



IMPLEMENTATION OF THE QUALITEE BUSINESS MODEL IN LATVIA



QualitEE Project

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1 EXECUTIVE SUMMARY

Based on requirements of the Energy Efficiency Directive, in 2019 the Ministry of Economy invited ESCOs to register on the list of energy efficiency service providers.¹ The list is informative and aims to improve the availability of information and facilitate ESCO market development. During the QualitEE project, several bilateral meetings with representatives from the Ministry of Economics, ALTUM (national development bank), ESCOs, national promotion team (NPT) and national discussion platform (NDP) meetings have been organized to introduce the quality criteria and to discuss the possible application of them. Beside policy makers ESCO companies (working in building, industry and lighting sectors), energy auditors working with big companies and big energy consumers and energy utility companies have been involved as well.

Currently, the registration of ESCO companies takes place in accordance with the evaluation of the ESCO contract (EX-ANTE evaluation based on submitted EPC contract). ESCO should fulfil quality criteria to be eligible to be registered as an energy service provider. The listed ESCOs must provide a copy of the energy efficiency service contract to Ministry of Economy where the contract is evaluated. As well ESCO should notify Ministry of Economics about the fulfilment of EPC contract and each year ESCO should report on number of projects and energy savings achieved. In the EPC contract energy savings should be guaranteed, measurement and verification procedure of savings, the energy efficiency service costs shall be covered with a part of the financial value of the energy efficiency improvement or energy savings that have arisen from the provision of the energy efficiency services.

¹https://em.gov.lv/lv/nozares_politika/energoefektivitate_un_siltumapgade/energoefektivitate/energoefektivitates_pakalpojumi/esko_pakalpojumu_sniedzēju_saraksts/

2 INTRODUCTION

The objective of this report is to provide information about the national implementation of quality assurance schemes for energy efficiency services (EES). This report has been developed as part of the "QualitEE – Quality Certification Frameworks for Energy Efficiency Services" project supported by the EU's Horizon 2020 programme. The QualitEE project aims to increase investment in EES and improve trust in service providers.

This report aims to cover the practical implementation of the business model selected for Latvia. A business model is the core growth strategy for most businesses. . It can be defined as “the rationale of how an organization creates, delivers, and captures value, in economic, social, cultural or other contexts. The process of business-model construction forms a part of the business strategy”².

It will describe the basic idea of quality assurance for energy efficiency services in general, the idea of the national scheme and some facts about the development and implementation process of the national scheme (background)

² Osterwalder, Pigneur, Smith, *et al.*: “Business Model Generation” (2010)

3 THE CASE OF LATVIA

3.1 Description

With the preparation of the new National Climate and Energy Plan 2030, Latvia has set new climate and energy targets for 2030. The key objectives for 2030 are the energy efficiency target with a commitment approximately 20% reduction in final energy consumption (cumulative energy end-use savings of 20 473 GWh) and an increase in renewable energy sources to 50% in final energy consumption, which means an increase of around 10% compared to 39% today (2017). There are also new targets for the share of renewable energy produced in transport and for the renovation of public buildings. In view of the climate and energy targets, it is estimated that over the next 10 years Latvia needs around 8,2 billion EUR in investment in new projects and energy efficiency measures.

According to the targets of the National Energy and Climate Plan, around 445 million EUR need to be invested annually in energy efficiency and renewable measures over the next 10 years, which is twice as much the cumulative investment in 2018. In order to be able to meet Latvia's climate and energy objectives, it is necessary to double the amount of investment in energy efficiency and renewable energy projects. Since almost all EU funds for energy and climate projects are used in the form of grants, investment in energy and climate projects is characterised by uneven nature and uncertainty.

