

Basic Criteria for Award of the Environmental Label

Energy Services provided under Guaranteed Energy Savings Contracts

RAL-UZ 170



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RAL gGmbH

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Specimen Contract

Appendix 1: Conversion of Final Energy into Greenhouse Gas Emissions and Cumulative Energy Consumption (CEC)

Appendix 2: Cross-Reference Table of Provisions of Different Specimen Contracts

1 Introduction

1.1 Preface

The Environmental Label Jury has set up these Basic Criteria for Award of the Blue Angel Eco-Label in co-operation with the Federal Minister for the Environment, Nature Conservation and Nuclear Safety, Umweltbundesamt (Federal Environmental Agency) and considering the results of expert hearings conducted by RAL gGmbH. RAL gGmbH has been tasked with awarding the Environmental Label.

Upon application to RAL gGmbH and on the basis of a Contract on the Use of the Environmental Label to be concluded with RAL gGmbH the permission to use the Blue Angel eco-label may be granted for all projects comprising services that meet the requirements specified hereinafter.

1.2 Background

The existing building stock offers significant energy savings potentials that can be realized by targeted investment in energy-efficient building technologies and professional energy management. Numerous pilot projects in the public building sector demonstrate that the consultation of energy service providers can often produce savings between 20 and 30 percent in the field of process equipment. Necessary investments can be regularly financed from savings on energy costs. Here, energy services provided under guaranteed energy savings contracts present a particularly interesting opportunity to achieve substantial energy savings without investment costs to be borne by the property management companies. In doing so, a specialised energy services provider conducts the analysis and energetic optimization of a property. The provider uses its own money to invest at its own risk in the technical building equipment and, at the same time, guarantees to achieve the agreed minimum savings in energy costs over a long-time contract period. In consideration of the services rendered the energy services provider shall receive a base remuneration which is often less than the energy costs saved. Thus, the guaranteed energy savings contract does not only result in a reduction of greenhouse gases but also in a reduction of property operating costs. Should the energy services provider fail to achieve the savings it shall be liable to financial compensation.

Even higher savings can be achieved if one does not only improve process equipment for heating, cooling or hot-water production but also energetically renovates the building envelope by insulating and replacing the windows. The realization of such structural measures usually requires contributions to construction costs on the side of

the customer which will not be recovered before the end of the usual term of the guaranteed energy savings contracts.

The implementation of energy services to achieve guaranteed energy savings requires providers to have substantial knowledge and experience. It is true that these Basic Criteria for Award of the Blue Angel Eco-Label describe the criteria for model energy services yielding guaranteed energy savings but it continues to be indispensable for providers and customers to read and apply the relevant guidelines (see para. 1.4).

1.3 Goals of the Blue Angel Eco-Label

Reduction of energy consumption and greenhouse gas emissions are major goals of environmental protection. The Blue Angel eco-label for energy services provided under guaranteed energy savings contracts may be awarded to projects that may be considered as particularly exemplary, make a particularly significant contribution to reducing the impacts of climate change and distinguish themselves by a qualified energy management. The Blue Angel eco-label is to better visualise such exemplary projects and to inspire others do the same.

1.4 Definitions

Guaranteed Energy Savings Contract

A guaranteed energy savings contract is usually concluded between a property management company or a building owner and a qualified energy service provider. The contract specifies a guaranteed energy savings goal (usually energy costs) compared to the baseline i.e. compared to the energy consumption or energy costs prior to concluding the contract, that must be achieved each year over the term of the contract. For this purpose, the energy service provider invests at its own expense in the technical equipment of the building and, if the occasion arises, in the building itself. In exchange, the service provider receives regular payment (base remuneration) which the customer can often finance from the savings on energy costs. If the energy savings fall below the guaranteed savings amount the energy service provider under a guaranteed energy savings contract will have to financially compensate the customer for the savings that have not been achieved. Some synonyms for the term “guaranteed energy savings contract” would be *guaranteed success contracts* or *energy savings contracting*. Examples of guaranteed energy savings contracts are the specimen contracts of Deutsche Energie Agentur GmbH¹, Berlin Energieagentur GmbH²,

