

Methodological recommendations for the co-owners of apartment buildings:

elaboration of energy-efficient projects

Selecting contractors for energy-efficiency activities and the type of contracts

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Building and Nuclear Safety

of the Federal Republic of Germany

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Selecting contractors for energy-efficiency activities and the type of contracts

Goal – ensure the proper implementation of solutions for the higher energy efficiency of the house as well as the proper quality of all construction, installation and launching works.

Key issues – where and how to find qualified contractors

– how to find out if their qualifications meet the relevant requirements

- what contracts are to be signed and what is the best way to minimize all risks of their improper execution.





Risks related to the improper qualification of the contractors

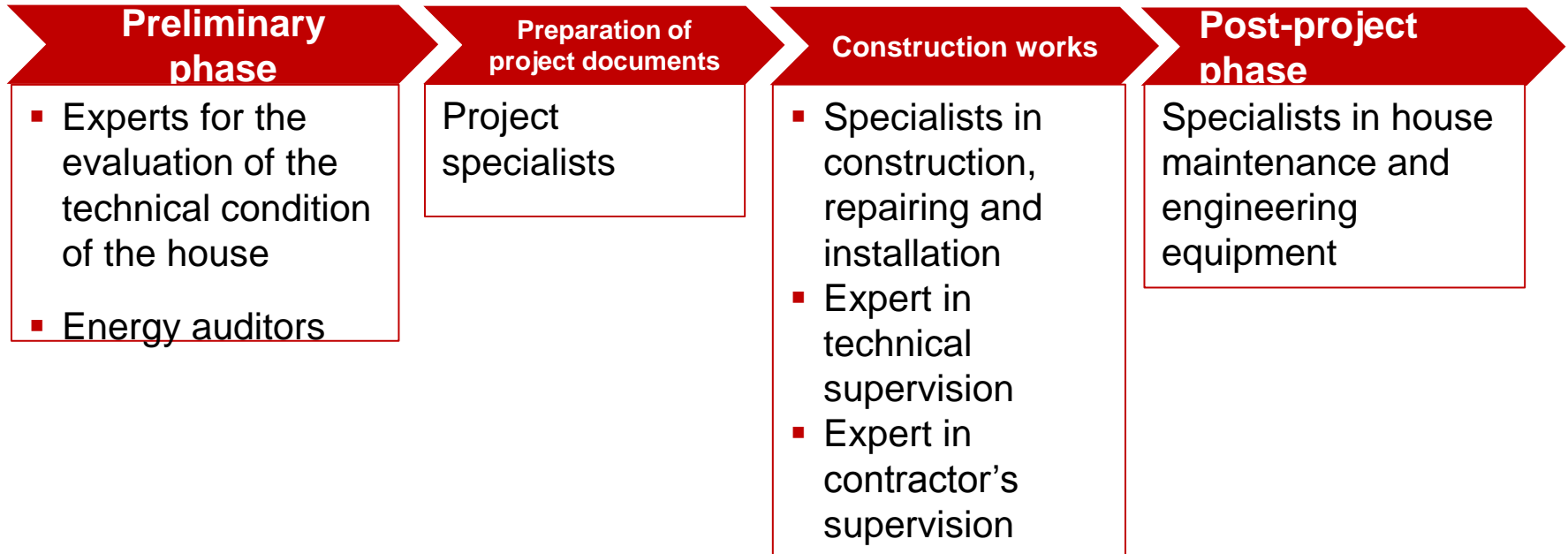
- Mistakes in the energy audit
- Miscalculations in technical design and terms of references
- Low quality of the project documents
- Use of low-quality materials
- Use of equipment with unsatisfactory technical data
- Non-compliance with the technology
- Failure to meet the agreed delivery terms etc.

Consequences:

- ✓ Failure to achieve expected savings
- ✓ Excessive project costs
- ✓ Longer ROI term of the project



Contractors in different stages of the energy-efficient project



It is recommended to engage advisors in the below fields at all stages of the project:

- ✓ technical (project manager)
- ✓ legal
- ✓ financial



Contest procedure for the selection of contractors

The procedure is not regulated by law, but it is **recommended** to adopt it at the meeting.