One of the sectors capable of contributing significantly to the development of new projects, while also attracting private investment, are energy efficiency service providers or ESCO companies. The involvement of ESCO and private investment is critical to meeting the 2030 targets

The requirements for energy efficiency service providers in Latvia are specified in the Energy Efficiency Law (Section 14). However, at the moment the EPC market is still emerging. So far EPC projects have been conducted in the residential building and lighting sectors, while no EPC projects have been executed in the public building sector. The QualitEE market study conducted in 2019 surveyed 173 energy-efficiency service providers from 15 European countries. The same type of assessment was also carried out in 2015 and 2017. The results of the study showed that over the last year the overall market for energy efficiency services in Europe is increasing compared to Latvia, where there are no significant changes. Overall, the majority of EU respondents (57%) indicated that their national market has been growing over the past 12 months, of which 16% assessed it as significant growth (+6% and above) and 41% as small growth (between 1% and 5%). In the Latvian market, only 33% indicated that the market has grown over the past 12 months, describing it as a small growth, while the other 67% noted that there have been no significant changes in the market. It should be noted that the figures are more positive at both European and Latvian level compared to the survey conducted in 2017. The most significant barriers to EPC business revealed in the survey are the complexity of the concept, lack of information identified by 58% of the respondents followed by lack of trust in the ESCO industry identified by 53% of the respondents.

As for Latvia, the lack of trust in the ESCO industry was also recognised as one of the main obstacles, besides the lack of “government support”, “available financing” and “lack of customer demand”.

It's necessary to inform and educate potential customers and energy consumers, including the national and municipal sectors, of the possibilities to attract ESCO to implement and finance new

projects. A majority of respondents acknowledged that pressure on customers to cut costs as well as increasing energy prices are the most important drivers for the development of EPC projects.





3.2 Phases of quality assurance scheme procurement

3.2.1 Quality assessment criteria and compliance

The quality criteria presented below have been developed within the QualitEE project and are based on “preliminary quality criteria for energy efficiency services” developed for the Austrian market within the Transparense project.

This comprehensive set of technical, economic, communicational, and other criteria has been defined to be applied on energy efficiency services, with special focus on “Energy Performance Contracting” (EPC) and “Energy Supply Contracting” (ESC) in order to ensure minimum quality requirements which all services must comply with to be labelled as high-quality services.

The quality criteria selected have been object of discussion among stakeholders at both, national and European levels. Consequently, the feedback has been incorporated allowing us to present an extended and agreed set of criteria. These criteria are:

-  QC1 Adequate analysis: the analysis of an energy-consuming unit (building, industrial establishment, facility, etc.) concerning possible energy savings including the identification of possible energy efficiency improvement (EEI) measures is often the first step in an EES. The quality of analysis will thus, also have an enormous impact on the overall quality of EES.
-  QC2 Quality of implementation of technical energy efficiency improvement measures: In many cases, the rendering of an EES is connected with the implementation of technical measures. A broad spectrum of quality standards can be met in practice while rendering services in this respect. QC2, therefore, stipulates a range of quality standards that must be complied with when implementing technical measures. In the process, compliance with such standards that regulate the implementation of technical measures is of paramount importance. Moreover, it must be ensured that the operator of the facility will be in a position to operate the newly installed facilities after the end of the project.
-  QC3 Savings guarantee: some EES come with the promise that savings of a specific size will be realized. Such promises – routinely known as savings guarantee – must meet specific requirements for them to truly be beneficial to the client.
-  QC4 Verification of energy savings: The identification and/or implementation of energy savings is at the centre of EES. For this reason, the quality of an EES is also determined by the way that energy savings are verified. Energy savings cannot be measured directly but are always calculated. In simple terms, three approaches are differentiated:
 - Verification based on measured energy consumption: even in places where measurement equipment is available for recording energy consumption, energy-saving is determined through the comparison of the current value with a reference consumption (frequently called a “baseline”). At the same time, factors impacting energy consumption that are not caused by EES must be “filtered out” (often referred to as an “adjustment process” e.g. for the impact of variations in weather conditions);
 - Engineering calculation of energy-savings: usage of complex methods of calculation and simulation largely based on standards;
 - Expert estimation: derivation from savings realized from similar and comparable cases.

