



# D7.1 Sustainability strategy plan

QualDeEPC H2020 project

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PUBLIC Report

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Accelerating Deep Energy Renovation“

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Table 3: Document History



## ABBREVIATIONS

**DRNP:** Deep Renovation Network Platform

**EBPD:** Energy performance of buildings directive

**EC:** European Commission

**EPC:** Energy performance certificate

**EU:** European Union

**MS:** Member State

## PROJECT PARTNERS

**WI:** Wuppertal Institut für KLIMA, UMWELT, ENERGIE gGMBH

**CRES:** Centre for renewable energy sources and saving foundation

**DENA:** Deutsche Energie-Agentur GmbH (dena)

**EAP:** Energy agency of Plovdiv Association

**EKODOMA**

**ENERGIACLUB:** Energiaklub Szakpolitikai Intezet Modszertani Kozpont Egyesulet

**E-P-C:** EPC Project Corporation Climate. Sustainability. Communications. mbH

**FEDARENE:** Federation européenne des agences et des regions pour l'énergie et l'environnement

**ESCAN:** Escan SL

**CIT ENERGY MANAGEMENT AB**

**BME:** Budapest University of Technology and Economics



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## PUBLISHABLE SUMMARY

The objective of this report is to maximise the impacts of the project on implementation of enhanced EPC schemes and their application in practice also after its end. The sustainability of the project's results largely depends on the involvement of the relevant stakeholders and on the level of their involvement and engagement. The aim of this plan is to ensure that the proposals, solutions, and tools developed during the project will be acknowledged, accepted and utilized in all target countries, both during and after the project.

This document therefore summarizes the tasks and will help implementing partners to continue the policy dialogue if needed and to ensure the conditions to maintain and update the tools developed in the frame of the project.



## TABLE OF CONTENTS

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>INTRODUCTION</b> .....   | <b>8</b>  |
| <b>2</b> | <b>Approach</b> .....   | <b>9</b>  |
| <b>3</b> | <b>Overview of Priorities and activities needed for their sustainability</b> .....  | <b>11</b> |
|          | 2.1 Policy proposals and tools to be analysed                                       | 11        |
|          | 2.2 Project website   | 12        |
|          | 2.3 Technical items   | 13        |
| <b>3</b> | <b>DETAILED ASSESSMENT OF THE ROLES AND ACTIONS REQUIRED</b> .....                  | <b>18</b> |
| 3.1      | EU level  | 19        |
| 3.1.1    | The project website   | 19        |
| 3.1.2    | Key stakeholders for the policy dialogue on the tools and policy recommendations    | 20        |
| 3.1.3    | Planned steps of EU-wide policy dialogue and transfer of the policy recommendations | 22        |
| 3.2      | Bulgaria  | 23        |
| 3.2.1    | Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term     | 23        |
| 3.2.2    | Actions needed for the maximal exploitation of QualDeEPC’s tools                    | 26        |
| 3.3      | Germany   | 29        |
| 3.3.1    | Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term     | 29        |
| 3.3.2    | Actions needed for the maximal exploitation of QualDeEPC’s tools                    | 31        |
| 3.4      | Greece  | 33        |
| 3.4.1    | Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term     | 33        |
| 3.4.2    | Actions needed for the maximal exploitation of QualDeEPC’s tools                    | 36        |
| 3.5      | Hungary   | 38        |
| 3.5.1    | Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term     | 38        |
| 3.5.2    | Actions needed for the maximal exploitation of QualDeEPC’s tools                    | 42        |
| 3.6      | Latvia  | 45        |
| 3.6.1    | Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term     | 45        |
| 3.6.2    | Actions needed for the maximal exploitation of QualDeEPC’s tools                    | 48        |
| 3.7      | Spain   | 51        |
| 3.7.1    | Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term     | 51        |
| 3.7.2    | Actions needed for the maximal exploitation of QualDeEPC’s tools                    | 53        |
| 3.8      | Sweden  | 56        |
| 3.8.1    | Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term     | 56        |
| 3.8.2    | Actions needed for the maximal exploitation of QualDeEPC’s tools                    | 59        |
| <b>4</b> | <b>CONCLUSIONS AND INDICATORS</b> .....   | <b>63</b> |



# 1 INTRODUCTION

The objective of this report is to maximise the impacts of the project on implementation of enhanced EPC schemes and their application in practice also after its end. The sustainability of the project's results largely depends on the involvement of the relevant stakeholders and on the level of their involvement and engagement. The aim of this plan is to ensure that the proposals, solutions, and tools developed during the project will be acknowledged, accepted and utilized in all target countries, both during and after the project. This document aims to reassure the funding agency, and hence the EU taxpayers, that the main project results have the potential to survive and thrive in the long term.

The stakeholder dialogue in tasks 2.3 (Analysis of shortcomings in current EPC handling), 3.4 (Dialogue on the Green paper and Concepts), 5.5 (National dialogue and roadmap to convergence) 7.3 (EU-wide and national policy dialogue and transfer of the policy recommendations and good practice) was supportive in that way backed by the involvement of stakeholders and associated partners. It needs to take stock of what has already been achieved, and what remains to be done as per the roadmap to convergence.

Based on this, the sustainability strategy plan is meant to prepare and enable the use of the project results and strategies after the project's lifespan. It therefore particularly builds on the results of the following tasks:

- i) 3.4 (Dialogue on the Green paper and Concepts) and 3.5 (Green/White paper for an enhanced EPC scheme) in the early stage,
- ii) 4.5 Summary of testing results and recommendations,
- iii) 5.2 Adaptation of the enhanced scheme to country needs and implementation of consensus elements,
- iv) 5.3 Adaptation of the Deep Renovation Network Platforms to country needs and implementation of consensus elements, and
- v) 5.5 National dialogue and roadmap to convergence.

The sustainability strategy plan is built on an assessment of the roles and actions required of stakeholders and administrations in the implementation of the roadmap, as well as in the further implementation of the elements tested in WP 4 and implemented in tasks 5.2 and 5.3. This concerns both the national level in the countries represented in the proposal, and the EU level.

The plan thereby also provided input to Tasks 7.2 (Conclusive policy recommendations guide for the further EPC policy process) and 7.3. (EU-wide and national policy dialogue and transfer of the policy recommendations and good practice).

This report on the sustainability strategy plan is organised in the following chapters, from which is the most important is the 4<sup>th</sup> one:

- 1. Introduction
- 2. Approach – summarizing baseline information on the elements of the strategy
- 3. Overview of priorities and activities needed for their sustainability
- 4. Detailed assessment of actions required to ensure sustainability and exploitation of QualDeEPC's results at EU and national level
- 5. Conclusions and indicators to monitor the success of actions planned.





## 2 APPROACH

In drafting the plan, the following criteria, considerations, and tools were taken into account. In order to ensure the maximal impact, the planning was guided by the following objectives: to

- i) reach national/local target groups in Europe;
- ii) provide effective tools and methods;
- iii) extend the involved community during and after the completion of the project;
- iv) build a dissemination infrastructure that is sustainably functioning beyond the lifetime of the project.

The primary targets to be addressed by / build on when it comes to implementing the activities planned in this report are the following stakeholder groups:

- i) Institutional actors: national /regional energy agencies as well as certification bodies responsible for the certification, compliance and monitoring of EPCs. In addition, national, regional or local governments, political and administrative representatives of municipalities, policy makers / political assemblies, urban development funds, public procurement departments, local real estate societies.
- ii) Lobby groups: representatives of the different professions and sectors that are involved in the EPC issuing, e.g. chambers of architects, associations of EPC assessors or energy advisors, chambers of crafts and trade, associations of planners, representations of real estate agents and real estate owners, representations of energy suppliers.
- iii) Market actors: Stakeholders that are especially involved in the practical implementation and use of EPCs, e.g. building owners, private, corporate and public landlords, real estate agents, property development companies, banks and other commercial investors.

Possible forms of involving and cooperating with these groups are:

- i) Direct contact and exchange, including proactive exchange at events (fairs, conferences, etc.) in case of lobby groups
- ii) Invitation to dialogue (workshops)
- iii) Information via social media, newsletters, workshops, webinars, publications and project website
- iv) Intermediated contact through regional networks (e.g. FEDARENE, ERRIN)

In order to present sustainability of QualDeEPC project's main outputs, aspects of sustainability will be presented for the seven main development priorities of the QualDeEPC Project and the respective tools and policy proposals plus the project website, and also country by country.

In general, organisational sustainability is strongly assured, as all implementing partners of QualDeEPC project's consortium have been working on energy issues for at least 20 years and as this topic becomes more and more important at all levels, there is no risk for them to cease their operation.

The best way and first level of the exploitation is by the project partners, who inspire national authorities and policy makers on EU level to address the identified priorities and make changes and can embed all gained experiences into their further activities.

Key deliverables to focus on while describing the needed actions to sustain and fully exploit the results of QualDeEPC project are:



- i) The project website (D 6.1)
- ii) The seven main development priorities of the QualDeEPC Project and the respective tools and policy proposals, as presented in the White paper on good practice in EPC assessment, certification, and use (D 3.2), the Report on the seven nationally adapted enhanced assessment and certification schemes (D 5.1), the Report on the seven nationally adapted Deep Renovation Network Platform concepts (D 5.2), and the Guidebook for improved EPCs (D 5.3).

These seven priorities are:

- A) Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation
- B) Online tool for comparing EPC recommendations to deep energy renovation recommendations
- C) Creating Deep Renovation Network Platforms
- D) Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry
- E) High user-friendliness of the EPC through an enhanced EPC form template
- F) Voluntary/mandatory advertising guidelines for EPCs
- G) Improving compliance with the mandatory use of EPCs in real estate advertisements

Targeted fields of the QualDeEPC project that shall be in focus when planning actions in this sustainability strategy:

1. Increasing energy efficiency
2. Investments in sustainable energy
3. Good quality and reliable energy performance assessment and certification
4. Rate of application and compliance of EPCs and independent control systems with the provisions of EU and national legislation
5. EPCs databases for compliance checking and verification, linking eg. with financing schemes

**General objective of the sustainability strategy plan is**

to maximise the impacts of the project on implementation of enhanced EPC schemes and their application in practice also after its end.



### 3 OVERVIEW OF PRIORITIES AND ACTIVITIES NEEDED FOR THEIR SUSTAINABILITY

Sustainability of the project results can be ensured by the implementation of policy proposals and by the long-term maintenance (and up-date) of the tools developed. In addition, the project website containing all public outputs of the project is also important to assess in regards to sustainability.

This chapter gives an overview about the elements to be analysed as a part of the sustainability strategy.

