

Flexibility Options for Energy Performance Contracts (EPC)

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The guarantEE project aims to promote performance based energy services (such as EPC) among customer groups, which presently do not often use such services, e.g. private building owners or owners of rented facilities.

The objective was to identify aspects or procedures in existing EPC / energy service contracts which may be difficult to accept for certain customers and to develop optional contract elements addressing such concerns. These 'flexibility options' are seen as additional elements or alternative ways of addressing certain contractual issues.

The respective contractual clauses within this document are to be understood as optional alterations to existing model contracts on the national level. These clauses will have to be assessed, translated and integrated (as optional elements) in national EPC model contracts. As the legal frameworks differ in the member states, a legal assessment of the clauses (if seen necessary) is to be performed on the national level.

Resulting from the feedback received in the guarantEE stakeholder surveys and talks, the following three issues have been identified as especially relevant:

1. Ordinary termination of contract
2. Simplified Measurement & Verification
3. Integration of Public Funding by ESCO

Two further topics which offer synergies with EPC are being described in the document EPC Model Processes (D2.7):

- Synergies with Energy Auditing
- Synergies with ISO 50001

1. Ordinary termination of contract

Currently, most EPC contracts have a fixed contract duration. The duration is a key parameter for the ESCO's calculation of the energy services provided. A longer duration allows to include additional energy saving measures (ESM) with longer payback time, thus increasing the achievable savings.

In several countries, EPC model contracts do not foresee ordinary contract termination. Only extraordinary termination for important reasons is possible, usually connected to serious breach of the obligations by one party.

The fear of 'being locked' in a long contract with no proper way to get out is a serious obstacle for many building owners to engage in EPC. If an ongoing EPC contract manifests an obstacle for selling a building, most private building owners will refrain from engaging in such a project or will only engage in very short contracts which will only realise a certain part of the possible savings. Therefore, amending a contract with a paragraph for "Ordinary Termination" will increase its flexibility and make it more attractive for private building owners.

Such a paragraph has to determine

- Who has the right to terminate the contract; we see the main case to be addressed in termination by the client
- Earliest possible time for termination
- Pre-notification time for termination to take effect
- Compensation for the contractual partner; the calculation of compensation should be as simple as possible; the compensation should be high enough to not easily encourage termination

Compensation elements for the ESCO (in case of termination by client):

- ESCO can claim all foreseen payments until the regular end of the contract less the saved costs for maintenance, upkeep and energy management activities.
- The ESCO can claim a flat-rate of 10%¹ for its loss of profit of the regular ESCO rates until the rest of the planned contract duration

¹ This does not reflect any real profit margin but is a flat rate which includes additional administrative efforts for the ESCO connected with the termination

Model Contract Clause

§ xx Ordinary Termination

(1) Neither party shall be entitled to give notice to terminate the Contract prior to the completion and accounting of the first settlement period within the repayment period.

(2) The client may give notice to terminate the Contract with a period of notice of at least 12 months. The termination takes effect with the completion and accounting of the settlement period following the period in which the notice of termination was given.

(3) Upon termination according to (2), the Client is liable to provide to the Contractor financial compensation, either as annual payments or as single payment. The contractor is entitled to receive compensation in the amount of the regular payments as foreseen in § XX less the costs of the contractors services to be provided until the end of the repayment period. The contractor is entitled to keep the profit margin of XX% flat. The compensation will be determined after and based on the completed accounting of the settlement period.

2. Simplified Measurement & Verification

In performance based energy services, proper Measurement & Verification (M&V) procedures are key to determine whether an ESCO has (over-) fulfilled or not fulfilled its performance guarantee. At the same time, M&V procedures are often complex and contribute significantly to the transaction costs of a project. If buildings are subject to change of conditions (e.g. occupancy), adjustments must be part of the M&V process. Also weather correction is necessary, especially for heating/cooling related energy consumption. As M&V issues directly relate to the ESCO's remuneration, they can easily become an issue of disputes between the ESCO and the client.²

Lowering the transaction costs with simplified MV procedures

Lowering transaction costs is not a goal in itself. Nevertheless, it is justified to look for ways to reduce transaction costs if quality requirements and the fair cooperation between client and ESCO are not being negatively affected.