- ✔ QC5 Value retention and maintenance: some EES also cover services relating to the maintenance and repairs of newly installed or existing facilities. Quality of these services has a direct influence on the availability of the (energy) system and retention of its value. As these factors ensure desired benefits and long-term sustainability of projects beyond the contract duration, they also influence the overall quality of the EES.
- ✔ QC6 Communication between the contractor and the client: In addition to technical quality, the type and scope of communication between the EES provider and the client contributes to the quality of EES. EES providers assume only partial responsibilities from existing operating personnel. To avoid problems in the implementation of the EES the interfaces between contractual parties must be effectively managed through continuous and well-defined communication.
- ✔ QC7 Maintenance of users' comfort: The execution of EES shall not lead to any impediment on the comfort of the user. In this context, users' comfort requirements can be assessed either through physical parameters (temperature, air quality, luminous intensity, etc.) or captured by collecting feedback via a comfort survey tool.
- ✔ QC 8 Information and motivation of users: Since in most cases, users have a considerable impact on the energy consumption of an object and thus, also influence the success of EES, selected EES approaches entail actions for the information and motivation of users.
Considering the heterogeneity of user-information activities, QC 8 contains just a "minimum package". In real EES projects, however, it may be advisable to extend user-information activities beyond the minimum requirements as included in QC 8.
- ✔ QC9 Comprehensible contractual stipulations for the contracting of specific regulatory requirements: several years of experience in contracting projects have shown that their quality is not just of a technical and communicative nature but that the shaping of the Contract also contributes decisively to the quality of a project. The Contract must contain regulations for individual issues such as ownership transfer, handling of energy price risk, insurance or exit regulations, that will repeatedly lead to problems in practice if they were not regulated.

Where possible, the quality criteria were supplemented with references to Latvian legislation and relevant standards. Beside existing European quality criteria some more basic criteria have been added for the companies. The ESCO certification scheme should, on the one hand, enhance the visibility and credibility of ESCO companies and, on the other hand, should not create additional administrative and or financial barriers to the development of new ESCO companies and new energy efficiency projects. The proposed criteria for the inclusion of ESCO companies in the list have been developed on the basis of the quality management criteria developed during the QualitEE project and the experience of other countries in the development of ESCO lists.

3.2.2 Evaluation of compliance

Considering the fact that the ESCO market in Latvia is poorly developed, the proposed certification criteria include only a part of the QualitEE technical criteria, which would be recommended to use when starting the development of the system. In the future, ESCO certification can be created similarly to the register of construction companies and supplemented with additional requirements. The requirements for an ESCO company can be divided into two major parts:

- Basic requirements for the ESCO company;
- Additional requirements for the ESCO company based on the experience of its services and employees in energy efficiency projects. At present, the inspection is possible according to the model contract submitted by the ESCO company, which they have used or intend to use. In

the future, with the development of the ESCO market, the proposed criteria could be applied on the basis of the experience of ESCO companies, which would not be useful to determine at present, given the small number of ESCO projects.

The ESCO register shall set out a set of basic requirements for cooperation between ESCOs and customers, project preparation and project implementation, in order to achieve the best possible results and sustainability while maximizing the energy and cost savings achieved through energy efficiency improvement measures. An ESCO company, like any other company, can have basic requirements regarding the absence of violations and tax debts.

EX-ANTE evaluation based on submitted EPC contract. The ESCO should fulfil quality criteria to be eligible to be registered as an energy service provider. The listed ESCOs must provide a copy of the energy efficiency service contract to Ministry of Economy. To be registered as an ESCO company should submit:

- Copy of EPC contract;
- Assurances that ESCO will notify Ministry of Economics about the fulfilment of EPC contract;