¹ Deutsche Energie-Agentur (German Energy Agency) (Publ.): Leitfaden Energiespar-Contracting - Vorbereitung und Durchführung von Energiespar-Contracting in Bundesliegenschaften (Guidelines for Energy Savings Contracting – Preparation and Implementation of Energy Savings Contracting for Federal Properties), 2008

Ministry for Environment, Energy, Agriculture and Consumer Protection of the Federal State of Hesse³, Umweltbundesamt (Federal Environmental Agency)⁴ or Oberste Baubehörde im Bayerischen Staatsministerium des Innern (Supreme Building Authority forming part of the Bavarian State Ministry of the Interior)⁵.

Energy Savings Contracting:

Energy savings contracting means the energy services provided under a guaranteed energy savings contract. Such services are provided by an energy service provider. A synonym would be *energy savings performance contracting*. The abbreviation is *ESC*.

Customer

The customer under a guaranteed energy savings contract is the building owner, the operator or user of the building, provided that they may influence the building technology or the existing building stock. As regards public authority buildings, the customer is usually the building management agency.

Energy Service Provider

The energy service provider is a specialised company that provides services in the fields of energy supply, automation and energy monitoring of buildings. The energy service provider is the contractor under a guaranteed energy savings contract. Possible synonyms would be *energy contractor* as well as *Energy Service Company* (ESCO).

Baseline

Baseline means the reference final energy consumption of a building for a defined use (minimum 1 calendar year) prior to the energetic optimization by an energy service provider with the respective costs. Here, the *baseline energy costs* represent the monetary value of energy consumption. In addition to energy consumption, the

² Berliner Energieagentur (Publisher): Die Energiesparpartnerschaft. Ein Berliner Erfolgsmodell, (Energy partnership - A Berlin Success Story), 2006

³ Hessisches Ministerium für Umwelt, Energie, Landwirtschaft und Verbraucherschutz (Ministry for Environment, Energy, Agriculture and Consumer Protection of the Federal State of Hesse) (Publisher): Leitfaden für Energiespar-Contracting in öffentlichen Liegenschaften (Guidelines for Energy Savings Contracting for Public Properties); Revised version of „Leitfaden für praxisnahe Verfahren zur Begründung von Energiespar-Contracting-Fällen in öffentlichen Liegenschaften im Bundesland Hessen“ (Guidelines for practical energy savings contracting in public properties in the Federal State of Hesse), 1998

⁴ Umweltbundesamt (Federal Environmental Agency) (Publisher): Energiespar-Contracting als Beitrag zu Klimaschutz und Kostensenkung (Energy savings contracting - a contribution to help protect the climate and reduce costs), Agricola, A., Seifried, D., Umweltbundesamt 2000, <http://www.umweltbundesamt.de/uba-info-medien/1903.html>

⁵ Oberste Baubehörde im Bayerischen Staatsministerium des Innern (Publisher) (Supreme Building Authority forming part of the Bavarian State Ministry of the Interior): Guidelines for Contracting – Part: Energy Savings Contracting, 2011

baseline can also include water consumption and other regular costs. The baseline forms the basis for evaluating the achievement of the guaranteed energy savings.

Base Remuneration

The energy service provider receives an annual base remuneration for its investments, planning activities, continuous energy management, maintenance work as well as for assuming the risk of investment. If the investments are low-investment or highly cost-intensive measures such base remuneration is regularly lower than the savings on energy costs. If the energy service provider takes on additional tasks (e.g. maintenance of the existing building technology) or makes investments that cannot be recovered within the term of the contract (e.g. renovation of the building envelope) the base remuneration may be more than the energy costs saved.

Contribution to Building Costs

The customer can reduce the base remuneration amount by means of a contribution to the building costs made available to the energy service provider. The energy service provider uses the contribution to building costs to realize investments and, as a result, reduce its own investment costs. This would be useful in those cases where own investment funds are available at favourable interest rates or where measures can be implemented that need to be taken anyway but do not directly result in energy cost savings (e.g. restoration of the piping system and replacement of the fittings).