² Involving a third party (e.g. an EPC facilitator) to calculate or verify the savings is normally a good way to avoid or moderate such disputes.

Furthermore, high transaction costs are the main reason that a market for small EPC projects (with low energy cost baselines) could so far not be established in many countries.

M&V costs in EPC projects applying the IPMVP methodology usually make up 3-5% of the annual cost savings (USDOE, 2007). Depending on the option applied, M&V costs might even be as high as 10% of the cost savings (NAESCO, U.S. EPA, 2001). This, however, relates to projects operating in the recommended size with a baseline of 300 k€/a or more. For smaller projects, this share will be higher, as the M&V costs cannot be reduced proportionally when reducing the project size.

In different countries, different M&V standards are being used. While the IPMVP standard is well established in countries like USA, UK, India, China, Ireland Switzerland Portugal and Spain, many well-established EPC markets apply their own methods of M&V successfully. Therefore, when looking at simplified M&V, the aim cannot be to look at the topic from the point of view of one specific standards, but to look at the objectives and requirements of M&V and assess simplification options which still meet these objectives and requirements.

M&V simplification usually means to reduce the measurement tasks for the parties involved by agreeing on procedures with either less measurements or completely calculated savings. Naturally, the verification aspect is weakened if less results are measured. So when looking for simplification options, it is important to address two guiding questions:

- Relevance of the specific energy consumption for the overall project
- Ensuring at least an initial measurement before and after measure implementation and the option for additional measurements (checks) on request of the client

Combined approach (measurements and calculations)

This approach is being recommended as it implies mandatory measurements at least in the initial phases of the repayment period.

The contractual partners may

- Agree on M&V with a simplified procedure for specific parts of the energy consumption (e.g. electricity), provided this energy consumption accounts for not more than 30% of the overall energy cost baseline



- Perform measurements of this specific energy consumption before and after the implementation (e.g. one year after installation) according to accepted standards
- Agree to assume these achieved and verified savings of year 1 to be achieved in every following year without further mandatory measurements
- Have, on request of the client, the possibility of singular checks (measurements) also in subsequent years; the costs of these checks are to be covered by the client, if the savings levels are not less than in year 1, and by the ESCO, if they are smaller than in year 1

Model Contract Clause

§ xx Calculation of the Amount of Savings based on the Combined Approach

(1) For energy saving measures addressing systems representing less than xx% of energy cost baseline and which cannot easily be measured and verified due to overlaps with the effects of other measures, the Combined Approach of measurements and calculations may be applied.

(2) Both parties have to commonly agree to apply the Combined Approach.

(3) The calculation rules for the verification of savings according to the Combined Approach are defined in Annex XX.

3. Acquisition of Public Funding by the ESCO

Depending on the national funding landscape, subsidies may be available for certain energy saving measures in an EPC project. Normally the building owner is eligible to apply for such funding. In some programs, ESCOs are also eligible to apply.

It is usually beneficial for all project partners to make use of such co-financing options. But it is important to clearly define the responsibilities and the remuneration of the efforts involved.

A possible contract clause (inspired by Austrian/GEA experiences) could be structured as follows:

Model Contract Clause



- (1) The contractor is responsible for the acquisition of public funding for activities or measures to be implemented within the project. Acting in the interest of the client, the contractor will assess available funding sources and present to the client the list of funding options no later than 14 days after contract signature. Contractor and client will jointly define which public funding options are to be pursued. The contractor will apply for these either under his own name or in the name and for the benefit of the client.
- (2) The contractor will inform the client immediately about the successful obtainment of public funding and transfer received funds to the client.³
- (3) For successfully obtained public funding the contractor may claim a management fee of 15% for the first 10.000 € acquired and a fee of 10% for all acquired funding above 10.000 €. The contractor can claim this management fee for all fund applications he prepared, no matter if the application was finally submitted by the contractor or the client.
- (4) Client and ESCO agree to mutually provide timely support for all activities related to the acquisition of public funding for this project.
- (5) The contractor invoices the management fee to the client in combination with the next regular invoice for his services.

³ Alternatively, the contractor may reduce the investment costs in the contract by the obtained funds (less a management fee) and recalculate / reduce the ESCO rate for all upcoming payments.