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Quality assurance for energy efficiency services (EES)

A test case from Austria

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Why is quality assurance important for energy efficiency services (EES)?

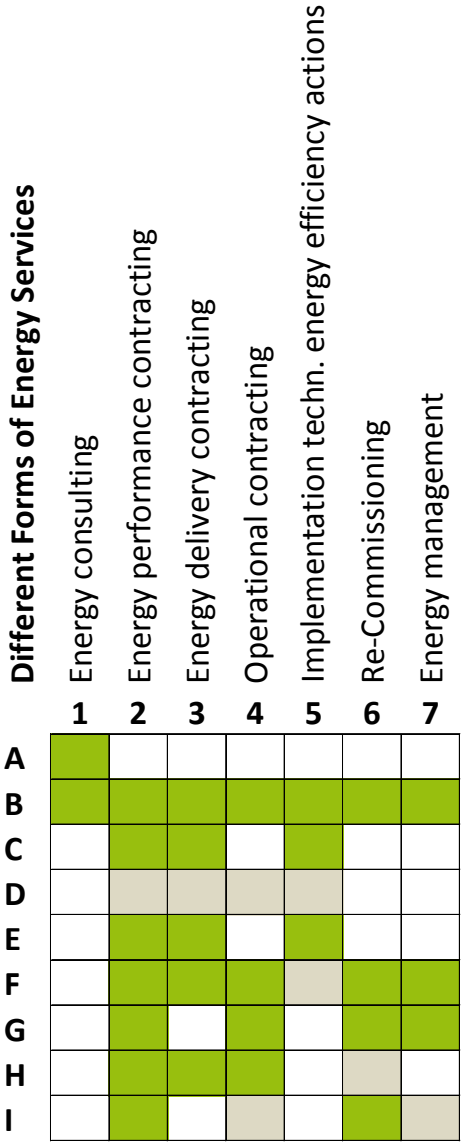
- **EES are not self-explaining – but a heterogeneous and complex concept**
  - EES provider can make complex things more transparent
  - EES providers can differentiate from each other without telling long stories
  - From the customers' perspective: Do good and show it!
- **Good practice examples of quality assurance**
  - Energy management systems according to EN 50001
  - Sustainable building certificates contributed to a market up-take

Heterogeneity of EES

EN 15900 defines characteristics of **„full“ EES**
BUT many different forms of **„partial“ EES on the market**

Heterogeneity needs to be reflected in different elements of quality

Steps of the Value Chain
Information and motivation
Consulting and analysis
Planning
Finance and public funding
Installation and technical implementation
Energetic optimisation of operational phase
Monitoring and Measurement & Verification
Warranty services
User motivation

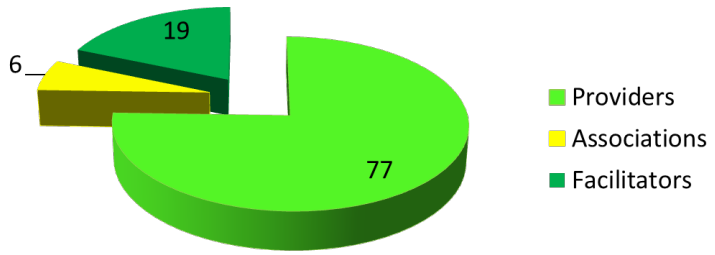


EES quality certification in Austria

Code of Conduct for EPC as a starting point

- **Code defines 9 principles to ensure a transparent and trustworthy high quality EPC market across Europe**
  - The EPC provider delivers economically efficient savings
  - The EPC provider takes over the performance risks
  - Savings are guaranteed by the EPC provider and determined by M&V
  - The EPC provider supports long-term use of energy management
  - The relationship between the EPC provider and the Client is long-term, fair and transparent
  - All steps in the process of the EPC project are conducted lawfully and with integrity
  - The EPC provider supports the Client in financing of EPC project
  - The EPC provider ensures qualified staff for EPC project implementation
  - The EPC provider focuses on high quality and care in all phases of project implementation

No of signatories: 102



EES quality certification in Austria

Step 1: Selection of quality criteria

With regard to certification of quality the following three dimensions can be certified:

- The energy service provider
- The quality standards for the service provided
- The order quality (preparedness of the client)