Preparatory Phase

The guaranteed energy savings contract is performed in phases. Relevant with respect to these Basic Criteria are two phases: 'preparatory' and 'main execution' phase. In the preparatory phase the energy service provider implements technical and organizational measures determined during the tender phase or the detailed analysis in order to achieve the energy savings. That is why this phase is also called *building phase*. The end of the preparatory phase shall be stipulated in the contract.

Main Execution Phase

The main execution phase begins upon completion of the preparatory phase under the guaranteed energy savings contract. In the main execution phase the duration of which shall be specified in the contract (typically 6 to 15 years) the guaranteed energy savings must be realized. In the main execution phase, the energy service provider shall be responsible for the process equipment installed, conduct energy monitoring and present a report showing the savings achieved - supported by annual settlements.

2 Scope

These Basic Criteria apply to projects covered by a guaranteed energy savings contract concluded with an energy service provider. A project within the meaning of such contract is a building or a group of buildings. Projects are identified by an address or a definite name. Application for award of the Blue Angel eco-label shall be filed by either party to the guaranteed energy savings contract with the prior approval of the respective other contracting party. An application for the eco-label may not be filed until the first annual settlement and the first energy report (cf. para. 3.3.2) become available during the main execution phase which document the achievement of the guaranteed energy savings. Thereafter, application may be filed any time during the main execution phase of existing projects.

3 Requirements

3.1 General Requirements for the Guaranteed Energy Savings Contract

3.1.1 Conformity with Specimen Guaranteed Energy Savings Contracts

As regards the reimbursement mechanism and the services provided the guaranteed energy savings contract shall be clearly identifiable as such. To this end, the guaranteed energy savings contract shall at least include the following provisions:

- a) Contractually guaranteed cost savings compared to the baseline costs or contractually guaranteed maximum energy consumption (energy consumption cap),
- b) Financial compensation in case the energy savings fall below the guaranteed savings or the maximum allowable energy consumption is exceeded,
- c) The energy service provider shall make investments in the technical building equipment or in the building itself in order to sustainably reduce energy consumption,
- d) The energy service provider shall maintain its energy conservation measures in terms of DIN 31051⁶ over the entire term of the contract,
- e) Flexibility of the settlement mechanism in the case of changes in use, expansion and modernisation of the buildings.

⁶ DIN 31051: Fundamentals of maintenance

Compliance Verification

The applicant shall declare compliance with requirements in Annex 1, submit at least the relevant extracts from the guaranteed energy savings contract in Annex 2.1 and mark therein the paragraphs or articles, including the required provisions a) to e).

3.1.2 Key Contract Data

The applicant shall list the key data of the guaranteed energy savings contract:

- Contracting parties to the guaranteed energy savings contract,
- Baseline energy costs,
- Guaranteed annual energy cost savings,
- Cost of the investments made by the energy service provider,
- Amounts and due dates of the payments to be made by customer (base remuneration, contributions to building costs, if applicable),
- Period set for the implementation of the building measures (preparatory phase),
- Period set for achieving the guaranteed energy savings (main execution phase).

Compliance Verification

The applicant shall give the key data of the guaranteed energy savings contract in Annex 2 to the Contract and name the articles of the guaranteed energy savings contract (Annex 2.1) covering the respective agreements.

3.2 Contribution to Reducing the Impacts of Climate Change

3.2.1 Achieving the Guaranteed Energy Savings

The objectives of the guaranteed energy savings contract aiming at cost savings must be achieved. For this purpose, the applicant shall verify by means of the last annual settlement available upon filing the application that the contractually guaranteed cost savings have actually been achieved. The annual settlement submitted must be accepted by both contracting parties.

Compliance Verification

The applicant shall declare in Annex 1 that the contractually guaranteed cost savings have been achieved and submit the last annual settlement available upon filing the application as Annex 3. In Annex 4 to the Contract, the applicant shall quantify the cost savings achieved compared to the guaranteed cost savings as specified in the guaranteed energy savings contract and have the validity of the annual settlement confirmed by the respective other contracting party. The label awarding agency shall

be entitled to request the respective annual settlement for checking purposes - also during the contract term.