#### 2.1 Policy proposals and tools to be analysed

**The strategy is built on the items (A-G) related to the 7 priorities that are:**

- A) Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation  
**Item A:** the list of enhanced nationally adapted recommendations (both a policy proposal and a tool)
- B) Online tool for comparing EPC recommendations to deep energy renovation recommendations  
**Item B:** the online tool itself; *objective:* implement this tool (*during project*) and ensure future operation and updates, either by project partners themselves or by third parties; *activities:* develop and implement a concept to ensure future operation and updates
- C) Creating Deep Renovation Network Platforms (DRNP)  
**Item C1:** the DRNP (a tool; partners are aiming to either create and implement a new online platform with the minimum level of information suggested by the project, or to improve existing ones);  
**Item C2:** the policy proposal for implementing a network of local DRNPs along with the national level online platform (a policy proposal)
- D) Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry  
**Item D:** the policy proposal for requiring regular training or examination, along with the proposal for the training content and for a peer review of the quality of a sample of EPCs issued by an assessor as part of the training (a policy proposal)
- E) High user-friendliness of the EPC through an enhanced EPC form template  
**Item E:** proposal to enhance the data and presentation of the EPC further, best by using the draft enhanced EPC form template offered by QualDeEPC, and requiring that the renovation recommendations be consistent with deep energy renovation in their selection and energy efficiency levels, and that possibilities for a stepwise implementation are indicated, and a guidebook or tutorial for EPC assessors on how to fill in the enhanced EPC form is provided (a policy proposal along with a tool for policy-makers: the enhanced EPC form template)
- F) Voluntary/mandatory advertising guidelines for EPCs  
**Item F:** Policy proposals a. to d. to improve the use EPCs in advertising, accompanied by tools e. and f.:
  - a. Create easy-to-use advertising guidelines, the use of which would ensure compliance with the mandatory display of EPC energy data/class;
  - b. Communicate the existence and usefulness of the guidelines widely and actively;
  - c. Consider making the use mandatory;



- d. Require EPC assessors to hand over a leaflet with the guidelines and respective links, as well as the legal requirements, to building owners together with the EPC, particularly if using the guidelines is made mandatory;
  - e. Proposal for aspects to be considered in terms of content and publication when creating such guidelines (tool) and
  - f. Proposed master text in English that Member States could use, if the wished to make the use of such guidelines mandatory (tool)
- G) Improving compliance with the mandatory use of EPCs in real estate advertisements
- Item G:** Policy proposals to ensure reliable and accessible information on EPCs in advertisements:
- a. Appoint a nodal authority with sufficient resources and the mandate to perform the following two measures;
  - b. perform random checking of a sample of advertisements, and denouncing non-compliance to the authorities able to impose penalties (if these are not the nodal authorities themselves);
  - c. Raising awareness of the duty to display EPC energy data/class in real estate advertisement, and of the advertisement guidelines;
  - d. Define staged penalties for non-compliance.

In addition, another very important policy proposal from the project is a suggestion for the definition of “Deep Energy Renovation” based on a modified nZEB-based approach.

## 2.2 Project website

The project’s website, <https://qualdeepc.eu/> contains all public outputs of the project and other relevant information as the main communicational channel of the project. It was built up at the beginning of the project and constantly maintained and updated.

3-1. Table: Summarizing table on the actions to sustain and expand the impacts of the project website

| Summarizing table on the actions to sustain and expand the impacts of the project website |   |
|---|---|
| Objective   | The project website represents the project’s primary method of communication with external stakeholders and the wider public. The objective is to provide all necessary information and news about QualDeEPC, its activities and related events.                |
| Target groups   | Relevant stakeholders, such as energy experts, consultants, national and regional certification bodies etc., as well as the general public  |
| Language  | available only in English   |
| Already achieved results, completed steps   | By the end of the project the website counted >57.000 website visits, >1.200 pdf material downloads and promoted more than 100 QualDeEPC related events   |
| Requirements for its maintenance  | The project partner E-P-C (responsible for project communication) continues to maintain and update the website in cooperation with the project partners throughout the course of the project. The website will be maintained three years post project duration. |



### 2.3 Technical items

This subchapter gives an overview to the items of the seven priorities as listed in Chapter 3.1: their objectives, the activities needed to achieve and/or continue their implementation, and which of these have been achieved to date or are planned by the end of the project, are presented concisely. Chapter 4 holds the more detailed assessment of the roles of key stakeholders and activities needed after the project ends at EU level and in the seven Member States represented in the QualDeEPC project.

Regarding the already performed tasks to ensure the embedding of our policy recommendations and tools in the national (and even EU-level) framework, the QualDeEPC project has implemented a series of stakeholders’ workshops that will be completed fully by the end of the project. Our conclusive [‘Guidebook for improved EPCs’ \(Deliverable 5.3\)](#) and [‘Policy Recommendations Guide’ \(Deliverable 7.2\)](#) summarizes and explains all our proposals that are mentioned in this strategy. This document also assesses the positive and synergic changes that the Energy Performance of Buildings Directive – EPBD – recast, which is part of the European Commission’s “Renovation Wave Strategy” launched in October 2020, has raised and are in line with our proposals.

The tables below present item by item the objectives, already achieved results related to the aims of this strategy and activities still needed.

3-2. Table: Objectives, already achieved results related to the aims of this strategy and activities still needed by items

| A) List of enhanced nationally adapted recommendations  |   |
|---|---|
| Related to the priority                                 | A: Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation   |
| Objective   | To achieve that nationally adapted recommendations for deep energy renovation are included in national EPC assessment regulations and practice;<br>and if possible, that a requirement for Member States to do so is included in the EPBD revision. |
| Activities needed for implementation and sustainability | policy dialogue towards this objective;<br>promote voluntary use of the list as a tool for EPC assessors; if possible, develop additional guidance for their use  |
| Already achieved results, completed steps               | policy dialogue has been implemented (3 workshops and other consultations)<br><br>In Sweden, this priority is partly already implemented in existing laws (enhanced level).   |



| B) Online tool for comparing EPC recommendations        |   |
|---|---|
| Related to the priority                                 | B: Online tool for comparing EPC recommendations to deep energy renovation recommendations  |
| Objective   | To implement this tool (during the project) and ensure future operation and updates, either by project partners themselves or by third parties.   |
| Activities needed for implementation and sustainability | To develop and implement a sustainability concept to ensure future operation and updates  |
| Already achieved results, completed steps               | policy dialogue has been implemented (3 workshops and other consultations); the online tool or similar information tools are being put in operation by partners by the end of the project |

| C1) Deep Renovation Network Platforms – Tool            |   |
|---|---|
| Related to the priority                                 | C: Creating Deep Renovation Network Platforms (DRNP)  |
| Objective   | To implement the basic/minimum form of DRNP in participating countries (during the project) and ensure future operation and updates, either by project partners themselves or by third parties.   |
| Activities needed for implementation and sustainability | To create and implement a new online platform in each participating country with the minimum level of information suggested by the project, or to improve existing ones - finalization of the developments and content updates.<br><br>To develop and implement concept to ensure future operation and updates. |
| Already achieved results, completed steps               | DRNPs are operating in all countries of QualDeEPC project (Spain, Hungary, Bulgaria, Greece, Germany, Sweden, and Latvia)   |

| C2) Policy proposal for implementing a network of local DRNPs |  |
|---|--|
| Related to the priority                                       | C: Creating Deep Renovation Network Platforms (DRNP)   |
| Objective   | To achieve that a network of local DRNPs is promoted and financially supported by national or regional governments and implemented by regional or local governments, possibly together with market partners, local/regional energy agencies and professional chambers.<br><br>In addition, a requirement for Member States to provide such networks of DRNPs is included in the EPBD revision. |



|   |   |
|---|---|
| Activities needed for implementation and sustainability | <p>policy dialogue towards this objective</p> <p>promotion and overview of the operating and to be implemented DRNPs via the project website</p>  |
| Already achieved results, completed steps               | <p>Some partners have identified the actors that could promote and support the implementation of such network:</p> <p>Bulgaria: local/regional energy agencies, professional chambers</p> <p>Greece: CRES (QualDeEPC project partner)</p> <p>Spain: Ministry of Ecology Transition, MITECO, IDAE Regional Governments</p> <p>Sweden: regional energy agencies</p> |

#### D) Policy proposal for requiring regular training or examination

|   |  |
|---|--|
| Related to the priority                                 | D: Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry   |
| Objective   | <p>To achieve that the policy proposal for requiring regular training or examination, along with the proposal for the training content and for a peer review of the quality of a sample of EPCs issued by an assessor as part of the training is adopted and implemented by national or regional governments or regulators.</p> <p>In addition, aim to achieve that a requirement for MS to mandate regular EPC assessor training or exams is included in the EPBD revision.</p>   |
| Activities needed for implementation and sustainability | <p>policy dialogue towards this objective;</p> <p>some project partners offering training themselves: using the proposal for the training content</p>  |
| Already achieved results, completed steps               | <p>policy dialogue has been implemented (3 workshops and other consultations, eg. bilateral consultations with the responsible national Ministries and/or energy agencies)</p> <p>In Spain, the amendment of the legislation to include more university degrees for the EP issuers is foreseen to be in place August-October 2023; by the end of 2022 most probably a new decree for requirements of EPC issuers will be published. The partner participated in several meetings with Ministries and the National Energy Agency IDAE to provide information for the new decree, end 2021 and 2022.</p> |



| E) Enhanced EPC form template + policy proposal         |   |
|---|---|
| Related to the priority                                 | E: High user-friendliness of the EPC through an enhanced EPC form template  |
| Objective   | <p>To enhance the data and presentation of the EPC further.</p> <p>To require that the renovation recommendations be consistent with deep energy renovation in their selection and energy efficiency levels, and that possibilities for a stepwise implementation are indicated.</p> <p>To reach that, a guidebook or tutorial for EPC assessors on how to fill in the enhanced EPC form is provided.</p> <p>To achieve that these all are adopted and implemented by national or regional governments or regulators.</p> <p>Aim to achieve that the most important additional data and the requirement for the recommendations and their stepwise implementation are included in the template and provisions on EPCs in the EPBD revision.</p> |
| Activities needed for implementation and sustainability | policy dialogue towards these objectives  |
| Already achieved results, completed steps               | <p>policy dialogue has been implemented (3 workshops and other consultations)</p> <p>Partners have promoted the enhanced template via a shortened version combined with social media call-outs as well as promoted the shortened version in press releases for downloads.</p>   |

| F) Proposals for guidelines on the use of EPCs in advertising |   |
|---|---|
| Related to the priority                                       | F: Voluntary/mandatory advertising guidelines for EPCs  |
| Objective   | <p>To achieve that advertising guidelines and additional policy proposals are adopted and implemented by national or regional governments or regulators.</p> <p>Aim to achieve that a requirement for MS to offer voluntary or mandate the use of such advertising guidelines is included in the EPBD revision.</p> |
| Activities needed for implementation and sustainability       | <p>policy dialogue towards this objective;</p> <p>particularly, project partners that are EPC bodies or national energy agencies may consider creating such guidelines themselves</p>   |
| Already achieved results,                                     | policy dialogue has been implemented (3 workshops and other   |





|                 |  |
|-----------------|--|
| completed steps | <p>consultations)</p> <p>Escan has developed a document with the proposal (discussed and agreed during the workshops) for the information to be included in the advertisements; and one regional government is using it for a campaign.</p> <p>In Sweden, guidelines on the use of EPCs in advertising are already in place.</p> |
|-----------------|--|

### G) Policy proposals to ensure reliable and accessible information on EPCs in advertisements

|   |   |
|---|---|
| Related to the priority                                 | G: Improving compliance with the mandatory use of EPCs in real estate advertisements  |
| Objective   | <p>To achieve that this is adopted and implemented by national or regional governments or regulators.</p> <p>Aim to achieve that, a requirement for MS to offer voluntary or mandate the use of such advertising guidelines is included in the EPBD revision.</p> |
| Activities needed for implementation and sustainability | policy dialogue towards this objective; particularly, project partners that are EPC bodies or national energy agencies may consider performing awareness-raising activities themselves  |
| Already achieved results, completed steps               | <p>policy dialogue has been implemented (3 workshops and other consultations)</p> <p>In Greece, this proposal is already included in the national legislation.</p> <p>In Sweden, a responsible body is already appointed.</p>                                     |



### 3 DETAILED ASSESSMENT OF THE ROLES AND ACTIONS REQUIRED

This main chapter of the sustainability strategy plan summarizes actions needed and key stakeholders to involve/target both at EU and national level to reach the objectives set in Chapter 3.