- ✓ Working experience in the field of energy efficiency, incl. registration documents
- ✓ References to previous similar projects completed by the candidate
- ✓ Qualifications of the bidder's key personnel
- ✓ Available equipment
- ✓ Proposals (vision) regarding the optimal solutions for the project objectives



Types of contracts

Type of contract	Relevant areas
Service contract	<ul style="list-style-type: none">✓ Assessment of the building's technical condition✓ Energy audit✓ Technical supervision✓ Project management✓ Examination of the project documents✓ Legal, financial and consulting services
Work contract	<ul style="list-style-type: none">✓ Project design works✓ Construction and repairing works✓ Equipment installation and launching works
Contract on supply of goods/equipment	Purchase of construction materials and equipment
Energy service contract	Project implementation at the terms of the energy service contract (funded by ESCO)



Engineering competence



Technical check, energy audit, selection of optimal energy-efficiency measures, terms of reference for the project



Preparation of a feasibility study or



a feasibility study for investors



Project management, technical supervision and verification of the implemented technical solutions



Who can provide engineering services?

ESCO – business entity (private person or legal entity) implementing energy-saving measures at the cost of the customer or at its own cost (or funded by third parties) and ensures a guaranteed reduction in the consumption of fuel and energy.

ESCO can provide funding or assist in arranging funding for energy-efficient projects by guaranteeing lower energy consumption.

Remuneration of ESCO directly depends on the volume of the energy saving reached upon the completion of the project.

Requirements to ESCO:

- ✓ Qualification
- ✓ Must be independent from suppliers of materials/equipment and contractors



Advantages of ESCO – complex solutions

Cost reduction achieved by savings in:

- ✓ fuel / energy;
- ✓ personnel;
- ✓ maintenance;
- ✓ other operational costs (materials, water etc.).

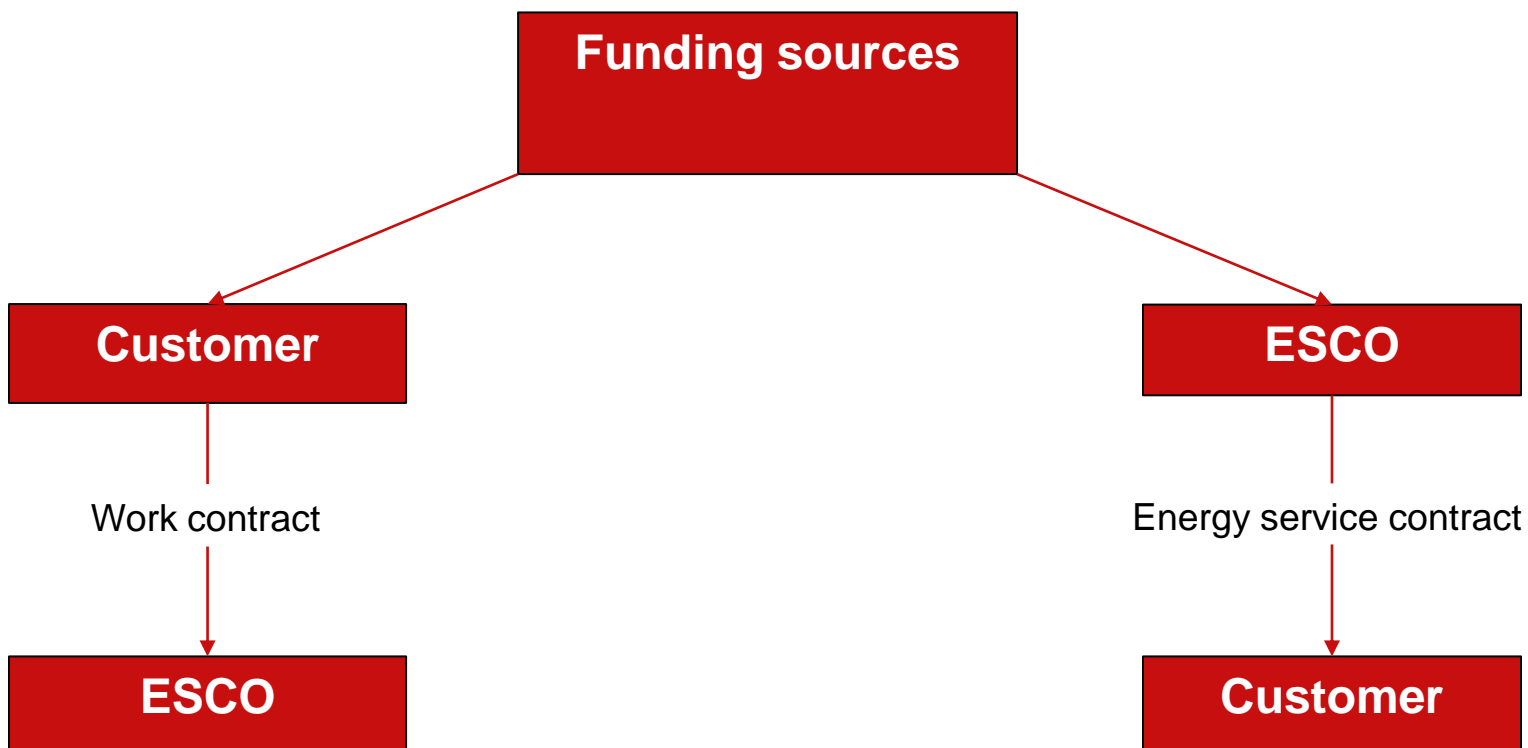
Standard list of ESCO services:

- ✓ energy assessment (energy audit);
- ✓ feasibility study for energy-saving and energy-efficiency measures;
- ✓ providing or arranging financial and investment management;
- ✓ management of financial and technical risks in the course of the project;
- ✓ engineering (implementation), supervision of the implementation of energy-saving measures;
- ✓ supply and installation of equipment, its operation, maintenance and other activities.



Terms for engaging ESCO

Depend on the terms of the project funding:





Optimal terms for the implementation of the ESC mechanism

- Energy-efficiency measures are funded (ROI is achieved) by energy saving;
- The entire project is implemented by the specialized ESCO company;
- Investments, debt re-payment and the costs of the energy services (total value of the energy “performance contract”) are paid in installments by ESCO (or by the beneficiary) within the period set in the contract, after the agreed annual savings in operational costs have been achieved;
- The “performance contract” is concluded for the period which is necessary for the complete refund of costs spent on the energy-efficiency measures;
- ESCO bears financial and technical risks;
- Consistent savings in energy costs and other operational costs are guaranteed.



Risks related to energy services

ESCO-related risks:

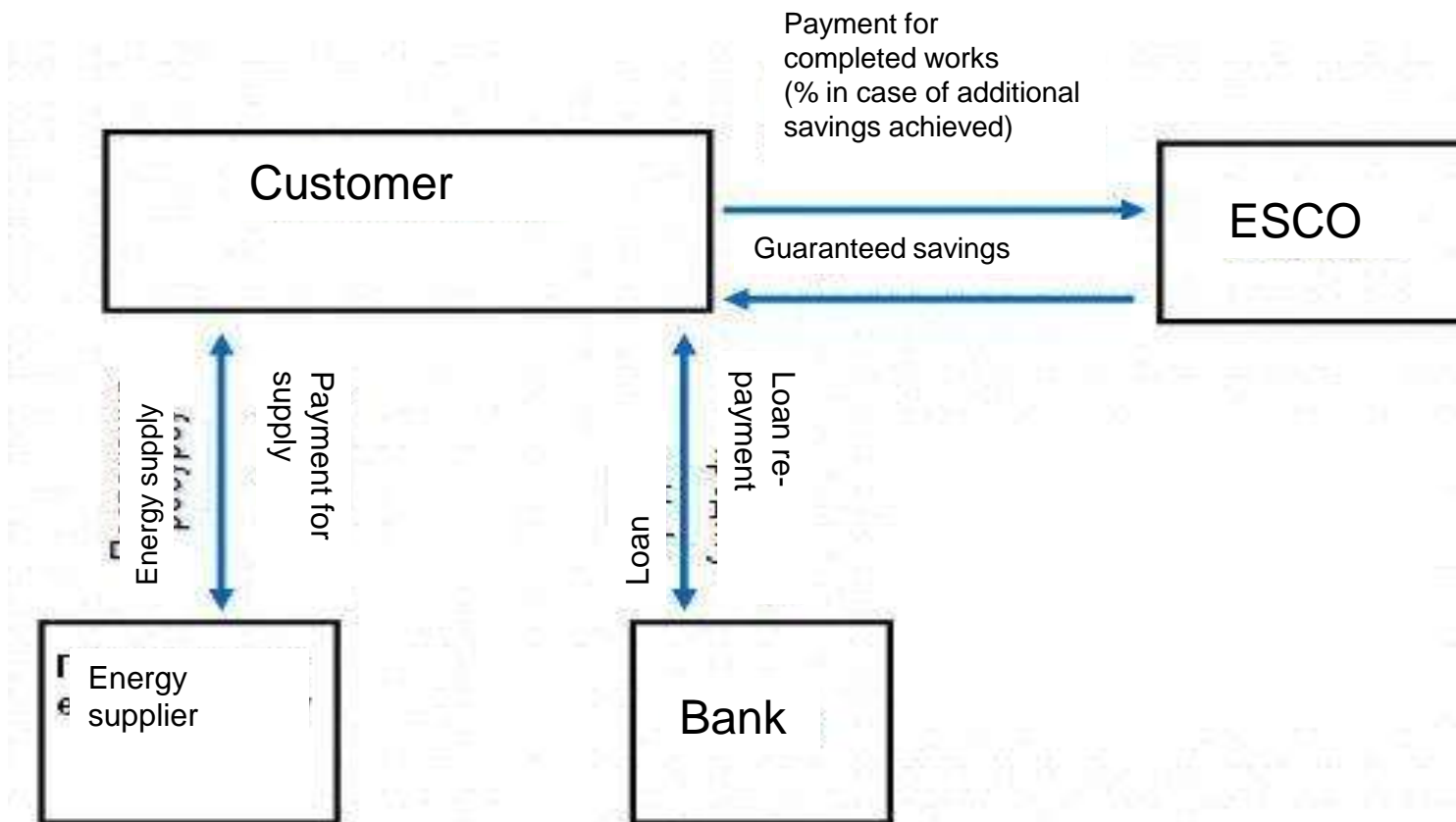
- **Business risks** – mistakes/miscalculations related to the selection of the business model for the project, profitability figures, legal and political changes, selection of partners/participants of the project, possible failure to meet the contract obligations etc.;
- **Financial risks** – possible financial losses due to inflation, unfavorable market situation in regard to the respective goods, services, materials etc.;
- **Technical risks** – possible wrong technical solutions, mistakes in the use of equipment and/or its unforeseen malfunction.

