supervision

The Project Team will develop the Terms of Reference for tendering an experienced and **independent** Site Supervision expert for the implementation of EE/RE measures. It is expected that your project uses the template ToR for Site supervision, developed by the Support Team (see Annexes). Furthermore clear and transparent selection criteria should be developed by the Project Team.

Each project needs its own independent Site Supervision. In case of very different EE measures e.g. Street lighting and building refurbishment, 2 Site Supervision experts should be hired

6.3 Review of the ToR for the Site Supervision

In case you do not use the template provided by the Support Team, and develop a ToR using another template which deviates from the one developed by the Support Team, you should send the ToR to the **Support Team for review**. The Support Team will then provide you with comments for improvement or give the go-ahead to launch the procurement for the Site supervision. In case you use the template ToR as developed by the Support Team, you should submit the ToR to the Support Team for filing, and you will receive the go-ahead for the next step (6.4.).

6.4 Tendering and contracting of an independent Site Supervision

The **project will launch the procurement** for Site Supervision, and select and contract an experienced company, according to the tender selection criteria. Often the amount involved makes it possible to carry out a single tender, however you are strongly advised to solicit bids from at least 3 companies/experts.

In case you do not know which companies to contact to submit a bid, you can contact other municipalities.

You can also ask the Support Team to comment on your report on the evaluation of the procurement (Procurement Report). Please note that these comments only serve to advise you on obvious mistakes/omissions. **Under no circumstances, can this be seen as approval of the procurement by either the Support Team or EU (Delegation).**

The Support Team will participate in some of the site supervision meetings, and might carry out



unannounced spot-checks.

6.5 Project management and coordination of the implementation

The **Project Team should manage the implementation** of the EE/RE measures with regards to the agreed **implementation schedule, the project budget and the general quality of the project implementation**. In the event that other projects (e.g. ventilation systems, capital repair works) are implemented at the same construction site, the Project Team and the Site Supervision should coordinate the EE/RE measures with those projects.

6.6 Milestones and deliverables of phase 6

Milestone phase 6: Implementation of EE/RE measures finalized

Key deliverables phase 6: Construction site diary, minutes, monthly progress reports, etc. by the Project Team and the Site Supervision

7 Phase 7: Final acceptance

Duration: 1-2 months

7.1 Organizing the acceptance of the EE/RE measures

The finalization of the contracted services and works shall be announced in written form by the Construction Company to the Site Supervision, the Project Team and the Beneficiary. The **Site Supervision, supported by the Project Team, will verify the finalization of the services and works at the construction site**. Major construction defects or any other major deviation from the agreed upon services and works will be recorded (pictures, etc.) by the Site Supervision. A list of construction defects will be handed over to the Construction Company for correction. After the correction works have been finalized, the Construction Company has to announce the finalization of the services and works again. The Site Supervision, supported by the Project Team, will again verify the finalization of the services and works at the construction site.

Based on the kind of project, acceptance of different EE measures might be separated. For example, EE measure 1: solar system; EE measure 2: building refurbishment → both measures are independent and the final acceptance should be done separately. However, EE measure 1: building refurbishment (roof, walls) → such works are connected to each other and the final acceptance cannot be separated!

7.2 Final acceptance

The **Project Team will organize the final acceptance procedure** of the services and works with the relevant parties (Beneficiary, Site Supervision, Construction Company, Support Team). This also includes verification of performance of the EE measures (test operation, test protocols etc.).

Any construction deficits and deviations from the agreed upon works and services should be recorded (pictures etc.) and listed in the final acceptance report. The Site Supervision will prepare a final acceptance report incl. final list of construction defects and other deviations incl. deadlines for their correction. All parties shall sign the acceptance report.

The final acceptance procedure can also be applied on sub projects or individual EE/RE measures, if they can be seen as an independent functional unit.

7.3 Project financial management

The **Project Team** (supported by the Site Supervision) **will verify invoices** and the supporting documents attached to invoices (dimensions, schemes, drawings, etc.), and make final payments.

7.4 Milestones and deliverables of phase 7

Milestone phase 7: Final acceptance of all EE/RE measures issued

Key deliverables phase 7: Final acceptance reports incl. list of construction defects for all EE/RE measures

8 Phase 8: Operation and maintenance of the EE/RE measures

Duration: permanently

8.1 Establish the maintenance and operation structure

The **Project Team in close cooperation with the Beneficiary will elaborate a maintenance and operation structure that secures the sustainability of the EE/RE measures**. The following issues should be considered (among others):

- Responsibility for the operation and maintenance of the project, i.e. which institution
- Securing the resources for operation and maintenance
- Securing the fuel supply (amount and quality) for fuel based facilities (e.g. biomass boilers, etc.)
- Coordination of materials for operation and maintenance as well as training with the Construction Company
- Coordination with the Construction Company in the event of defects during the warranty period

8.2 Ongoing operation and maintenance of the project

The implemented projects will be operated and maintained by the institution which was defined in the previous step. It is recommended, to monitor the performance of the EE/RE measures in order to verify the actual savings and to identify performance improvements.

8.3 Milestones and deliverables of phase 8

Key deliverables phase 8: Operation and maintenance structure by the Project Team

9 Phase 9: Project summary after project implementation

Duration: 1 month

The **Project Team will elaborate the final report of the project development and implementation** incl. lessons learned comparison of project assumptions before the implementation (investment costs, operation costs, technical performance, etc.) with the situation after the project implementation, etc.

Key deliverables phase 9: Final report of the project development and implementation by the Project Team