Regarding the items covering policy proposals, their sustainability would most preferably be ensured if they were included in relevant national standards and regulations.

The tables below give a general overview on the key target groups of the QualDeEPC’s outputs, corresponding to the seven priorities and methods to ensure their reach to maximize exploitation and sustainable use. The first table is referring to the tools, the second to the policy recommendations.

4-1. Table (2): Overview of key target groups of (1) tools and (2) policy proposals and methods to reach them

| Overview of methods and key target groups                                       |   |
|---|---|
| Tools   |   |
| key target groups   | Methods   |
| potential buyers and renters  | targeted communication, broad digital promotion (social media, website news items)  |
| building owners and renters   | thematic events, targeted communication, broad digital promotion (social media, website news items); for building owners, direct communication by EPC assessors |
| regional energy agencies (or regional governments having this function as well) | direct targeted contacts and workshops  |
| EPC issuers and advisors  | thematic events, targeted communication   |
| universities (professors, students) as tools could be used in the education     | thematic events, targeted communication   |
| other market actors: manufacturers, architects                                  | targeted communication and events   |

| Overview of methods and key stakeholders |  |
|--|--|
| Policy proposals                         |  |
| key target groups                        | Methods  |
| policy makers                            | policy papers, round table discussions, bilateral meetings |
| legislative bodies                       | thematic events, round table discussions                   |
| EPC and building energy experts          | Conventional dissemination measures, such as               |



press releases, newsletters, as well as digital promotion (social media, website news items)

According to the project proposal, project partners will participate at national as well as European publicity events to present the policy recommendations, and engage stakeholders outside the partnership and share information with related projects. Regarding the efforts at national level, another round of national workshops will take place focusing on the policy proposals, with 15 to 30 participants each from a more policy-level audience (including MPs, administration, stakeholder associations; number depending on country size and structure).

Concerning the national level, the subchapters 4.2-4.8 will present the plan for the sustainability of items related to the priorities B and C (tools). Regarding items of A, D, E, F, G priorities (policy proposals) most preferably they should be included in relevant national standards and regulations. The needed steps and likelihood of official application of enhanced EPC and other policy proposals to the national framework are presented in the [Technical guidebook for improved EPCs](#) (D5.3).

### 3.1 EU level

For the EU level, the project website and how the policy proposals by QualDeEPC could be reflected in the ongoing EPBD revision are relevant subjects of the sustainability strategy plan.

#### 3.1.1 The project website

4-2. Table: Summarizing table on the actions to sustain and expand the impacts of the project website

| Summarizing table on the actions to sustain and expand the impacts of the project website |   |
|---|---|
| Responsible Partner   | E-P-C - Project Corporation Climate. Sustainability. Communications. mbH (non-profit)   |
| Technical aspects of sustainability (if relevant)   | The website will be maintained three years post project duration until February 2026; requests of contact will be automatically forwarded to the project coordinator, Wuppertal Institute |
| Financial aspects of sustainability (if relevant)   | The accompanying monthly hosting fee will be taken care of by E-P-C   |
| Barriers of further use   | Lacking human capacities for content-related updates, for monitoring technical changes  |
| Possible actions for extending and improving  | Post-project extensions and improvements, whether technically or content-related, are not planned   |
| Available at  | <a href="https://qualdeepc.eu/">https://qualdeepc.eu/</a>   |



### 3.1.2 Key stakeholders for the policy dialogue on the tools and policy recommendations

The tools (such as DRNPs) are developed at national levels, the corresponding sustainability plans are elaborated in chapters 4.2-4.8.

Regarding the policy proposals, the '[Policy Recommendations Guide](#)' summarizes and explains all our proposals that are mentioned in this strategy. This document also assesses the positive and synergic changes that the EPBD recast has raised and are in line with our proposals.

The corresponding objectives for including provisions on QualDeEPC's policy proposals **in the revised EPBD** have also been mentioned in the tables in chapter 3.

The policy recommendations have to be presented to and discussed with national and EU policy-makers during high-visibility events in order to advance consensus, possibly improve them further, and stimulate uptake of these policy proposals and instruments. The table below gives an overview of the key stakeholders and their role in this EU-level policy dialogue.

4-3. Table: Key stakeholders and their role in the EU-level policy dialogue

| Key stakeholders and their role in the policy dialogue   |  |
|--|--|
| Key stakeholders   | Their role   |
| European Commission > Directorate-General for Energy<br>Deputy Director-General - Coordination of the Just and Green Energy Transition (in charge of Directorates B and C)<br>Directorate B: Just Transition, Consumers, Energy Efficiency and Innovation<br><b>Unit Buildings and Products (ENER.B.3)</b> | Body initiating and monitoring the EU policy, drafts the regulations, directives, etc. in accordance with the Union's interests and submits the texts to the European Parliament and Council.    |
| European Parliament > Members of the European Parliament (MEPs)<br>Parliamentary committees<br><b>Committee on Industry, Research and Energy (ITRE)</b>  | Body representing the citizens directly. The dedicated committee appoints a <i>rapporteur</i> who reviews and amend the Commission proposals in accordance with the political groups' interests. |
| European Council: Energy attachés working in preparation for the ministerial meeting of <b>Transport, Telecommunications and Energy Council (Energy)</b>   | Body representing the national governments, reviews and amend the Commission proposals in accordance with the national interests.  |
| Concerted Action on the Energy   | CA EPBD is a joint initiative between the EU Member States   |



|  |  |
|--|--|
| Performance of Buildings Directive (CA EPBD) | and the European Commission. It involves representatives of national ministries or their affiliated institutions who are in charge of preparing the technical, legal and administrative framework for the Energy Performance of Buildings Directive in each EU Member State, plus Norway. The objective is to enhance the sharing of information and experiences from national adoption and implementation of this important European legislation. It has assigned central working teams which deal with every EPBD article, and provides information about the status of every MS, country reports, and best practices applied to achieve energy efficiency in buildings.   |
| European Energy Network (EnR)                | <p>EnR is a voluntary network currently numbering twenty five European energy agencies, with responsibility for the planning, management or review of national research, development, demonstration or dissemination programmes in the fields of energy efficiency and renewable energy and climate change abatement. It seeks to strengthen cooperation between member agencies and other European actors on all issues relevant to sustainable energy (energy efficiency, sustainable transport and renewable energy). International comparison and information sharing takes place primarily through eight Working Groups, which are also open to relevant non-member organisations.</p> <p>The EnR <a href="#">Buildings Working Group</a>'s focus is the energy performance of buildings and addresses policies, initiatives, and technical measures.</p> |
| Housing Europe                               | <p>Housing Europe is the European Federation of Public, Cooperative and Social Housing.</p> <p>Established in 1988, it is a network of 46 national and regional federations which together gather about 43,000 public, social and cooperative housing providers in 25 countries. Altogether they manage around 25 million homes.</p> <p>Social, public and co-operative housing providers have a vision of a Europe which provides access to decent and affordable housing for all in communities which are socially, economically and environmentally sustainable and where everyone is enabled to reach their full potential.</p> <p>Housing systems in transition Working Group.</p>  |

Focused events with MEPs and DG ENER or the CA EPBD will likely be effective in increasing the visibility of the policy recommendations. The EU-level Technical Advisory Committee and FEDARENE members will regularly be invited to comment and participate in EU events. The recast of the EPBD was at a perfect timing to maximise the interest around the topic of EPCs. The policy



recommendations (summarized in D7.2 Conclusive policy recommendations guide) were presented during the FEDARENE General assembly session on 15 June 2022 and other events.

Events and other dissemination activities will aim to jointly present results with sister projects to cross-promote and mutually invite to events.

As mostly the EPDB recast could at EU level serve as an implementing possibility of our recommendations, targeted EU-wide policy dialogue and transfer of the policy recommendations will be organized and implemented as planned in the last months of the project coordinated by FEDARENE.

### *3.1.3 Planned steps of EU-wide policy dialogue and transfer of the policy recommendations*

At the EU level, the policy dialogues target the EU institutions involved in the policymaking process listed in the table 4-3. The timing depended on the EPBD recast process to have the biggest impact possible on EU policy. Indeed, in the recast of the EPBD, Energy Performance Certificates were not only included as such, but also highlighted as an important tool for renovation. The second aspect of QualDeEPC, namely deep renovation, was also finally mentioned in the text. These two aspects were very encouraging for the potential impact of the recommendations drafted by QualDeEPC.

After several meetings with representatives of the European Commission, the policy recommendations developed by QualDeEPC have been in the hands of several policymakers in the EP and the Council. They received further visibility thanks to close collaboration with the projects of the Next Gen EPC project cluster, e.g., at the final conference of X-tendo and U-Cert.

The next step is to continue engaging with Members of the European Parliament (MEPs) who, as explained in table 4-3 may get inspiration from the proposals for their amendments. The plan is thus to contact targeted MEPs directly involved in the EPBD recast. They include: (Sean KELLY, Tsvetelina PENKOVA, Morten PETERSEN, and Ciaran CUFFE, from the ITRE committee, plus Radan KANEV and Bas EICKHOUT, from the ENVI committee as they will give an opinion on the ITRE's report.) In addition to inviting them to a 30-min online call, they received a 9-min video where the Wuppertal Institute presents the policy recommendations. The timeline of discussion in the European Parliament include: a first vote in the 2 committees working on this proposal in September and October 2022 and a vote in plenary session in December 2022.

In parallel, national partners were asked to get in touch with their representatives at the European Council, to multiply the chances of the European Council decision to include some recommendations proposed by QualDeEPC. This part is also included in the partners' effort in the National policy dialogue. Their interest in this exercise is to position themselves as key partners when the EPBD will get adapted into national laws. The timeline of discussion about the EPBD in the Energy Council will also be in October and December 2022.

At the time of writing (08.2022), the transposition date is not set yet. They usually take a lot of discussion, and it is hard to guess them well in advance. Nevertheless, elements in the text of the draft report published by the MEP rapporteur indicate some potential deadlines that the Member States may have to take into account in their legislation. The earliest of which would be the 1st of November 2023. One can therefore guess that the transposition would take place after this, however, it is impossible to have a clear timeline set in stone at this stage.



## 3.2 Bulgaria

This sub-chapter summarizes the actions needed after the project’s end in Bulgaria in order to reach the implementation of as many policy recommendations of QualDeEPC project as possible and to ensure the long-term maintenance and updates of the tools developed in the frame of the project.

