Functional tender
(versus tendering detailed services)
for EPC projects

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Standardized – Project Procedure, Phase I: Preparation and Feasibility

1. First Contact
2. Rough energy check – Performance figures and Benchmarking
3. Decision base for building owner – technical, economic, organisational, financial and legal background, feasibility analysis of possible measures and renovation models
4. Optional: Detail analysis – detailed evaluation of possible measures
5. Go or No – Decision of the building owner or other responsible person to go for renovation or not, and if yes, with which model
6. Assignment of a project manager – Co-ordination of project preparation, functional tender and awarding
Standardized – Project Procedure, Phase II: Implementation and Realisation

7. **Functional specification of measures**: description of the renovation needs and of technical, economic, organisational, financial and legal framework conditions

8. **Draft EPC contract** – an urgently recommended component of the tender documents

9. **Selection of the best offer** – comparison and evaluation (cost-benefit analysis) of the offers, negotiation procedure and contract assignment

10. **Realisation** – measures planned in detail by the ESCO; if necessary, assistance with implementation/quality assurance

11. **Controlling** – with yearly corrections regarding climate, energy prices and user behaviour
Functional tender: Preconditions and Recommendations (1/2)

- In order to take advantage of the creativity of the ESCO, there must not be fixed solutions for the implementation.
- There must be special competence and interest on both the building owner and the ESCO side (Recommendation: experienced consultant who prepares the tender documents and evaluates the offers).
- The criteria to evaluate and rate the ESCOs and the offers must be defined and announced in advance.
- ESCOs must learn to deal with functional tender, i.e. “thinking with the head of the customer”.
Functional tender: Preconditions and Recommendations (2/2)

- Comparability of the offers must be ensured (recommendation: provide templates for offers with predefined chapters)
- Requirement of independence (no preferences for certain products), no discrimination (no preference for certain companies) and calculability (predefined framework conditions)
- Principle of the BEST, not cheapest offer (winner is the best offer after the cost-benefit-analysis)
- Negotiation according to procedures depending on the national procurement laws (special slides)
Functional tender: Evaluation criteria for cost-benefit analysis

- Defining the evaluation and awarding criteria (project related) (§20 (1), BVerG)
  - Monetary criteria (e.g. contracting rate, building costs subsidies, energy saving guarantees, investment costs, …)
    => all monetary criteria summarized in a present value
  - Quality criteria (e.g. quality of the measures, user motivation concept, controlling concept, …)

- Weighting the evaluation criteria (Σ = 100)
  - Weights can be chosen freely
  - Monetary criteria have typical min. 70 %

- Detailed description of the evaluation criteria in the tender
- Request for a detailed description of the evaluation criteria
  - Recommendation: defining a tender template with subchapters
Functional tender: Advantages and chances (1/2)

- **Integrated competition of prices and solutions** (e.g. on energy saving measures and/or innovative technologies) ➔ incentive for innovative solutions
- **Freedom of solutions for ESCOs**
  ➔ Possible economic synergies for tenderers ➔ lower prices
  ➔ Know-how from different ESCOs (under competition) can be utilised
- **Guaranteed results: Transfer of risks towards ESCO** (performance and price guarantees)
Functional tender: Advantages and chances (2/2)

• Comprehensive service without numerous single tenders (prime contractor model) → minimising interfaces
• Planning and implementation is in one hand → minimising interfaces (Who is in charge of controlling the proper delivery?)
• Detail planning included in the total price (“saving” of planning costs???)
• Integration of bonus-malus payments by over and under achievement, e.g. saving guarantee
• …
Functional tender: Disadvantages, Risks and how to cope with them (1/2)

- Poor quality of planning and implementation:
  - Functional requirements must be specified in detail (technical and economic framework conditions, interfaces, standards, etc.)
  - ESCO must give guarantees (performance, price...) over the whole contract duration

- Comparability of offers:
  - ESCO must deliver a detailed description of his offer according to a predefined template (call for tenders) this will be part of the contract
  - Tender evaluation together with experts of the specific field
Functional tender: Disadvantages, Risks and how to cope with them (2/2)

• No cross-checks of planning by independent consultant
  ➔ Building owner should execute quality checks
  ➔ For critical points supervision by an independent consultant is recommended

• Problems with interfaces ➔ clearly defined interfaces necessary

• Fear of in-house technicians/planners they could loose their jobs or influence
  ➔ Include in-house know-how in the tender specifications
  ➔ New job as controller of ESCO

• ...