3.2.2 Greenhouse Gas Savings Amount

The contractually guaranteed energy savings shall result in a minimum 30 percent reduction in greenhouse gas emissions (in CO₂ equivalents) compared to the baseline emissions. The amount of the actually achieved reduction in greenhouse gas emissions shall be calculated on the basis of the annual settlement submitted in Annex 3. The emission factors specified in Annex 1 shall be used as basis of calculation.

Compliance Verification

The applicant shall declare compliance with this requirement in Annex 1 and specify the amount and the percentage of the actually achieved reductions in greenhouse gas emissions in Annex 5 to the Contract using the emission factors given in Appendix 1.

3.2.3 Energy Savings Amount

In order to make sure that the reductions in greenhouse gas emissions set forth in para. 3.2.2 are not only due to a change in energy source the applicant shall additionally provide evidence of the energy savings actually achieved. The energy consumption evaluated in terms of primary energy shall be calculated using the methodology of cumulative energy consumption (CEC)⁷. The applicant shall demonstrate by means of the annual settlement presented in Annex 3 that the cumulative energy consumption achieved is at least 25 percent less than the baseline consumption. The CEC conversion factors specified in Appendix 1 shall be used as basis of calculation.

Compliance Verification

The applicant shall declare compliance with this requirement in Annex 1 to the Contract and give in Annex 5 to the Contract amount and percentage of the actually achieved energy savings evaluated in terms of primary energy using the CEC conversion factors listed in Appendix 1.

⁷ Since GEMIS 4.2 the cumulative energy consumption (CEC) has been the standard indicator of energetic resource consumption (primary energies). <http://www.gemis.de>

3.2.4 Incentive to Achieve Energy Savings Beyond Mandatory Levels

The guaranteed energy savings contract shall provide an incentive for both the energy service provider and the customer to achieve savings beyond the contractually agreed level (bonus scheme). This requires a monetary division of the extra-mandatory savings where the energy service provider receives a minimum of 30 percent and a maximum of 70 percent of the cost savings beyond the guaranteed savings as remuneration.

Compliance Verification

The applicant shall declare compliance with these requirements in Annex 1, give the division of the extra-mandatory savings as well as name and mark the relevant article of the guaranteed energy savings contract (Annex 2.1).

3.3 Sustainability of the Measures Implemented

3.3.1 Implementation of Investments

The guaranteed energy savings contract shall include a provision that specifies and explains the agreed investments and allows the customer to check their plausibility.

Compliance Verification

The applicant shall declare compliance with these requirements in Annex 1, name and mark the relevant paragraph or article of the guaranteed energy savings contract (Annex 2.1).

3.3.2 Introduction of an Energy Management System

The project shall be accompanied by an energy management system or at least continuous energy controlling supervised by the energy service provider (contractor). Both, energy service provider and customer, shall play an active part in the working of the energy management system, for example, in defining an energy policy. The energy service provider shall – at least once per year – present to the customer an energy report showing the energy consumption figures and consumption parameters (e.g. kWh/m²_{BGF}) and their development over the term of the contract starting with the baseline consumption values. Energy consumption figures shall be recorded at least once per month and made available to electronic evaluation. The standards DIN EN 16001 or DIN EN ISO 50001⁸ may serve as a basis for the energy management

⁸ DIN EN 16001: Energy Management Systems - Requirements with guidance for use
or DIN EN ISO/ 50001 Energy Management Systems - Requirements with guidance for use

system. In addition, the energy report shall document energy consumption-related changes in the use of the subject-matter of the contract and adjust the use and climate parameters in terms of the guaranteed energy savings contract. This documentation shall give the customer a clear understanding of whether the guaranteed energy savings have been achieved. The energy report may form part of the annual settlement.

Compliance Verification

The applicant shall declare compliance with these requirements in Annex 1 and submit the last energy report available as Annex 6 to the Contract.

3.3.3 Transfer of Knowledge to the Technical Operations Staff

The energy service provider shall hold regular training courses on energy-efficient building operation for customer's technical operations staff.