### 3.2.1 Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term

4-1. Table: Key stakeholders and their role in the sustainability of the results of QualDeEPC project in Bulgaria

| Key stakeholders and their role in the sustainability of the results of QualDeEPC project |  |
|---|--|
| Key stakeholders  | Their role   |
| Policy makers   | Take into account the results and the suggestions, transfer them with cooperation of some of the other stakeholders into concrete policy proposals   |
| Local governments   | Citizens information campaigns for promotion of the tools and the EPC achievements; follow-up of the application of the advertisement requirements on local level;   |
| Energy agencies   | Suggestion on improvement of the results, their application at local, regional and national level; together with the policy makers, local government and the professionals: work on policy proposals; cooperation with the citizens; |
| Academia  | Provide feedback on the theoretical achievements; organise trainings for EPC auditors  |
| Professional chambers of engineers and architect  | Promote and use the results, give proposals for update and improvement; practical application of the project achievements; provide feedback on the practical application of the results; key role in the EPC assessors trainings     |
| Energy auditors   | Promote and use the results, give proposals for update and improvement; practical application of the project achievements and feedback; key role in the EPC assessors training   |
| Facility managers’ chambers   | Promote the results to the building owners/renters, active role in the application of the advertisement guidelines suggestions and the promotion of the tools  |
| Chamber of installers   | Practical application of the results and feedback on them  |

In order to maintain the National Expert Forum, EAP as part of the Association of Bulgarian Energy Agencies organises National Conferences twice a year with different panels, one of which is dedicated to the Energy Efficiency. Representatives of the policy makers, legislative bodies and EPC and building experts are always invited and present. They actively take part in the discussions and



proposals for improvement of the local legislation. The outcome of these Conferences is always a recommendations and policy proposal document which is sent to all the respective national institutions.

In addition, regular contact with these key stakeholders is maintained via different events and working groups related to the Energy Efficiency.

EAP actively participates in policy proposal documents, discussions, workshops at local and EU level, which makes the access to these stakeholders easy and creates sustainable relationships with them.





4-2. Table: Overview of actions needed in Bulgaria to implement policy proposals

| Item | QualDeEPC priority (policy proposal)  | Key changes of the current legislation                                     | Key changes of the current regulation                                  | Timeline, milestones | Human and material resources needed                                     | Actions planned to support the changes  |
|------|---|--|--|----------------------|---|---|
| 1    | Definition of “Deep Energy Renovation” based on a modified nZEB-based approach.   | Introduction of the definition in the Spatial Development Act              |  | 6-12                 | Experts from the professional organisations and governmental committees | Organise meetings of the key stakeholders; prepare proposals for the key changes; follow-up of the actions; |
| A)   | Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation                                    |  | Amendment of Ordinance № РД-02-20-3 for Energy Efficiency of Buildings | 18                   |   |   |
| E)   | High user-friendliness of the EPC, by way of an enhanced EPC template form, including an introduction of the proposed “Energy Rating” indicator | Introduction of the “Energy rating indicator” in the Energy efficiency Act | Amendment of Ordinance Е-РД-04-02/ 16.12.2022                          | 18                   |   |   |
| D)   | Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry                 | Amendment of the Energy Efficiency Act                                     |  | 18                   |   |   |
| F)   | Voluntary/mandatory advertising guidelines for EPCs   |  |  | 18                   |   |   |
| G)   | Improving compliance with the mandatory use of EPCs in real estate advertisement.   |  |  | 18                   |   |   |



### 3.2.2 Actions needed for the maximal exploitation of QualDeEPC's tools

4-3. Table: Actions needed in Bulgaria for the sustainability of the online tool

| Online tool for comparing EPC recommendations to deep energy renovation recommendations |  |          |  |                             |
|---|--|----------|--|-----------------------------|
| Related to the priority   | B: Online tool for comparing EPC recommendations to deep energy renovation recommendations   |          |  |                             |
| Objective   | To implement this tool (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |          |  |                             |
| Key stakeholders and their role in the further exploitation                             | <table border="1"> <tr> <td>Citizens</td> <td rowspan="2">Their feedback on the tool could lead to its improvement</td> </tr> <tr> <td>Building owners and rentals</td> </tr> </table>   | Citizens | Their feedback on the tool could lead to its improvement | Building owners and rentals |
| Citizens  | Their feedback on the tool could lead to its improvement   |          |  |                             |
| Building owners and rentals   |  |          |  |                             |
| How the tool is being implemented in Bulgaria   | The online tool for comparing EPC recommendations to deep energy recommendations for Bulgaria is developed as simplified tool, embedded in the Deep Renovation Network Platform which is called Qualrenovate. The user is given the possibility to choose among a list of recommendations for Deep Renovation, specific recommendations and to make a selection. The list contains recommendations for the building envelope (walls insulation, roof and floor insulation, doors and windows replacement, etc.) and systems improvements (ventilation, heating and cooling, domestic hot water systems, lighting, etc.). |          |  |                             |
| Actions implemented so far  | The tool is created, integrated in the DRNP and ready for use since May 2022.  |          |  |                             |
| Actions planned for further implementation and status expected by end of the project    | By 28 February 2023 an update of the market research will be done and the information on the energy savings (%) will also be added. The indicative costs will be also updated.   |          |  |                             |
| Technical aspects of sustainability   | The tool is simplified so it is very sustainable from a technical point of view. As the tool is part of DRNP which will be hosted at EAP server a minimum technical maintenance could be performed in order to ensure its operation and make it sustainable.   |          |  |                             |
| Financial aspects of sustainability   | If there is no funding to maintain the tool, it will not be maintained and updated after 28 February 2023. Funding could come a special dedicated project or by making the use of the tool paid  |          |  |                             |
| Barriers of further use   | A barrier of the use after the end of the project (28 February 2023) could be the technical unavailability or dated information in case of non-maintenance.  |          |  |                             |
| Actions needed for  | In order to maintain the tool, up-to-date regular market research  |          |  |                             |



|  |   |
|--|---|
| maintaining and further exploitation after the project end | must be done and the indicative costs must be updated, as well as the maximum values of some materials if any novelties are available.<br>As the tool is developed by EAP, EAP should be the most suitable to maintain it after the end of the project. |
| Possible actions for extending and improving               | N/A   |
| Available at   | <a href="https://qualrenovate.eu/bg/services-products/deep-renovation-general-info/deep-renovation-recommendations2/">https://qualrenovate.eu/bg/services-products/deep-renovation-general-info/deep-renovation-recommendations2/</a>                   |

4-4. Table: Actions needed in Bulgaria for the sustainability of the DRNP

| National Deep Renovation Network Platform                   |  |          |  |                             |               |
|---|--|----------|--|-----------------------------|---------------|
| Related to the priority                                     | C: Creating Deep Renovation Network Platforms (DRNP)   |          |  |                             |               |
| Objective   | To implement the basic/minimum form of DRNP in participating countries (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |          |  |                             |               |
| Key stakeholders and their role in the further exploitation | <table border="1"> <tr> <td>Citizens</td> <td rowspan="3">All of the three categories could include information regarding Financing/subsidy programs, Deep Renovation promotion, Demonstration buildings, Training opportunities, Renovation platforms</td> </tr> <tr> <td>Building owners and rentals</td> </tr> <tr> <td>Professionals</td> </tr> </table>   | Citizens | All of the three categories could include information regarding Financing/subsidy programs, Deep Renovation promotion, Demonstration buildings, Training opportunities, Renovation platforms | Building owners and rentals | Professionals |
| Citizens  | All of the three categories could include information regarding Financing/subsidy programs, Deep Renovation promotion, Demonstration buildings, Training opportunities, Renovation platforms   |          |  |                             |               |
| Building owners and rentals                                 |  |          |  |                             |               |
| Professionals   |  |          |  |                             |               |
| How the platform is being implemented in Bulgaria           | <p>The Bulgarian Deep Renovation Network Platform was created together with partners based on a joint concept. The platform is providing information on a national level. Its purpose is to help building owners to take the steps needed for renovation after or based on the EPC.</p> <p>A Spanish software company developed the online based software, including all the relevant topics concerning the deep renovation concept and the seven priorities of QualDeEPC project, and the Bulgarian partner will operate the platform for Bulgaria. The tool is designed as a user-friendly platform containing all the necessary and relevant information concerning the deep renovation process, taking in consideration the national requirements. The platform is in Bulgarian language, which makes it accessible to all kinds of users.</p> |          |  |                             |               |
| Actions implemented so far                                  | The platform is created and available for use.   |          |  |                             |               |
| Actions planned for further implementation and status       | The platform will be regularly updated until the end of the project (28 February 2023)   |          |  |                             |               |



|   |   |
|---|---|
| expected by end of the project  |   |
| Technical aspects of sustainability (after the project end)                   | As the platform will be hosted at EAP server, a minimum technical maintenance could be performed in order to ensure its operation and make it sustainable.  |
| Financial aspects of sustainability   | No specific actions on the DRNP improvement or updates are planned after the end of the project, so from a financial point of view, if no funding is available, only minimal actions to keep it operational will be done  |
| Barriers of further use   | A barrier of the use after the end of the project (28 February 2023) could be the technical unavailability or out-dated information in case of non-maintenance.   |
| Actions needed for maintaining and further exploitation after the project end | After the end of the project, the platform will be hosted on the EAP server, so the most suitable body to maintain and update is EAP. This action will be possible if there is funding for it - by a separate project or by making the use of the information on the platform paid. |
| Possible actions for extending and improving                                  | N/A   |
| Available at  | <a href="https://qualrenovate.eu/bg/">https://qualrenovate.eu/bg/</a>   |



### 3.3 Germany

This sub-chapter summarizes the actions needed after the project’s end in Germany in order to reach the implementation of as many policy recommendations of QualDeEPC project as possible and to ensure the long-term maintenance and updates of the tools developed in the frame of the project.

#### 3.3.1 Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term

4-5. Table: Key stakeholders and their role in the sustainability of the results of QualDeEPC project in Germany

| Key stakeholders and their role in the sustainability of the results of QualDeEPC project |   |
|---|---|
| Key stakeholders  | Their role  |
| Policy makers / federal ministries  | Taking into account the results and proposals from the project and translating them into policy proposals in cooperation with other stakeholders.   |
| Energy agencies   | Implementation and application at the local, regional level; collaboration with policy makers, local government, and professionals in developing policy proposals; collaboration with citizens. |
| Energy consultant associations  | Promote and use the results, make suggestions for updating and improvement; practical application of project results and feedback; key role in training EPC assessors                           |
| Financial institutions  | Promote and use the results, make suggestions for updating and improvement; practical application of project results and feedback   |

Dena is involved in numerous projects with participants in the National Expert Forum. Further exchange can take place via these projects. In addition, regular contact will be maintained with these key stakeholders through various events and working groups related to energy efficiency.

Dena is actively involved in policy proposals and discussions in the energy-efficient and climate-neutral building sector, both at national and EU level, which facilitates access to these stakeholders and creates sustainable relationships.