In summary:

“Define requirements and framework conditions as precisely as necessary, but as few as possible!”
Tendering Procedure for an EPC project
A short introduction

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Overview tendering procedure:

Unlimited interested parties

Letter of Intent

Qualification and selection criteria

Qualification and selection procedure

Tenders

Awarding criteria

Contractor

Evaluation of tenders

min. 5 bidders in not open procedure

min. 3 bidders in negotiation procedure
Tendering Procedure for EPC projects – Overview

Selection of best bids with a negotiation procedure
1. Announcement of tender (Europe wide)
2. Invitation to ESCOs to declare interest
3. Selection of suitable ESCOs/suppliers
4. Functional tender (with template contract)
5. Submission of offers
6. Presentations of bidders and contract negotiations (2-3 rounds)
7. Tender evaluation & selection with cost-benefit analysis
8. Recommendation and decision for awarding, information for the tenderers
9. Signing of the contract
Awarding procedure for EPC projects – Details

Evaluation with negotiation procedure (details may vary with national procurement law)

0. Preparation of the tender

- Determination of goals, evaluation criteria and time schedule together with the client (= building owner)
- Preparation of the tender documents
- Coordination and releasing of the building owner
Awarding procedure for EPC projects – Details

1. Announcement of tender (in most cases together with 2.)
2. Invitation to ESCOs to declare interest

- Announcement of the tender first in the EU Official Journal and then on national level
- Formal description of the tender:
  - Client, contact person
  - Content of tender
  - Requirements for participation (minimal requirements not discriminating)
  - Criteria for tender selection (company related!)
  - Procedure, time schedule
- Limiting the number of bidders (e.g. 5-8) possible/recommendable
- Closing date for applications: 37 days
Awarding procedure for EPC projects – Details

3. Selection of suitable ESCOs/suppliers

The bidders are evaluated regarding (§§ 51 – 57):

- Professional authorisation (e.g. trade authorisation)
- Professional reliability (e.g. trade authorisation, …)
- Financial, economic capacity (e.g. annual balance sheet)
- Technical capacity (e.g. reference projects, staff quality)
- Further: trade register, account statement, fulfilment of social insurance and tax obligations

- The evaluation and bidder selection must be documented
- Only selected bidders will be invited to submit detailed offers
Awarding procedure for EPC projects – Details

4. Functional tender

- Functional specification of measures: description of the renovation needs and of technical, economic, organisational, financial and legal framework conditions
- Adequate deadline: about 3-6 weeks
- Musts:
  - Attach template contract
  - Do not disclose number or names of selected bidders until the contracts are signed

- Further details: slides of functional tender
Awarding procedure for EPC projects: Functional tender – evaluation criteria

4. Functional Tender (continuation):

- Defining the evaluation and awarding criteria (task related) (§20 (1), BVerG)
  - Monetary criteria (e.g. contracting rate, building costs subsidies, energy saving guarantees, investment costs, …)
    => all monetary criteria summarized in a cash value
  - Quality criteria (e.g. quality of the measures, user motivation concept, controlling concept, …)

- Weighting the evaluation criteria (Σ = 100)
  - Weighting can be chosen freely
  - Monetary criteria have typical min. 70 %

- Description of the evaluation criteria in the tender

- Detailed request of the evaluation criteria
  - Recommendation: defining a tender sample with subchapters
Awarding procedure for EPC projects – Details