EPC contract should contain

A list of energy efficiency improvement measures to be implemented, implementation plan and cost estimate;	1-1 and 2-3
The guaranteed energy savings;	3-2 and 3-1
The provisions for the achieved guaranteed savings measurements and their quality inspections;	4-5
The validity term of the contract and the terms for the submission of the interim report, conditions and terms of termination of the contract;	9-4;
The obligations of the contracting parties, including the obligation of the energy efficiency service provider, upon entering into a subcontracting agreement with third parties, to include in the agreement requirements that are equivalent to the concluded energy efficiency service contract, and sanctions in cases of the non-fulfilment;	New and partly 5-4
The procedures by which all changes in energy efficiency improvement measures, the implementation plan and cost estimate thereof made during the project shall be documented;	2-3
The distribution of the project's financial impact and the achieved money savings, including service provider's compensation, between the contracting parties;	3-1;
Conditions that explain how to act in cases when changes of the basic conditions affect the content and the outcome of the contract (if energy prices, use intensity of the equipment change);	9-2
The energy efficiency service costs shall be covered with a part of the financial value of the energy efficiency improvement or	new

energy savings that have arisen from the provision of the energy efficiency services;	
The provider of the energy efficiency service shall bear the project's financial, technical and commercial risks.	New and partly QC5 requirements on technical risks

3.2.3 Granting of the QualitEE label

During NPT meeting several options were analysed. As possible responsible bodies, the Ministry of Economics, the Latvian National Accreditation Bureau, ALTUM and the State Bureau of Construction Control have been proposed. So far while the market is underdeveloped the main responsible institution to assure that the quality criteria is met is the Ministry of Economics. It is proposed that in a future if there will be more ESCO companies the certification could be organized by the State Bureau of Construction Control who are also responsible for certification of energy auditors. In the long run, EPC service providers could have a very similar scheme to the certification scheme for energy auditing in industry. Companies allowed to do energy audits are certified by the Latvian National Accreditation Bureau. However, at the moment we are not sure that it is possible in the framework of this project as a new LVS ISO standard is needed describing all the procedures.

3.3 Main features

The main features of the QualitEE business model are found in the following table:

Table 1 - Main features for Latvia

	Latvia
Principal action	Quality assurance
Country	Latvia
Type	Voluntary
Target user	EES provider (ESCO companies)
Authority	Ministry of Economics
Phases	<ol style="list-style-type: none"> 1. ESCO company provides a copy of EPC contract to the Ministry of Economics; 2. ESCO provides assurances that ESCO will notify the Ministry of Economics about the fulfilment of EPC contract; 3. EPC contract is analysed against criteria; 4. If criteria are met EPC provider is registered as ESCO company; 5. Each year EPC provider should provide information about energy savings and performance of the contract
Stakeholders	<ol style="list-style-type: none"> 1. EES Provider; 2. Ministry of Economics.
Support measures/ dissemination	Information available in the website of the Ministry of Economics
Year of implementation	2019/2020
Costs	Voluntary (at this stage free)

Source: Agris Kamenders (Ekodoma)

3.4 Canvas analysis

The ESCO register is currently in place, however it is not used as the number of new ESCO projects is very small and potential clients are not yet ready to include additional requirements in their procurements. Although it is hoped that as the market develops, the ESCO register can be used to boost confidence in ESCO services. Table below explain the operation of the ESCO register if register will start to operate fully.

3.4.1 Business Model Canvas Analysis

Table 2 - Canvas analysis

KEY PARTNERS <ul style="list-style-type: none"> • EES providers: EPC providers • Client: legal entity interested in implementing EE measures. Public clients could include requirements in public procurement. Private clients looking for trusted companies. Ministry maintaining the list 	KEY ACTIVITIES <ul style="list-style-type: none"> • Through its quality assessment, it defines if an EES meets the prerequisites to register as EES provider 	VALUE PROPOSITION <ul style="list-style-type: none"> • National recognition and quality assurance; • Easy to perform due to pre-determined steps • Objective criteria established by an external international consortium 	CUSTOMER RELATIONSHIP <ul style="list-style-type: none"> • Information from the Ministry of Economics on ESCO register 	CUSTOMER SEGMENT <ul style="list-style-type: none"> • Municipalities; • Commercial un industry sector; • House owner association; • Professional association
COST STRUCTURE <ul style="list-style-type: none"> • Fixed costs: review of EPC contract against the quality criteria; • Variable costs: IT support costs. At the moment no additional costs planned 		REVENUE STREAMS <ul style="list-style-type: none"> • Voluntary and free of charge. No revenue from certification planned. 		