4-6. Table: Overview of actions needed in Germany to implement policy proposals

| Item | QualDeEPC priority (policy proposal)  | Key changes of the current legislation  | Timeline, milestones | Human and material resources needed | Actions planned to support the changes   |
|------|---|---|----------------------|-------------------------------------|--|
| 1    | Definition of “Deep Energy Renovation” based on a modified nZEB-based approach.   | Insertion of a relevant paragraph in the next amendment to the Building Energy Act. | 12-18                |                                     | Organise meetings of the key stakeholders; prepare proposals for the key changes; follow-up of the actions |
| A)   | Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation                                    | Amendment of relevant paragraphs in the next Building Energy Act.                   |                      |                                     |  |
| E)   | High user-friendliness of the EPC, by way of an enhanced EPC template form, including an introduction of the proposed “Energy Rating” indicator |   |                      |                                     |  |
| D)   | Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry                 |   |                      |                                     |  |
| F)   | Voluntary/mandatory advertising guidelines for EPCs   |   |                      |                                     |  |
| G)   | Improving compliance with the mandatory use of EPCs in real estate advertisement  |   |                      |                                     |  |



### 3.3.2 Actions needed for the maximal exploitation of QualDeEPC's tools

4-7. Table: Actions needed in Germany for the sustainability of the online tool

| Online tool for comparing EPC recommendations to deep energy renovation recommendations |  |
|---|--|
| Related to the priority   | B: Online tool for comparing EPC recommendations to deep energy renovation recommendations   |
| Objective   | To implement this tool (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |
| Key stakeholders and their role in the further exploitation                             | Policy makers / federal ministries   Owner and host of the tool  |
| How the tool is being implemented in Germany  | The tool is located on the website of the consumer campaign of the Ministry of economic affairs and climate action   |
| Actions implemented so far  | Meeting with the responsible staff of the ministry and the service provider of the tool and elaboration of first proposals for the improvement of the tool   |
| Actions planned for further implementation and status expected by end of the project    | After consultation with the Ministry, commissioning of changes and implementation of the requested changes by the service provider.  |
| Technical aspects of sustainability   | As the Ministry is committed to have and maintain this tool, it ensures all technical needs for it.  |
| Financial aspects of sustainability   | As the Ministry is committed to have and maintain this tool, it ensures all financial resources for it.  |
| Barriers of further use   | Since there is only a small budget for adjustments to the tool, not all necessary adjustments can be made within the project duration  |
| Actions needed for maintaining and further exploitation after the project end           | A further contract for a complete update of the tool (adaptations to the current legal situation and calculation procedures in Germany) would be necessary, both for the technical conceptual design and for the service provider. |
| Possible actions for extending and improving  | -  |
| Available at  | <a href="https://www.energiewechsel.de">https://www.energiewechsel.de</a> or directly via <a href="https://www.sanierungskonfigurator.de/">https://www.sanierungskonfigurator.de/</a>  |



4-8. Table: Actions needed in Germany for the sustainability of the DRNP

| National Deep Renovation Network Platform  |   |
|--|---|
| Related to the priority  | C: Creating Deep Renovation Network Platforms (DRNP)  |
| Objective  | To implement the basic/minimum form of DRNP in participating countries (during project) and ensure future operation and updates, either by project partners themselves or by third parties  |
| Key stakeholders and their role in the further exploitation                          | Policy makers / federal ministries / Owner and host of the platform   |
| How the platform is being implemented in Germany                                     | Several Deep Renovation Network Platforms already exist, e.g. <a href="http://www.gebaeudeforum.de">www.gebaeudeforum.de</a> , <a href="http://www.energiewechsel.de">www.energiewechsel.de</a>                                       |
| Actions implemented so far   | Numerous sub-pages on energy-saving legislation and on the energy certificate have been created.  |
| Actions planned for further implementation and status expected by end of the project | In consultation with the network partners involved in the website, attempts are made to improve content through targeted additions. Proposals will be developed on how it could be expanded with the services that are still missing. |
| Technical aspects of sustainability (after the project end)                          | Dena is the joint operator of the website <a href="http://www.gebaeudeforum.de">www.gebaeudeforum.de</a> , so there are no technical limits to the amendment and maintenance of the platform after the project end.                   |
| Financial aspects of sustainability  | As these platforms depend on federal funds, it is very difficult to make up-to-date statements.   |
| Barriers of further use  | Only financial problems can prohibit the further use of the platform.   |
| Actions needed for maintaining and further exploitation after the project end        | Dena will make efforts with its partners to get suitable federal funds for the long-term maintenance.   |
| Possible actions for extending and improving   | There are no specific plans to further improve the platform.  |
| Available at   | <a href="http://www.gebaeudeforum.de">www.gebaeudeforum.de</a>  |





### 3.4 Greece

This sub-chapter summarizes the actions needed after the project's end in Greece in order to reach the implementation of as many policy recommendations of the QualDeEPC project as possible and to ensure the long-term maintenance and updates of the tools developed in the frame of the project.

#### 3.4.1 Key stakeholders and actions to reach QualDeEPC's policy goals in the long term

4-9. Table: Key stakeholders and their role in the sustainability of the results of QualDeEPC project in Greece

| Key stakeholders and their role in the sustainability of the results of QualDeEPC project  |  |
|--|--|
| Key stakeholders   | Their role   |
| Policy Makers <ul style="list-style-type: none"> <li>Ministry for Environment and Energy</li> <li>Division of Energy Policies and Energy Efficiency</li> <li>Hellenic Energy Inspectorate</li> </ul> | Take into account the results and proposals from the project and translate them into policy proposals in consultation with market stakeholders.<br><br>In charge of the formulation of the respective national regulations.  |
| Energy Agencies  | Communicate the results of project to a larger audience<br><br>Facilitate deep energy renovation, run DRNP platforms as well as the online tool  |
| Hellenic Technical Chamber   | Develop the relative Technical Guides assisting the implementation of updated Regulations.<br><br>Promote and use the results, give proposals for update and improvement; practical application of the project achievements; provide feedback on the practical application of the results. |
| Academia   | Provide feedback on the results.   |
| Energy Auditors (assessors) <ul style="list-style-type: none"> <li>Pan-Hellenic Association of Certified Energy Inspectors (PACEI)</li> <li>Individual Auditors (assessors)</li> </ul>               | Promote and use the results, give proposals for update and improvement; practical application of the project achievements and feedback; key role in the EPC assessors trainings;   |
| Installers,<br><br>Respective professionals' associations.   | Practical application of the results and feedback on them  |
| Building owners associations   | Promote the results to the building owners/tenants, active role in the application of the advertisement guidelines suggestions and the promotion of the tools  |
| Financial institutions   | Promote and use the results, make suggestions for updating, improvement & feedback   |
| Software developers  | Develop commercial software tools taking into account new  |



requirements and in line with the official national tool updated version to be provided by the competent Ministry

The National Expert Forum will be invited to conferences and workshops organised by our organisation and networks. Therefore, regular contact will be maintained with these key stakeholders through various events and working groups related to energy efficiency.

Moreover CRES is actively involved in policy proposals and discussions in the energy-efficient and climate-neutral building sector, both at national and EU level, which facilitates access to these stakeholders and creates sustainable relationships.



4-10. Table: Overview of actions needed in Greece to implement policy proposals

| Item | QualDeEPC priority (policy proposal)  | Key changes of the current legislation   | Key changes of the current regulation   | Timeline, milestones | Human and material resources needed  | Actions planned to support the changes  |
|------|---|--|---|----------------------|--|---|
| 1    | Definition of “Deep Energy Renovation” based on a modified nZEB-based approach.   | Introduction of the Deep energy renovation definition. then an and amendment of the law in force “Energy Efficiency in Buildings” (Law 4685/2020)  | Change of “Regulation for Energy Efficiency of Buildings” (KENAK) and the Technical Guides of the Technical Chamber of Greece on the minimum requirements for the energy efficiency of the building structural elements and technical systems.  |                      |  |   |
| A)   | Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation                                    | Introduction of the list of mandatory measures to be considered in EPCs.   |   |                      |  |   |
| E)   | High user-friendliness of the EPC, by way of an enhanced EPC template form, including an introduction of the proposed “Energy Rating” indicator | Introduction of the enhanced EPC template developed during the project.<br>Introduction of the “Energy rating indicator” in the “Energy Efficiency in Buildings” law (L.4685/2020)                 | Amendment of the Regulation for Energy Efficiency of Buildings” (KENAK) should be implemented (Article 14) as well as an amendment of the relevant Technical Guide of the Technical Chamber of Greece and the respective Ministerial Decree, should be issued for defining the new form | >24                  | Experts from the professional organisations, Technical Chamber of Greece and governmental committees | Organise meetings of the key stakeholders; prepare proposals for the key changes; follow-up of the actions; |
| D)   | Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry                 | Amendment of the Presidential Decree 100/2010: Energy auditors for buildings, boilers and HVAC systems.<br>Introduction of the deep energy renovation recommendations into the training curricula. | N.A.  |                      |  |   |
| F)   | Voluntary/mandatory advertising guidelines for EPCs   | Introduction of the guidelines in in the “Energy Efficiency in Buildings” Law (L.4685/2020)  | N.A.  |                      |  |   |
| G)   | Improving compliance with the mandatory use of EPCs in real estate advertisement.   | Already included in the national legislation   | N.A.  | N.A.                 | N.A.   | N.A.  |



### 3.4.2 Actions needed for the maximal exploitation of QualDeEPC's tools

4-11. Table: Actions needed in Greece for the sustainability of the online tool

| Online tool for comparing EPC recommendations to deep energy renovation recommendations |   |   |   |  |  |
|---|---|---|---|--|--|
| Related to the priority   | B: Online tool for comparing EPC recommendations to deep energy renovation recommendations  |   |   |  |  |
| Objective   | To implement this tool (during project) and ensure future operation and updates, either by project partners themselves or by third parties  |   |   |  |  |
| Key stakeholders and their role in the further exploitation                             | <table border="1"> <tr> <td>National Energy Agency (CRES-project partner)</td> <td>Role: Owner and host of the tool. Improvements implementation, regular update, dissemination.</td> </tr> <tr> <td>Building owners and renters, citizens; professionals</td> <td>Role: Users, feedback could lead to further improvements</td> </tr> </table> | National Energy Agency (CRES-project partner) | Role: Owner and host of the tool. Improvements implementation, regular update, dissemination. | Building owners and renters, citizens; professionals | Role: Users, feedback could lead to further improvements |
| National Energy Agency (CRES-project partner)   | Role: Owner and host of the tool. Improvements implementation, regular update, dissemination.   |   |   |  |  |
| Building owners and renters, citizens; professionals                                    | Role: Users, feedback could lead to further improvements  |   |   |  |  |
| How the tool is being implemented in Greece   | CRES developed the online QualDeEPC tool that performs building energy performance calculations and provides recommendations towards deep renovation (master tool).   |   |   |  |  |
| Actions implemented so far  | The Mastertool version was based on the existing Greek Home Energy check tool enriched with the new features in terms of elements, systems and recommendations. The tool was adapted to the national regulations and conditions for the Greek case.   |   |   |  |  |
| Actions planned for further implementation and status expected by end of the project    | The QualDeEPC Mastertool is embedded in and promoted via the platform 'EnergyHUB forALL' which is upgraded and enriched with content oriented towards deep energy renovation based on QualDeEPC concept. Related information about the Mastertool and platform will be published on CRES' social media.   |   |   |  |  |
| Technical aspects of sustainability   | The QualDeEPC Mastertool is hosted at CRES' IT infrastructure ensuring its sustainability in the long term.   |   |   |  |  |
| Financial aspects of sustainability   | In case a major upgrade is needed, CRES will pursue to receive the adequate funding from state resources or European projects.  |   |   |  |  |
| Barriers of further use   | No barriers identified  |   |   |  |  |
| Actions needed for maintaining and further exploitation after the project end           | The online tool is developed by CRES in such a way that it can be updated (default calculation values can be changed according to changes in energy efficiency measure costs, CO <sub>2</sub> emission factors, e.t.c.). The necessary changes will be implemented by CRES (by in-house software developers).                                   |   |   |  |  |
| Possible actions for extending and improving  | Currently no further improvements of the tool after the end of project are foreseen   |   |   |  |  |



|           |  |
|-----------|--|
| Available | in English and in Greek at<br><a href="https://www.energyhubforall.eu/home-energy-check/">https://www.energyhubforall.eu/home-energy-check/</a> and<br><a href="https://www.buildingcert.gr/qualdeepc_tools/master_tool/">https://www.buildingcert.gr/qualdeepc_tools/master_tool/</a> |
|-----------|--|