→ Decision to focus on quality criteria for energy efficiency service

Quality criteria for the energy service provider	
A-1	Educated and experienced staff
A-2	References
A-3	Duration of market presence
A-4	Portfolio of services
A-5	Coverage of the portfolio of services
A-6	Market appearance
A-7	Other quality assurance instruments
Quality criteria for the energy efficieny service	
B-1	Adequacy of energy audit
B-2	Service level regarding the implementation of technical measures
B-3	Energy savings guarantee
B-4	Verification of savings
B-5	Conservation of value and maintenance
B-6	Communication between provider and client
B-7	Adherence to user comfort
B-8	User information and motivation
B-9	Transparency and completeness of contractual stipulations
Criteria regarding order quality	
C-1	Adequacy of performance description
C-2	Selection process
C-3	Support during performance delivery
C-4	Credit-worthiness

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Step 2: Operationalising quality criteria

	Assigning quality criteria to different EES types	quality criteria for services								
		Adequacy analysis	Service level regarding the implementation of technical measures	Savings guarantee	Verification of savings	Conservation of value and maintenance	Communication between provider and client	Adherence of user comfort	User information and motivation	Transparency and completeness of contractual stipulations
		2.1.	2.2.	2.3.	2.4.	2.5.	2.6.	2.7.	2.8.	2.9.
1	Energy consulting									
2	Energy performance contracting									
3	Energy delivery contracting									
4	Operational contracting									
5	Implementation technical energy efficiency actions									
6	Re-Commissioning									
7	Energy management									

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Step 2: Operationalising quality criteria

Developing traceable assessment criteria and verification procedures

- The decision whether a certain criterion is fulfilled or not can be taken based on the presence resp. absence of clearly defined conditions. This can be **either a Yes-No-decision or a decision on a certain degree of performance** (e.g. point system from 1-10);
- The decision needs to be possible based on **available information in different points in time**: a) before project start: **ex-ante** verification; or b) after the end of the project: **ex-post** verification.

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Step 2: Operationalising quality criteria

Assessment criteria and verification process for quality criteria “Energy Savings Guarantee”.

No.	Assessment criteria	Evidence	Verification	Comment
3-1	Adequate level of savings guarantee	This requires an energy analysis conducted prior to the EES. In this case the level of the savings guarantee has to match with the identified economic energy savings potential from the analysis (max. deviation: 15%)	Draw a comparison between the contractually guaranteed savings and the economic savings potential according to the analysis.	Consider that the period under consideration for the definition of the economic saving potentials from the analysis equals the run-time of the EES contract.
3-2	**Remuneration depends on the attainment of the savings guarantee**	Grade 1: The reduction of remuneration has to be at least the same level as the level of the non-attainment of the guarantee assurance. Grade 2: Achieved savings are shared between the EES provider and the client according to a defined ratio.	On the basis of the contractual arrangements with respect to the guarantee assurance.	Grading leads to a differentiation with respect to the quality of the guarantee assurance: Grade 1 is used conventional EPC contracts; Grade 2 is used in e.g. Re-Commissioning contracts.
3-3	Adequate intervals for the inspection of compliance with the guarantee assurance.	In principle once a year. Divergence is allowed only if variations for technical reasons of the savings effect can be ruled out over a longer period.	Ex-ante: On the basis of contractual arrangements. Ex-post: Have the set intervals really been adhered to?	The exception refers to light and pump contracting for instance. In these cases, longer intervals are acceptable.

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Step 2: Operationalising quality criteria

Assessment criteria and verification process for quality criteria “Communication between EES-provider and client”.

No.	Assessment criteria	Evidence	Verification	Comment
6-1	Announcement of contact persons	Definition of a contact person with respective task description in a suitable document (contract, project handbook); Amendment in case of change of contact person or task description.	Ex-ante: Are contact persons and their tasks described in a contractually relevant document? Ex-post: Have changes of contact persons or their tasks been written down mandatory?	In longer-lasting EES (e.g. contracting models) the traceability of changes of the project team is of particular importance.
6-2	Access to data and data exchange (in both directions)	Availability of an approach or tool which ensures a simple data exchange.	Ex-ante: Examination of the approach or tool for data exchange based on reference projects. Ex-post: Examination of satisfaction with data exchange; utilisation of tools in practice.	Usually the technical facilities are at hand but sometimes they are not applied productively.
6-3	**Capturing and continuous actualisation of all measures carried out by the provider**	Availability of a tool, which provides the possibility to capture all measures clearly arranged.	Ex-ante: Examination of the offered tool for capturing measures based on reference projects. Ex-post: How up-to-date are the recorded data for implementing measures during the project and after the end of the project (random sample)?	