5. Submission of offers
   ➔ No formal opening session (§ 88 (2))

6. Presentation of bidders and contract negotiations
   ➔ Formal check of offers (deadline, completeness, accuracy of calculations, correct signature etc.)
   ➔ Questionnaire for bidders, invitation to explain details
   ➔ Presentation by the bidder
   ➔ 2-3 negotiation rounds
      ✗ Take minutes from all results from each negotiation round!
Awarding procedure for EPC projects – Details

7. Tender evaluation and selection with cost-benefit analysis
   ➔ Evaluate bidders after each negotiation round!

8. Recommendations and decision for awarding, information for the tenderers
   ➔ Final documentation of bidders and evaluation results
   ➔ Recommendation for client / decision maker
   ➔ It is the client who decides!
   ➔ Clients informs the selected bidder and keeps a nondisclosure period of 14 days

9. Signing of the contract
Framework conditions of procurement law in Austria (1/2)

1. Tender procedure: Negotiation procedure with previous announcement (according BVerG § 25 chap. 5 point 2)

2. European law:
   - DIRECTIVE 2004/17/EC of 31 March 2004: coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors
   - DIRECTIVE 2004/18/EC of 31 March 2004: on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts

3. Minimum and maximum price thresholds
   - For service contracts € 211,000,- (VO-EG No. 2083/2005 from 19.12.05)
   - For construction contracts € 5,278,000,- (VO-EG No. 2083/2005 from 19.12.05)
   - Calculation of threshold: total order volume over contract periode
   - EPC projects are mostly above these threshold values
Framework conditions of procurement law in Austria (2/2)

4. **EPC contracts are service contracts** (as long as construction works comprise not more than 50% of the contract)

5. **In which cases are functional tenders permitted?**
   - Goals and framework conditions are clearly defined, but
   - Amount and kind of measures (at least partly) left open
   - Performance-related remuneration

6. **Main deliveries of EPC-projects are**
   - Securing a performance and price guarantee
   - Providing and operating energy supply systems (heating, electricity, cooling, etc.)

7. **Public tenders with negotiation phase require Europe-wide calls**
Evaluation of tenders with a cost-benefit analysis

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The Cost-Benefit Analysis – Definition

Definition (Wikipedia, 02/2006):

- The Cost-benefit analysis (CBA) is a comparing evaluation tool for different (complex) alternative actions. The purpose of CBA is to rank the alternative actions by a multi-dimension target system according to the preferences of the decision-maker.
- During CBA, quantitative values may also be assigned to less tangible effects such as risk, loss of reputation, market penetration, long-term strategy alignment, etc."
- The advantage of CBA is the transparency and plausibility of the decision making process. On the basis of the quantitative evaluation a comparability will be accomplished, which can not be effected without this method.

► CBA is a tool for the integrated evaluation of costs (e.g. contracting rate, contribution to the renovation costs) and quality criteria (e.g. effects of energy saving measures, user motivation concept etc.) of different EPC offers.
Example of tender evaluation for a concrete EPC project

➔ EPC project Municipality Ansfelden
### Overview evaluation criteria

**Municipality Ansfelden**

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Max. Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallest total costs</td>
<td>max. 50%</td>
</tr>
<tr>
<td>Highest energy savings guarantee</td>
<td>max. 20%</td>
</tr>
<tr>
<td>Quality, kind and amount of the suggested measures</td>
<td>max. 20%</td>
</tr>
<tr>
<td>User motivation concept</td>
<td>max. 5%</td>
</tr>
<tr>
<td>Monitoring system</td>
<td>max. 5%</td>
</tr>
</tbody>
</table>

| Total                                                    | max. 100%       |
Overview offers: Energy Savings

Guaranteed Energy Savings

<table>
<thead>
<tr>
<th>Bidder</th>
<th>First offer</th>
<th>1. negotiation</th>
<th>2. negotiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder 1</td>
<td>79.279</td>
<td>79.279</td>
<td>79.354</td>
</tr>
<tr>
<td>Bidder 2</td>
<td>54.080</td>
<td>72.097</td>
<td>72.097</td>
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<tr>
<td>Bidder 3</td>
<td>47.564</td>
<td>49.671</td>
<td>49.670</td>
</tr>
<tr>
<td>Bidder 4</td>
<td>70.272</td>
<td>34.333</td>
<td>34.333</td>
</tr>
<tr>
<td>Bidder 5</td>
<td>42.500</td>
<td>42.500</td>
<td>42.500</td>
</tr>
</tbody>
</table>
Overview Offers: Total investment costs