4-12. Table: Actions needed in Greece for the sustainability of the DRNP

| National Deep Renovation Network Platform   |  |                               |  |   |             |
|---|--|-------------------------------|--|---|-------------|
| Related to the priority   | C: Creating Deep Renovation Network Platforms (DRNP)   |                               |  |   |             |
| Objective   | To implement the basic/minimum form of DRNP in participating countries (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |                               |  |   |             |
| Key stakeholders and their role in the further exploitation                                     | <table border="1"> <tr> <td>National Energy Agency (CRES)</td> <td>Role: Facilitator and host of the platform. Improvements Implementation, regular update, dissemination</td> </tr> <tr> <td>Citizens, Building owners and tenants, Professionals, potential buyers, students, professionals</td> <td>Role: Users</td> </tr> </table> | National Energy Agency (CRES) | Role: Facilitator and host of the platform. Improvements Implementation, regular update, dissemination | Citizens, Building owners and tenants, Professionals, potential buyers, students, professionals | Role: Users |
| National Energy Agency (CRES)   | Role: Facilitator and host of the platform. Improvements Implementation, regular update, dissemination   |                               |  |   |             |
| Citizens, Building owners and tenants, Professionals, potential buyers, students, professionals | Role: Users  |                               |  |   |             |
| How the platform is being implemented in Greece   | CRES built upon an existing platform developed and operated by the centre; the platform 'EnergyHUBforALL' (classified as 1a) subtype. The existing platform was upgraded towards deep renovation to meet the QualDeEPC project requirements.   |                               |  |   |             |
| Actions implemented so far  | The upgraded version of the platform is operating as of 10.2022.   |                               |  |   |             |
| Actions planned for further implementation and status expected by end of the project            | The platform will be regularly updated until the end of the project by CRES team   |                               |  |   |             |
| Technical aspects of sustainability (after the project end)                                     | As the platform will be hosted at CRES' IT infrastructure a minimum technical maintenance could be performed in order to ensure its operation and make it sustainable in the long term.  |                               |  |   |             |
| Financial aspects of sustainability   | In case a major upgrade is needed, CRES will pursue to receive the adequate funding from state resources or European projects, otherwise the updates, technical and content-wise, will be limited.   |                               |  |   |             |
| Barriers of further use   | A barrier of the use after the end of the project (28 February 2023) could be the dated information. It is important that the platform remains independent, funding will be needed after the project time.   |                               |  |   |             |



|   |  |
|---|--|
| Actions needed for maintaining and further exploitation after the project end | The platform owner (CRES) needs to secure the sufficient financial resources in order to keep updated as well as to further exploit (i.e. include additional services) the platform. |
| Possible actions for extending and improving                                  | No specific actions for extending and improving the DRNP are foreseen at the moment.   |
| Available at  | <a href="http://www.energyhubforall.eu">http://www.energyhubforall.eu</a>  |

### 3.5 Hungary

This sub-chapter summarizes the actions needed after the project's end in Hungary in order to reach the implementation of as much policy recommendations of QualDeEPC project as possible and to ensure the long-term maintenance and updates of the tools developed in the frame of the project.

#### 3.5.1 Key stakeholders and actions to reach QualDeEPC's policy goals in the long term

4-13. Table: Key stakeholders and their role in the sustainability of the results of QualDeEPC project in Hungary

| Key stakeholders and their role in the sustainability of the results of QualDeEPC project      |  |
|--|--|
| Key stakeholders   | Their role   |
| Ministry for Construction and Investments and Ministry for Industry and Technology             | Responsible for legislation  |
| Lechner Knowledge Centre   | Develop and maintain the EPC register  |
| Hungarian Chamber of Engineers and Hungarian Chamber of Architects                             | Verify training content and issue certificates to EPC assessors, inform EPC assessors on major changes; review and approve certification bodies that issue certificates to energy experts; Implement results in courses. |
| Budapest University of Technology and Economics (BME)  | Collaboration with ministries. Develop and update professional (technical) content of legislation.   |
| Advisory NGO-s active in the topic (HuGBC, Hungarian Energy Efficiency Institute, Energiaklub) | Collaboration with authorities; collaboration with citizens, promotion and use of the results  |
| Academia   | Provide feedback on the results  |
| National Bank of Hungary   | Promote and use the results, make suggestions for updating and improvement; practical application of project results   |

The National Expert Forum will be invited to conferences and workshops organised by Energiaklub and BME even after the project's end. We are also planning to have common projects in the future, to maintain and further develop the DRNP for example.



BME has strong relationships with the Hungarian Chamber of Engineers and Hungarian Chamber of Architects and they will work on the implementation of the policy recommendations by advisory activities to the relevant ministries.



4-14. Table: Overview of actions needed in Hungary to implement policy proposals

| Item | QualDeEPC policy proposal   | Needed change                             | Key changes of the current regulation  | Timeline, milestones | Human and material resources needed  | Actions planned to support the changes   |
|------|---|---|--|----------------------|--|--|
| 1    | Definition of “Deep Energy Renovation” based on a modified nZEB-based approach.   | Introduction of the definition            | Amendment of the 7/2006 decree on the energy performance of buildings            | 6-12                 | trainings campaign is needed about the changes to be implemented by Hungarian Chamber of Engineers and Hungarian Chamber of Architects | Lobby for the amendments during thematic events and cooperative meetings with the Ministry for Construction and Investments and Ministry for Industry and Technology |
| A)   | Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation                                    |   | Amendment of 176/2008 governmental decree on the energy performance certificates | 6-12                 | calculation softwares and the online national registry platform of the EPCs should be updated  |  |
| E)   | High user-friendliness of the EPC, by way of an enhanced EPC template form, including an introduction of the proposed “Energy Rating” indicator | Introduction of the enhanced EPC template |  | 18                   | trainings campaign is needed about the changes to be implemented by Hungarian Chamber of Engineers and Hungarian Chamber of Architects |  |
| F)   | Voluntary/mandatory advertising guidelines for EPCs   | Appointment of the responsible body       |  | 18                   | Suitable human, technical and financial resources are needed to be ensured at the responsible authority                                | Proposal for the responsible authority to the Ministry for Construction and Investments and Ministry for Industry and Technology                                     |
| G)   | Improving compliance with the mandatory use of EPCs in real estate advertisement.   |   |  | 18                   |  | Support for the  |





|    |   |  |   |    |   |  |
|----|---|--|---|----|---|--|
|    |   |  |   |    |   | development of the advertising guidelines<br>Proposals for restrictions to be built in/develop in case of non-compliance |
| D) | Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry | Introduction of the deep energy renovation recommendations into the training curricula | Amendment of 266/2013. (VII. 11.) governmental decree on professional activities in the field of construction | 18 | trainings to be implemented by Hungarian Chamber of Engineers and Hungarian Chamber of Architects | Lobby for the amendments during thematic events and cooperative meetings with the responsible ministries                 |



### 3.5.2 Actions needed for the maximal exploitation of QualDeEPC's tools

4-15. Table: Actions needed in Hungary to ensure the sustainability of the DRNP

| National Deep Renovation Network Platform  |   |
|--|---|
| Related to the priority  | C: Creating Deep Renovation Network Platforms (DRNP)  |
| Objective  | To implement the basic/minimum form of DRNP in participating countries (during project) and ensure future operation and updates, either by project partners themselves or by third parties  |
| Key stakeholders and their role in the further exploitation                          | <p>Hungarian Energy Efficiency Institute (MEHI) content uploading, updating, contract with IT specialist</p> <p>Energiaklub content uploading, updating</p> <p>Skape.io (IT developer) platform maintaining, operation, development</p> <p>Budapest University of Technology and Economics (BME) review of contents, content updating, development of FAQ section and efficient building operation</p> <p>Dotroll Ltd. domain name, hosting service</p> |
| How the platform is being implemented in Hungary                                     | The platform is implemented by developing an existing platform developed and operated by Energiaklub and its partners. The platform 'Renopont' was upgraded towards deep renovation to meet the QualDeEPC project requirements.   |
| Actions implemented so far   | The site was launched on 16 November 2021 and extended in June 2022 with the addition of the professionals' database, calculator (online tool), deep renovation contents and customer relationship management system  |
| Actions planned for further implementation and status expected by end of the project | Improving the site based on user feedback, fine-tuning the site based on the user journey of different target groups, adding more deep renovation contents  |
| Technical aspects of sustainability (after the project end)                          | MEHI will contract with IT specialist for operation and webpage maintenance until 2026, contents will be updated by MEHI and Energiaklub  |
| Financial aspects of sustainability  | Financing the webpage maintenance and operation will be ensured till 2026 (app. 400 EUR/year)   |
| Barriers of further use  | If RenoPont project could not be financially self-sustaining after  |

|   |   |
|---|---|
|   | RenoHUB project, there won't be enough financial resources to update and develop the online platform.   |
| Actions needed for maintaining and further exploitation after the project end | Step 1. content updating, developing<br>Step 2. contract with the IT developer for long-term support the developments   |
| Possible actions for extending and improving                                  | If there is sufficient financial support for the RenoPont network, who would like to use/develop the website, it could be developed with their resources e.g. bank (K&H), EEO obligor (MVM) |
| Available at  | <a href="http://www.renopont.hu">www.renopont.hu</a> , in Hungarian   |