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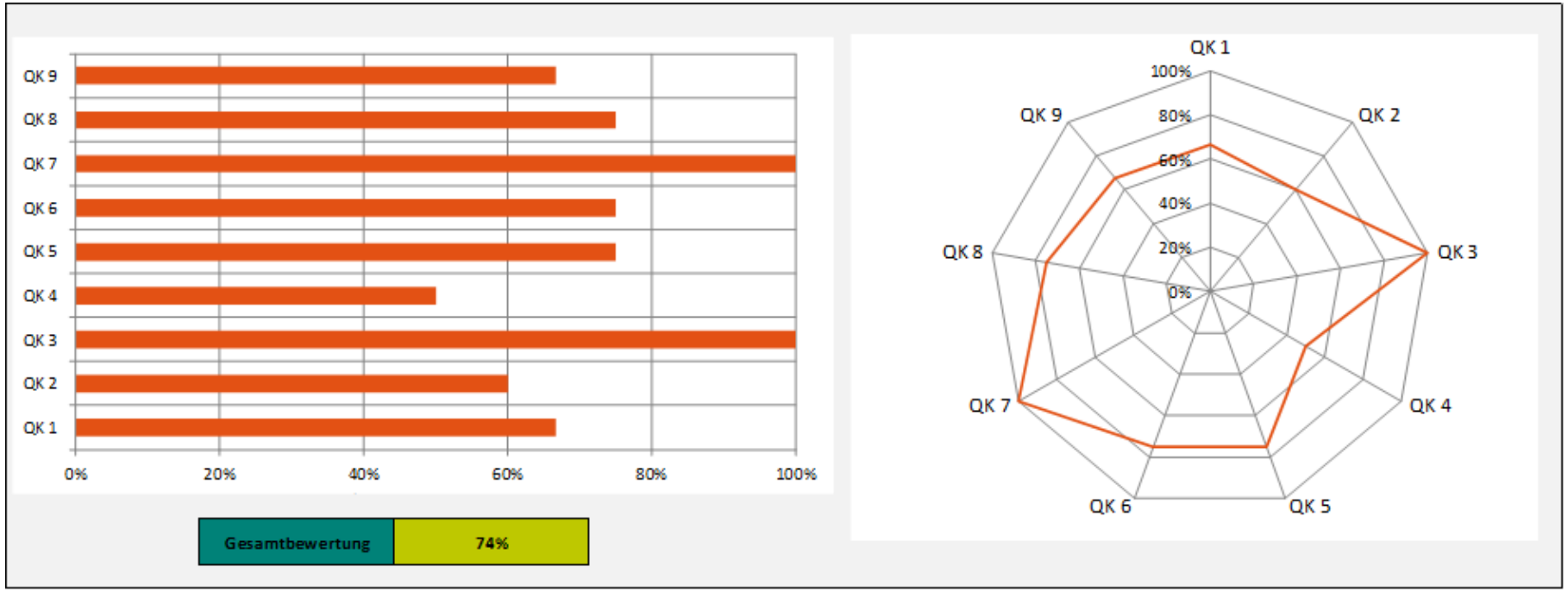
Step 3: Conflating evaluation



Example of overall evaluation of an EPC offer

EES quality certification in Austria

Current Status

- **DECA has started a test phase (till autumn 2015)**

Further steps of market introduction and institutional setting are not fully decided yet:

- **Phase 1: Application as guideline for bilateral agreements**
- **Phase 2: Third party certification** assuring that the product, service or system in question meets specific requirements
  - implemented either by DECA or
  - independent certification body

A few points for discussion

- **Your opinion on the importance of quality assurance instruments for the development of the EES markets?**
  - Does it really address important barriers?
- **Can the Austrian approach be transferred to other countries?**
  - Or should we strive for a European-wide approach → CEN standard?
- **Your advice on the institutional setting?**
  - Association or independent certification body

Thank you for your attention!

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