Total investment costs

<table>
<thead>
<tr>
<th>EUR</th>
<th>Bidder 1</th>
<th>Bidder 2</th>
<th>Bidder 3</th>
<th>Bidder 4</th>
<th>Bidder 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.199.080</td>
<td>1.397.220</td>
<td>1.260.485</td>
<td>2.637.381</td>
<td>1.367.541</td>
</tr>
<tr>
<td>500.000</td>
<td>1.199.080</td>
<td>1.467.331</td>
<td>1.249.621</td>
<td>1.191.161</td>
<td>1.367.541</td>
</tr>
<tr>
<td>1.000.000</td>
<td>1.193.904</td>
<td>1.467.331</td>
<td>1.249.621</td>
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<td>1.467.331</td>
<td>1.249.621</td>
<td>1.191.161</td>
<td>1.367.541</td>
</tr>
</tbody>
</table>

- **First offer**
- **1. negotiation**
- **2. negotiation**
Overview offers: Overall evaluation

<table>
<thead>
<tr>
<th>Bidder 1</th>
<th>Bidder 2</th>
<th>Bidder 3</th>
<th>Bidder 4</th>
<th>Bidder 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>First offer</td>
<td>97,3</td>
<td>87,4</td>
<td>78,3</td>
<td>78,3</td>
</tr>
<tr>
<td>1. negotiation</td>
<td>92,5</td>
<td>89,9</td>
<td>82,8</td>
<td>71,9</td>
</tr>
<tr>
<td>2. negotiation</td>
<td>97,9</td>
<td>90,3</td>
<td>82,4</td>
<td>71,8</td>
</tr>
</tbody>
</table>

The above numbers are specified for ten years contract duration.
Overview offers – Points distribution according to criteria – Evaluation

<table>
<thead>
<tr>
<th></th>
<th>Bidder 1</th>
<th>Bidder 2</th>
<th>Bidder 3</th>
<th>Bidder 4</th>
<th>Bidder 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>smallest total costs</td>
<td>47,9</td>
<td>42,9</td>
<td>50</td>
<td>36,2</td>
<td>37,6</td>
</tr>
<tr>
<td>highest ES guarantee</td>
<td>20</td>
<td>18,2</td>
<td>12,5</td>
<td>8,7</td>
<td>10,7</td>
</tr>
<tr>
<td>quality of ES measures</td>
<td>20</td>
<td>19,2</td>
<td>10,8</td>
<td>17,9</td>
<td>14</td>
</tr>
<tr>
<td>user motivation concept</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>monitoring system</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

ES = energy savings

The above numbers are specified for ten years contract duration.
Further Procedure

• Awarding the best offer by the municipality government
• Notification of the bidders
• Non-disclosure period of 14 days
• Integration of the negotiation results into the final contract
• Start of implementation during summer 2003
• Implementation finished in autumn 2004 (excluding the renovation high school Ansfelden ➔ will follow after locating further subsidies)
• Contract duration 10 years (saving guarantee, continuous professional operation and maintenance, user motivation etc.)
Results contracting-pool Ansfelden – a Thermoprofit-Project

Pool of 21 municipal buildings and the street lighting:
- Total investment costs: 1,2 Mio. €
- Heat energy savings 31% = 33,000 €
- Electric energy savings 36% = 54,000 €
- Contract time: 01.08.2003 – 2013
- Contracting rate: 111,926 € (incl. non energetic measures)
- Enhancement of economic efficiency through pool-establishment
- Integrated school refurbishment (guarantee modell with building subsidy and higher contracting rate)
Questions???

Thanks for your active participation!

Thermal Comfort
The Team: Graz Energy Agency Ltd.

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