4-16. Table: Actions needed in Hungary to ensure the sustainability of the online tool

| Online tool for comparing EPC recommendations to deep energy renovation recommendations |  |  |   |                         |   |   |  |
|---|--|--|---|-------------------------|---|---|--|
| Related to the priority   | B: Online tool for comparing EPC recommendations to deep energy renovation recommendations   |  |   |                         |   |   |  |
| Objective   | To implement this tool (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |  |   |                         |   |   |  |
| Key stakeholders and their role in the further exploitation                             | <table border="1"> <tr> <td>Hungarian Energy Efficiency Institute (MEHI)</td> <td>designing of online calculator appearance</td> </tr> <tr> <td>Skape.io (IT developer)</td> <td>correcting and developing the online tool</td> </tr> <tr> <td>Budapest University of Technology and Economics (BME)</td> <td>development and updating the background database</td> </tr> </table> | Hungarian Energy Efficiency Institute (MEHI) | designing of online calculator appearance | Skape.io (IT developer) | correcting and developing the online tool | Budapest University of Technology and Economics (BME) | development and updating the background database |
| Hungarian Energy Efficiency Institute (MEHI)  | designing of online calculator appearance  |  |   |                         |   |   |  |
| Skape.io (IT developer)   | correcting and developing the online tool  |  |   |                         |   |   |  |
| Budapest University of Technology and Economics (BME)                                   | development and updating the background database   |  |   |                         |   |   |  |
| How the tool is being implemented in Hungary  | Online calculator was developed based on an excel calculator by BME, which calculates energy consumption and energy saving potential based on building typology. The calculator is functioning as a subpage of DNRP Platform and connected with customer relationship system, so all registered users could save their calculations in their profile                               |  |   |                         |   |   |  |
| Actions implemented so far  | Background excel file was ready in August 2021. Online calculator was launched in June 2022 embedded in DNRP ( <a href="http://www.renopont.hu">www.renopont.hu</a> ).   |  |   |                         |   |   |  |
| Actions planned for further implementation and status expected by end of the project    | <ol style="list-style-type: none"> <li>1. Improvements and fine-tuning as a result of user testing;</li> <li>2. Online calculator needs to be developed to be able to compare two renovation options in an easier way.</li> </ol>  |  |   |                         |   |   |  |
| Technical aspects of  | same as for DRNP   |  |   |                         |   |   |  |



|   |  |
|---|--|
| sustainability  |  |
| Financial aspects of sustainability   | same as for DRNP   |
| Barriers of further use   | same as for DRNP   |
| Actions needed for maintaining and further exploitation after the project end | BME have to update calculation background database   |
| Possible actions for extending and improving                                  | There is an intention to figure out how the system should propose deep renovation options per building type.                 |
| Available at  | <a href="https://renopont.hu/kalkulator">https://renopont.hu/kalkulator</a> , in Hungarian, available only with registration |



### 3.6 Latvia

This sub-chapter summarizes the actions needed after the project’s end in Latvia in order to reach the implementation of as much policy recommendations of QualDeEPC project as possible and to ensure the long-term maintenance and updates of the tools developed in the frame of the project.

#### 3.6.1 Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term

4-17. Table: Key stakeholders and their role in the sustainability of the results of QualDeEPC project in Latvia

| Key stakeholders and their role in the sustainability of the results of QualDeEPC project |  |
|---|--|
| Key stakeholders  | Their role   |
| Policy maker / legislator – Ministry of Economics   | Incorporate the results of the project in national legislation on building energy efficiency<br>Communicate the changes in legislation to other groups of stakeholders |
| Energy Agencies   | Communicate the results of project to a larger audience<br>Facilitate deep energy renovation, run DRNP platforms   |
| Energy auditor (assessor) certifiers  | Ensure that energy auditors are informed on the developed proposals  |
| EPC issuers   | Test the developed proposals in real life and give feedback for additional improvements  |
| Housing management companies  | Promote the use of developed online tools and DRNP platforms   |

The National Expert Forum will be invited to conferences and workshops organised by our organisation and networks. Also, we continuously lead or participate in various development projects, where it would be suitable and valuable to include persons from this group.



4-18. Table: Overview of actions needed in Latvia to implement policy proposals

| Item | QualDeEPC priority (Policy proposal)  | Key changes of the current legislation   | Key changes of the current regulation   | Timeline, milestones | Human and material resources needed                                 | Actions planned to support the changes  |
|------|---|--|---|----------------------|---|---|
| 1    | Definition of “Deep Energy Renovation” based on a modified nZEB-based approach.   | Law on the Energy Performance of Buildings   | Change of Cabinet regulations on Minimal energy efficiency requirements and in Cabinet regulations on Thermotechnics of Building Envelopes  | 12                   | Experts from the professional organisations and governmental bodies | Organise meetings with stakeholders<br>Prepare proposals of the key changes<br>Follow-up of the actions |
| A)   | Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation                                    |  | Introduction of the list of mandatory measures to be considered in EPCs in the Cabinet regulations on Minimal energy efficiency requirements and in Cabinet regulations on Thermotechnics of Building Envelopes   | 6-12                 |   |   |
| E)   | High user-friendliness of the EPC, by way of an enhanced EPC template form, including an introduction of the proposed “Energy Rating” indicator |  | Introduction of the EPC template developed during the project in the Cabinet regulation on building energy efficiency calculation methods and buildings energy certification  | 12-18                |   |   |
| D)   | Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry                 |  | Clearly state the number of mandatory trainings and the content of these trainings in the Cabinet Regulations Regarding Assessment of the Competence of Independent Experts and Monitoring of Professional Activity Thereof in the Field of Energy Performance of Buildings | 12                   |   |   |
| F)   | Voluntary/mandatory advertising guidelines for EPCs   | Define a list of information to be included in advertising in the Law on Energy Performance of Buildings |   | 6-12                 |   |   |
|      |   |  |   |                      |   |   |

|    |   |   |  |      |  |  |
|----|---|---|--|------|--|--|
|    |   |   |  |      |  |  |
| G) | Improving compliance with the mandatory use of EPCs in real estate advertisement. | Clearly state that EPC advertising is mandatory and what are the consequences if this is not done in the Law on Energy Performance of Buildings |  | 6-12 |  |  |

### 3.6.2 Actions needed for the maximal exploitation of QualDeEPC's tools

4-19. Table: Actions needed to ensure the sustainability of the online tool in Latvia

| Online tool for comparing EPC recommendations to deep energy renovation recommendations |   |
|---|---|
| Related to the priority   | B: Online tool for comparing EPC recommendations to deep energy renovation recommendations  |
| Objective   | To implement this tool (during project) and ensure future operation and updates, either by project partners themselves or by third parties  |
| Key stakeholders and their role in the further exploitation                             | Building owners and renters, improvements of the tool citizens; professionals   |
| How the tool is being implemented in Latvia   | In Latvia an existing tool on multi-apartment building renovation will be updated (since the existing tool has been made more than a decade ago). This tool will be developed as a downloadable tool executed in MS Excel with user interface programmed in Visual Basic. The tool includes the most important information on energy savings potential, CO <sub>2</sub> savings potential as well as it includes an economical calculation part which allows to plan the investments for building renovation. |
| Actions implemented so far  | The tool has been updated and is undergoing testing in order to check if the results given by the tool are applicable. The tool was finalized by October 2022.  |
| Actions planned for further implementation and status expected by end of the project    | By the end of the project the tool will be further updated in case of such need.  |
| Technical aspects of sustainability   | The tool is made in such way that it can be updated (there is a part in the tool where default calculation values can be changed according to changes in energy efficiency measure costs, CO <sub>2</sub> emission factors, e.t.c.)   |
| Financial aspects of sustainability   | The tool does not need any financial additions in order for working beyond the end of the project   |
| Barriers of further use   | No barriers for use   |
| Actions needed for maintaining and further exploitation after the project end           | The tool can be used without major changes. In case of major changes in energy tariffs and energy efficiency measure costs occur, the tool can be updated by users of the tool.   |
| Possible actions for extending and improving  | At this moment no further improvements of the tool after the end of project are foreseen  |





|              |   |
|--------------|---|
| Available at | Will be available at Latvian Qualrenovate website for downloading |
|--------------|---|

4-20. Table: Actions needed to ensure the sustainability of the DRNP in Latvia

| National Deep Renovation Network Platform  |  |
|--|--|
| Related to the priority  | C: Creating Deep Renovation Network Platforms (DRNP)   |
| Objective  | To implement the basic/minimum form of DRNP in participating countries (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |
| Key stakeholders and their role in the further exploitation                          | Building owners and renters, citizens; professionals, regional agencies<br>They can include information in several menus: Financial/subsidy programs; promotion for deep renovation; trainings; renovation platforms and demonstrative buildings   |
| How the platform is being implemented in Latvia                                      | The Latvian Deep Renovation Network Platform was created together with partners based on a joint concept. The platform is a platform for information providing information on national level. Its purpose is to help building owners to take the steps needed for renovation after or based on the EPC.<br><br>A Spanish software company developed the online based software, including all the relevant topics concerning the deep renovation concept and the seven priorities of QualDeEPC project, and the Latvian partner will operate the platform. The tool is designed as a user-friendly platform containing all the necessary and relevant information concerning the deep renovation process, taking in consideration the national requirements. The platform is in Latvian language, which makes it accessible to all kind of users. |
| Actions implemented so far   | The works on filling the platform with information are ongoing. The main structure of the platform has been created. The platform will be fully functional By November 2022.   |
| Actions planned for further implementation and status expected by end of the project | The platform will be regularly updated until the end of the project.   |
| Technical aspects of sustainability (after the project end)                          | As the platform will be hosted at Ekodoma's server, a minimum technical maintenance could be performed in order to ensure its operation and make it sustainable.   |
| Financial aspects of sustainability  | No specific actions on the DRNP improvement or updates are planed after the end of the project so from financial point of view if no funding is available only a minimal actions to keep it operational will   |



|   |   |
|---|---|
|   | be done   |
| Barriers of further use   | A barrier of the use after the end of the project (28 February 2023) could be the technical unavailability or dated information in case of non-maintenance.   |
| Actions needed for maintaining and further exploitation after the project end | If the platform should be maintained and updated with up-to-date information, then funding for this reason should be found. It is possible to give this platform to a regional Energy agency, Ministry of Economics or another stakeholder who would be interested to maintain and improve this platform. |
| Possible actions for extending and improving                                  | n/a   |
| Available at  | <a href="https://qualrenovate.eu/lv/">https://qualrenovate.eu/lv/</a>   |



### 3.7 Spain

This sub-chapter summarizes the actions needed after the project’s end in Spain in order to reach the implementation of as much policy recommendations of QualDeEPC project as possible and to ensure the long-term maintenance and updates of the tools developed in the frame of the project.

#### 3.7.1 Key stakeholders and actions to reach QualDeEPC’s policy goals in the long term

4-21. Table: Key stakeholders and their role in the sustainability of the results of QualDeEPC project in Spain

| Key stakeholders and their role in the sustainability of the results of QualDeEPC project |  |
|---|--|
| Key stakeholders  | Their role   |
| Policy makers - Ministries  | Transfer and consider the results and suggestions of the project with cooperation of stakeholders into energy and buildings policy   |
| Energy agencies   | Facilitators for technical aspects of the new results of the project to be considered and potentially included in the legislation and normative  |
| Regional local Governments  | They manage the EPCs and some financing programmes for building renovations, so consideration deep renovation and recommendations of QualDeEPC. They also implement training courses for the EPC professionals |
| Professional chambers, associations of engineers, architects and manufacturers            | Promotion and use of the tools and other results of the project; application in the buildings improvements and for trainings; also feedback for improvements   |
| EPC issuers   | Utilization of some of the main results of the project as the tools and recommendations for suggestion deep renovations of buildings within the EPCs   |
| PTEC - Technological Association of Construction Industry                                 | National promotion and dissemination of project results to their associated members.   |

The experts Forum will be invited to the conferences that sometimes are organised; we also continue other projects and activities, so we maintain keeping informed to the members of the Forum.

Escan will participate in further improvements in the public legislative process.