Risk of the customer:

- Selection of ESCO as a contractor;
- -Imperfect legal frameworks.

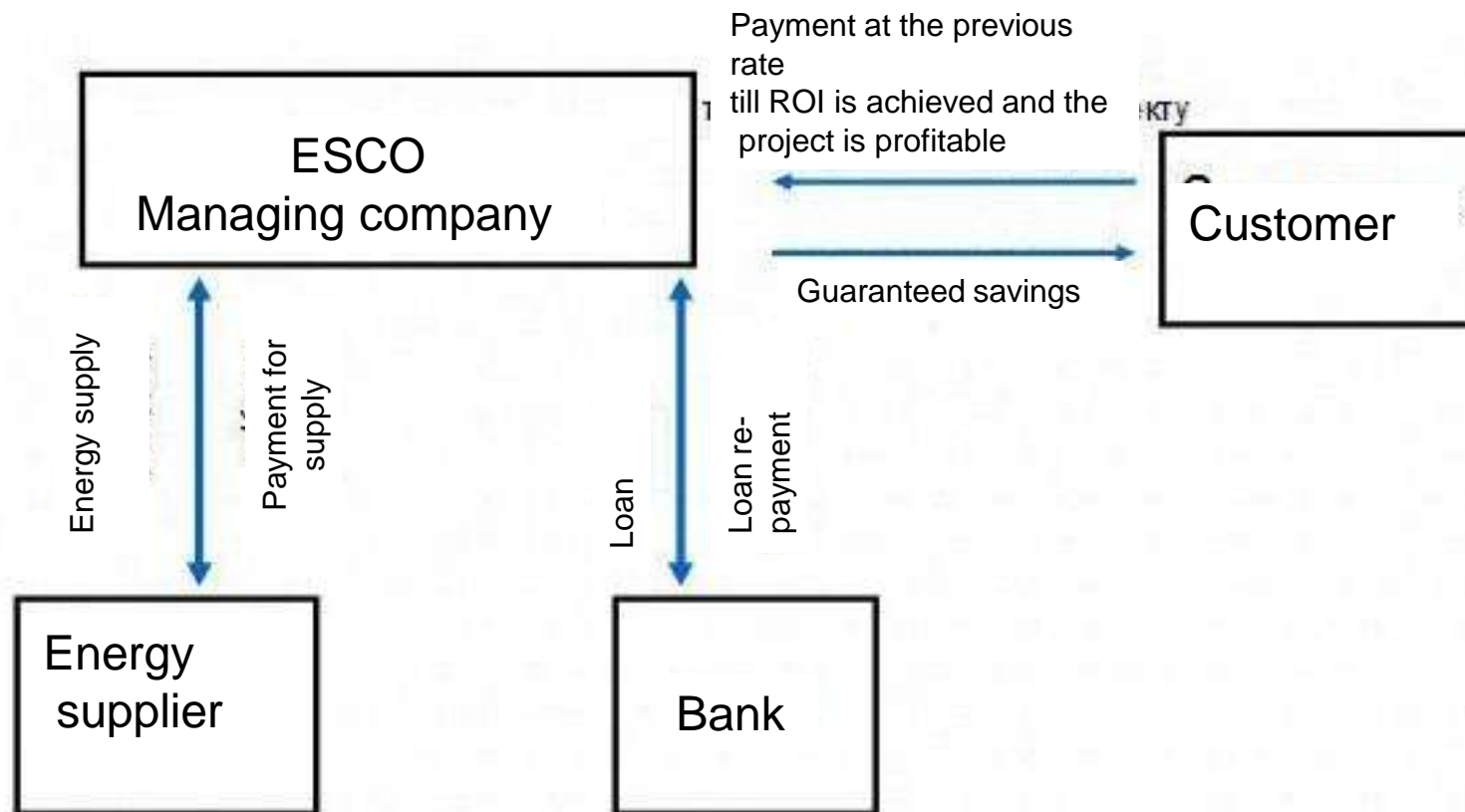


ENERGY SERVICE CONTRACT (EPC), type 1





ENERGY SERVICE CONTRACT (EPC), type 2





Energy service contract

IMPLEMENTATION OF THE ENERGY-EFFICIENT PROJECT ACCORDING TO THE CONTRACT WITH AN ENERGY SERVICE COMPANY (ESCO)



1

In its general meeting, the OSBB assigns ESCO as a provider of central heating (this decision is stated in the meeting's minutes) and signs a contract for several years. The contract duration should be sufficient to ensure ROI for ESCO.

2

ESCO signs a contract with a heating energy supplier. The amount of supplied energy is determined according to meters.

3

The authority in charge (irrespective of who granted ESCO a license for heating services) sets a tariff for ESCO services.



4

ESCO signs contracts on heating services with apartment owners. These contracts are based on the contract with the OSBB and the set tariff and stipulate Payment based on the footage of the heated space.

5

If ESCO does not have enough own funds, it takes a loan warranted by future customers' payments.

6

ESCO arranges works according to the contract with the OSBB and installs the necessary equipment. Upon expiry of the contract the OSBB becomes the owner of the implemented upgrades and installed equipment.

Source: http://www.merp.org.ua/index.php?option=com_content&view=article&id=195:2015-07-16-10-45-46&catid=79&Itemid=974&lang=uk



Obligatory elements / requirements of the energy service contract (1)

- Clear and transparent list of energy-efficiency measures to be implemented and/or their results;
- Guaranteed savings to be achieved through the implementation of the agreed measures;
- Duration and phases of the contract, terms and reporting periods;
- Clear and transparent list of each party's obligations;
- References to the concrete agreed terms for achieving the agreed savings;
- Clear and transparent list of steps for the implementation of the agreed measure(s) and the related costs;
- Obligations regarding the full implementation of the measures agreed in the contracts and other documents regarding amendments made in the course of the project;



Obligatory elements / requirements of the energy service contract(2)

- Regulations on the inclusion of the respective project requirements into any sub-contracts with third parties;
- Clear and transparent regulations on the financial consequences of the project and the parties' shares in the achieved financial savings (including the remuneration for service provider);
- Clear and transparent procedure of measuring and checking the achieved guaranteed savings, procedure of quality and warranty control;
- Regulations on the terms of use of the house and energy resources upon completion of the project;
- Contract price;
- Payment terms under the energy service contract;
- Property rights on items created (installed) in the course of the project;



Obligatory elements / requirements of the energy service contract (3)

- Contract duration
- Regulations on procedures regarding amendments to the frame terms which impact the contents and results of the contract (i.e., change of energy price, intensity of the use of equipment);
- Detailed information on the obligations of each party and liability for failure to comply with them.

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Thank you for your attention!

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