Source: Agris Kamenders (Ekodoma)

3.4.2 Value proposition

Table 3 - Value proposition of QualitEE in Latvia

PROVIDER OF THE CERTIFIED EE SERVICE		CLIENT OF THE CERTIFIED EE SERVICE	
<p>SERVICES</p> <ul style="list-style-type: none"> ✔ The project is developed following Energy Efficacy law criteria. ✔ ESCO company is recognized and trusted by the Ministry of Economics ✔ Yearly monitoring and maintenance examination, throughout the renting/ financing period 	<p>GAIN CREATORS</p> <ul style="list-style-type: none"> ✔ Improve visibility and trust in the service provider ✔ Help reduce energy costs ✔ Reduces impact on environment 	<p>GAINS</p> <ul style="list-style-type: none"> ✔ Savings are guaranteed ✔ Improve energy service quality ✔ Reduce energy and CO₂ consumption ✔ Minimize financial and technical risks: <ul style="list-style-type: none"> • The provider oversees the financial aspects of the project. ✔ Increase profitability of the business 	<p>CUSTOMER JOB(S)</p> <ul style="list-style-type: none"> ✔ Run a profitable business (reducing costs by maintaining operation equal) ✔ Have functioning operations: <ul style="list-style-type: none"> - “Out-source” non-core activities ✔ Improve energy efficiency in their business. ✔ Improve image by being more environment friendly
	<p>PAIN RELIEVERS</p> <ul style="list-style-type: none"> ✔ Minimize financial and technical risks by following trusted EES provider. ✔ Most of the financial obligations and timeliness are met by the provider. 	<p>PAINS</p> <ul style="list-style-type: none"> ✔ Influence on core business ✔ Need for resources for non-core activities ✔ Lack of time and resources for business ✔ Upfront investment costs 	

Source: Agris Kamenders (Ekodoma)

4 IMPLEMENTATION STRATEGY

4.1 Business opportunities

The preparation of national technical criteria has been organized in several interactions together with the Ministry of Economics, ALTUM (national financial institution), ESCO companies, energy auditors and project developers. At the beginning of the QualitEE project, the most attention was paid to quality criteria to be applied at the project level, as it was believed that demand for such QA could be higher. However, after the feedback from the main stakeholders, interest from the Ministry of Economics and considering energy efficiency directive requirements it was decided to focus on QA system at the company level. Due very limited number of projects in the market certification institutions did not see the need to set up a new certification system which could pose a risk that certification of each individual project will be too expensive and this would create additional barriers to market development.

All QualitEE technical criteria have been translated in Latvian, where possible with references to Latvian legislation and norms. All quality criteria have been presented and discussed during NPT and NDP meetings. The Ministry of Economics reviewed and provided feedback to all proposed quality criteria. Several new criteria for companies have been added - absence of tax debts and education level of employees. At this stage when EPC market is very new and underdeveloped the system is voluntary and free of charge.

4.2 Potential partnerships

The Ministry of Economics is responsible for the ESCO register. as well as for developing energy, energy efficiency, housing and construction policies including implementation of the Energy and Climate Plan for 2021-2030. In addition, the Ministry of Economics is also responsible for the Central Finance and Contracting Agency (CFCA) that administers EU funds, for instance, developing a plan regarding energy and housing energy efficiency. Active support programs:

- Promoting energy efficiency in public buildings;
- Promoting efficient use of energy resources, reducing energy consumption and switching to RES in the manufacturing sector;
- Promoting energy efficiency in multi-apartment buildings.