Compliance Verification

The applicant shall declare compliance with this requirement in Annex 1 and give dates and contents of the training courses for the technical operations staff.

3.3.4 Installation of Building Automation Systems

The buildings that fall within the scope of the guaranteed energy savings contract shall be equipped with automation systems. Building automation systems usually means all control and process units which allow an automatic adaptation of the system parameters to the current demand. If, following the implementation of the energy conservation measures, buildings still have annual energy costs of over 100,000 Euros the energy service provider shall install building automation systems with a management level („central building control system“) or enable an existing one to record the current physical state of the technical building equipment (e.g. volume flow, temperature, pressure), determine energy consumptions and improve system operations in terms of control technology.

Compliance Verification

The applicant shall declare compliance with this requirement in Annex 1.

3.3.5 Type of Investments

The investments made by the energy service provider shall comprise at least three crafts according to the “Vergabe- und Vertragsordnung für Bauleistungen” (German Contract Procedures for Building Works) – Part C (VOB/C). Such crafts may be, for example:

- DIN 18 345 Thermal insulation composite systems,
- DIN 18 361 Glazing works,
- DIN 18 339 Sheet metal works,
- DIN 18 379 Room ventilation systems,
- DIN 18 380 Installation of central heating systems and hot water supply systems,
- DIN 18 381 Gas, water and sewage plumbing works inside of buildings,
- DIN 18 382 Electrical installations in buildings,
- DIN 18 385 Conveying installations, lifts, escalators and moving walkways,
- DIN 18 386 Building automation and control systems,
- DIN 18 421 Insulation works on technical installations.

As an alternative to naming the crafts according to VOB/C, the names of the cost groups under DIN 276 Building Costs relating to the crafts may also be used to identify the crafts. The minimum three different cost groups to be named shall differ from each other at the second level of classification. (examples: 420 heat-supply systems, 430 air treatment systems, 440 power installations, 460 transport systems, 480 building automation.)

Compliance Verification

The applicant shall declare compliance with this requirement and name -in Annex 1 to the Contract- the crafts or cost groups where the energy service provider has made investments.

3.3.6 Qualification of the Energy Service Provider

The energy service provider shall meet the trade law requirements for performing the services provided and be a member of a corresponding trade association or an adequate insurance company.

Compliance Verification

The applicant shall declare compliance with this requirement in Annex 1 and submit as Annex 7 to the Contract a declaration from the energy service provider confirming that the latter meets these requirements and naming the trade associations or insurance company of which the energy service provider is a member.

4 Applicants and Parties Involved

- 4.1** Either of the parties to the guaranteed energy savings contract under para. 2 shall be eligible for application. The respective other contracting party shall agree to the application.

4.2 Parties involved in the award process:

- RAL gGmbH to award the Blue Angel eco-label,
- the federal state being home to the project covered by a guaranteed energy savings contract,
- Umweltbundesamt (Federal Environmental Agency) which after the signing of the contract receives all data and documents submitted in application for the Blue Angel in order to be able to further develop the Basic Award Criteria.

5 Use of the Blue Angel Environmental Label

5.1 The terms governing the use of the Environmental Label by the applicant are stipulated by a Contract on the Use of the Environmental Label to be concluded with RAL gGmbH.

5.2 Within the scope of such contract the applicant undertakes to comply with the requirements under paragraph 3 while using the Environmental Label.

5.3 Contracts on the Use of the Environmental Label are concluded to fix the terms for the certification of projects under paragraph 2 covered by a guaranteed energy savings contract. Such contracts shall run until December 31, 2021– but no longer than till the end of the guaranteed energy savings contract.

They shall be extended by periods of one year each, unless terminated in writing by March 31, 2021 or March 31 of the respective year of extension.

After the expiry of the contract the Environmental Label may neither be used for labelling nor for advertising purposes.

5.4 The Contract on the Use of the Environmental Label shall specify:

5.4.1 Applicant

5.4.2 Name of the project, building, property, group of buildings that will use the Blue Angel eco-label.