ALTUM is a state-owned development finance institution which provides financing through financial instruments (loans, guarantees, investments in venture capital funds, etc.):

- Manages the Ministry of Economics program for promoting energy efficiency in multi-apartment buildings;
- Provides loans for energy efficiency projects and for the implementation of renewable energy projects for companies;
- Provides loans for energy efficiency projects for housing;
- Altum also offers support with the development of projects and the preparation of technical documentation for both homeowners and businesses.

ESCO companies represent a type of business which provides a wide range of services related to the energy sector, including building renovation. First ESCO projects in the residential sector have been implemented in 2009.

Building management companies also play an important part in improving buildings energy efficiency assisting residents in project preparation and implementation phase. **Municipalities** play an important part by informing residents and supporting the preparation of technical documentation for the renovation of buildings.

The Ministry of Environmental Protection and Regional Development (MEPRD). Thanks to the GHG auctioning instrument, the Ministry has established two energy efficiency project grant programmes: The climate financial instrument (CCFI) and the instrument for auctioning emission allowances (IAEA), which have funded energy efficiency projects for buildings in the private and public sector, meaning for municipal and local government capital companies, also energy efficiency and renewable energy projects in for industrial and private buildings. Subordinate to the Ministry is the company **SIA Environmental Investment Fund**, whose main aim is to reduce environmental pollution by promoting the realization of environmental protection projects and increasing the capacity of local governments and private companies.





4.3 Implementation strategy

The main aim is to focus on ESCO companies and clients including FI. As clients create demand for new ESCO projects and in the end are those who set the requirements for companies they could require ESCO companies to be registered in the list as well. ESCO companies may be motivated to register to increase their visibility and trust.

5 MARKETING STRATEGY

5.1 Target groups

The main stakeholder for the use of the quality assurance scheme:

-  ESCOs;
-  Clients - municipalities, house owner association and big energy consumers;
-  ALTUM in banks (association of financial institutions);
-  The Ministry of Environmental Protection and Regional Development and Environmental Investment Fund

6 CONCLUSIONS

The ESCO certification scheme should, on the one hand, enhance the visibility and credibility of ESCO companies and, on the other hand, should not create additional administrative and financial barriers to the development of new ESCO companies and new energy efficiency projects. The proposed criteria for the inclusion of ESCO companies in the register have been developed on the basis of the quality management criteria developed during the QualitEE project. Considering the fact that the ESCO market in Latvia is poorly developed, the proposed certification criteria include only a part of the QualitEE technical criteria. Even technical criteria could be added later with the overall development of ESCO market. In the future, ESCO certification can be created similarly to the register of construction companies. ESCO companies have the possibility to be included in the ESCO register which is managed by the Ministry of Economics. ESCO companies should fulfil basic quality requirements to be included in the ESCO register. During NPT meeting with the Ministry of economics it was agreed that QualitEE technical criteria could be added for development of certification system. For an energy efficiency service provider to be certified and included in the ESCO register, the ESCO company should provide an energy efficiency service contract which is then been assessed. Based on energy efficiency directive requirements, in 2019 the Ministry of Economics invited ESCOs to register on the list of energy efficiency service providers.³ The list is informative and aims to improve the availability of information to potential customers and the public of energy services.

During the QualitEE project, several bilateral meetings with representatives from the ministry, national promotion team (NPT) and different national discussion platform (NDP) have been organized to introduce the quality criteria. The main stakeholders involved were national financing institution ALTUM (providing loans and support programs for energy efficiency and RES projects), the Ministry of Economics (responsible institutions about energy and energy efficacy policy), ESCO companies (working in building, industry and lighting sectors), energy auditors working with big companies and big energy consumers and energy utility companies.

³https://em.gov.lv/lv/nozares_politika/energoefektivitate_un_siltumapgade/energoefektivitate/energoefektivitates_pakalpojumi/esko_pakalpojumu_sniedzēju_saraksts/