4-22. Table: Overview of actions needed in Spain to implement policy proposals

| Item | QualDeEPC priority (Policy proposal)  | Key changes of the current legislation  | Timeline, milestones | Human and material resources needed   | Actions planned to support the changes   |
|------|---|---|----------------------|---|--|
| 1    | Definition of “Deep Energy Renovation” based on a modified nZEB-based approach.   | Include new modifications in the CTE, RITE and 390/2021 decree  | 6-10                 | Professional and experts of buildings and energy efficiency, committee  | Contacts and sending information with policy proposal  |
| A)   | Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation                                    | Modifications in CTE, RITE  | 10-12                |   | Workshop and meetings with stakeholders  |
| E)   | High user-friendliness of the EPC, by way of an enhanced EPC template form, including an introduction of the proposed “Energy Rating” indicator | 390/2021 and previous decrees on EPCs; modulation of the EPC and two categories   | 18                   | Technical experts   | Workshop and meetings with stakeholders  |
| D)   | Regular mandatory EPC assessor training on assessment and recommendations required for certification/accreditation and registry                 | 390/2021 decree require modification this includes requirements for EPS issuer; it is necessary more information training on deep energy renovations in buildings | 6-12                 | National Energy agency, regional governments and other private stakeholders   | ESCAN provided suggestions for modifications and some will be done with support of national partner; several meetings with IDAE in revision of legislation |
| F)   | Voluntary/mandatory advertising guidelines for EPCs   | Specifications for different type of advertisements could be included;  | 18                   | More personnel for the EPC management in Regional governments and agencies  | Prepare and implement a campaign for this to sales and renting companies   |
| G)   | Improving compliance with the mandatory use of EPCs in real estate advertisement.   | Documento de “Calificación de eficiencia energética” in MITMA website page 7  | 18                   | More personnel for the EPC management in Regional governments and agencies and budget requirement of about 10000 euro | The governments should monitor real estate agencies for this   |

### 3.7.2 Actions needed for the maximal exploitation of QualDeEPC's tools

4-23. Table: Action needed in Spain to ensure the sustainability of the online tool

| Online tool for comparing EPC recommendations to deep energy renovation recommendations |  |
|---|--|
| Related to the priority   | B: Online tool for comparing EPC recommendations to deep energy renovation recommendations   |
| Objective   | To implement this tool (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |
| Key stakeholders and their role in the further exploitation                             | Building owners and renters, citizens; professionals, improvements of the tool   |
| How the platform is being implemented in Spain  | The online tool that compares the EPC recommendations to deep energy renovation in Spain is a simplified tool created and included in the Deep Renovation Network Platform qualrenovate/España; it is public, available and friendly for users without a professional background. The data are in Spanish that the user can choose among several possible improvements to make a selection of one or several recommendations. The list contains recommendations for the building envelope (walls insulation, roof and floor insulation, doors and windows replacement, etc.) and systems improvements (ventilation, heating and cooling, domestic hot water systems, lighting etc.). |
| Actions implemented so far  | The tool is created by Escan with a software company, available and used since end 2021.   |
| Actions planned for further implementation and status expected by end of the project    | Escan and the software developer will maintain and updated the tool until February 2023. If necessary, Escan will update the table by 28 February 2023; the domain will be available two years after this (till 02.2025)   |
| Technical aspects of sustainability   | The tool can be updated by partner or software developer.  |
| Financial aspects of sustainability   | The qualrenovate- España and the tool are available 2021- 2025 without any further financial need, also for Latvia and Bulgarian qualrenovate national sites.  |
| Barriers of further use   | No barriers for use, it is public and easy for users.  |
| Actions needed for maintaining and further exploitation after the project end           | To maintain the domain till February 2025 with payment of Escan and also intention to include it in PTEC association website.  |

|  |   |
|--|---|
| Possible actions for extending and improving | At this moment no further actions are foreseen for its extension.   |
| Available at                                 | <a href="https://qualrenovate.eu/es/services-products/deep-renovation-general-info/deep-renovation-recommendations/">https://qualrenovate.eu/es/services-products/deep-renovation-general-info/deep-renovation-recommendations/</a> |

4-24. Table: Action needed in Spain to ensure the sustainability of the DRNP

| National Deep Renovation Network Platform                   |   |
|---|---|
| Related to the priority                                     | C: Creating Deep Renovation Network Platforms (DRNP)  |
| Objective   | To implement the basic/minimum form of DRNP in participating countries (during project) and ensure future operation and updates, either by project partners themselves or by third parties  |
| Key stakeholders and their role in the further exploitation | Building owners and renters, citizens; professionals; regional agencies<br>They can include information in several menus: Financial/subsidy programs; promotion for deep renovation; trainings; renovation platforms and demonstrative buildings  |
| How the platform is being implemented in Spain              | <p>After the analysis of the situation and context in Spain, we preferred to create a totally new platform as there were no available platforms with deep renovation focus. The national information has been searched and also elaborated where it was needed; images and photos have been taken for this purpose, also some manufacturers did send specific schedules and photos of the heating and cooling systems, insulations, etc.</p> <p>It has taken more than 10 person-months of working, plus subcontracting software developer to get the mock up and first version of menus; now we are updating the platform each month with new training courses, financing programmes and demonstrative buildings so about 2-3 days month are necessary for that.</p> <p>We dedicated 3 people during first semester 2021 to design and elaborate the first contents, minimum contents of the general DRNP, then we started the Spanish qualrenovate and took about 4-5 months to search an elaborate texts images etc. We did take several specific photos of buildings, lighting, heating systems, solar and biomass etc; we also asked for them to manufacturers and associations of insulations, heating systems, heat pumps, biomass etc The national partner with software developer subcontracted has uploaded all in the web.</p> |
| Actions implemented so far                                  | The platform qualrenovate was created in 2021 as general and in   |



|  |   |
|--|---|
|  | November the Spanish version was also launched; other national country based qualrenovate contents were ready in January 2022 and March 2022.   |
| Actions planned for further implementation and status expected by end of the project | The platform is now updated by the national partners; in addition some stakeholders are including information on trainings and financial programmes. The revision and correction of the contents are continuous.  |
| Technical aspects of sustainability (after the project end)                          | The software maintenance is ensured for 2 years after project finalisation, till February 2025 and the hosted institution. The technical aspect for updating will be asked for several public and private potential agencies; also, PTEC may also hold the qualrenovate-Spain for several years |
| Financial aspects of sustainability  | The financial needs for updating will be asked for several public and private potential agencies; also PTEC association members   |
| Barriers of further use  | Not relevant barriers because it is an easy user-friendly platform to be used by professionals and citizens   |
| Actions needed for maintaining and further exploitation after the project end        | Escan will maintain the platform several months after the project ends and then probably PTEC, National Association of building companies will do that  |
| Possible actions for extending and improving   | TBD   |
| Available at   | <a href="https://qualrenovate.eu/es/">https://qualrenovate.eu/es/</a>   |



### 3.8 Sweden

This sub-chapter summarizes the actions needed after the project's end in Sweden in order to reach the implementation of as many policy recommendations of QualDeEPC project as possible and to ensure the long-term maintenance and updates of the tools developed in the frame of the project.

#### 3.8.1 Key stakeholders and actions to reach QualDeEPC's policy goals in the long term

4-25. Table: Key stakeholders and their role in the sustainability of the results of QualDeEPC project in Sweden

| Key stakeholders and their role in the sustainability of the results of QualDeEPC project           |  |
|---|--|
| Key stakeholders  | Their role   |
| The Swedish Energy Agency   | Implementation and application at national level; collaboration with ministries, collaboration with local energy agencies.   |
| The Swedish National Board of Housing, Building and Planning  | Implementation and application at national level; collaboration with ministries, collaboration with local energy agencies.<br>It provides information related to EPCs in an online EPC handbook. |
| Regional energy agencies and local energy advisors, Energikontoren Sverige (Energy Agencies Sweden) | Collaboration with authorities; collaboration with citizens, promotion and use of the results  |
| Certification bodies; Swedac  | Verify training content and issue certificates to EPC assessors, inform EPC assessors on major changes; review and approve certification bodies that issue certificates to energy experts        |
| Companies offering trainings  | Implement results in courses.  |
| Academia  | Provide feedback on the results.   |
| The Swedish Bankers' Association  | Promote and use the results, make suggestions for updating and improvement; practical application of project results   |

The National Expert Forum will be invited to conferences and workshops organised by CIT and its networks. In addition, CIT continuously leads or participates in various development projects, where it would be suitable and valuable to include persons from this group.





4-26. Table: Overview of actions needed in Sweden to implement policy proposals

| Item | QualDeEPC priority (Policy proposal)   | Key changes of the current regulation   | Timeline, milestones  | Human and material resources needed   | Actions planned (for project partner) to support the changes   |
|------|--|---|---|---|--|
| 1    | Definition of “Deep Energy Renovation” based on a modified nZEB-based approach.                              | <p>A definition needs to be specified.</p> <p>An amendment of the Planning and Building Ordinance, PBF (2011:338) would be required.</p>  | <p>New Building regulations are under development. The definition could be implemented directly in them. Deadline for the energy-related regulations is January 1, 2025, at the earliest.</p> | <p>Human resources are already devoted for the task of developing new building regulations at the national Board of Housing, Building Planning (Boverket)</p>   | <p>Round table meetings with authorities.</p> <p>Support Boverket with expert advice in the process.</p>   |
| A)   | Improving the recommendations for renovation, which are provided on the EPCs, towards deep energy renovation | <p>a. A definition, or guiding, on the requirement of cost-effective recommendations in Boverket’s regulations and general advice (2006:1592) on energy performance certificates for buildings (BED). This should also include how to consider measures that are not cost effective in a short perspective.</p> <p>b. Recommended levels (enhanced and exceptional) of energy efficiency measures could be developed within Boverket’s EPC-template.</p> <p>c. Suggestion of renovation package to reach deep energy renovation should be included in the EPC.</p> <p>In large extent, enhanced levels are already existing included in the current Building regulations. However, new Building regulations are under development, and these will be less</p> | <p>2026 (after the work with the new building regulations, which will not include regulations for EPC-assessment.)</p>  | <ul style="list-style-type: none"> <li>Resources needed at Boverket.</li> <li>Resources for an expert group that can support Boverket in their work.</li> </ul> | <ul style="list-style-type: none"> <li>Continue the discussion with the authorities about the need for improvements.</li> <li>Support Boverket with expert advice in the process.</li> </ul> |

|    |   |  |   |   |  |
|----|---|--|---|---|--|
|    |   | detailed than before. Therefore, Boverket's EPC template is likely more suitable for b. and c.   |   |   |  |
| E) | High user-friendliness of the EPC, by way of an enhanced EPC template form, including an introduction of the proposed "Energy Rating" indicator | Revision in existing laws is not required. However, Boverket's EPC template needs to be revised.<br>Any changes to the first page of the EPC form requires an update of the template given in an appendix to the Regulation (2006:1592) on energy performance certificates for buildings (BED).<br>Any additional element or other changes to the Swedish EPC require changes in the electronic EPC form designed and handled by Boverket. | 2026 (after the work with the new building regulations) | <ul style="list-style-type: none"> <li>Resources needed at Boverket.</li> <li>A revision of Boverket's EPC template will require a revision of the EPC database, which in turn requires large resources.</li> <li>Resources for an expert group that can support Boverket in their work.</li> </ul> | <ul style="list-style-type: none"> <li>Continue the discussion with the authorities about the need for improvements.</li> <li>Support Boverket with expert advice in the process.</li> </ul> |
| D) | Regular mandatory EPC assessor training (or test) on assessment and recommendations required for certification/accreditation and registry       | <p>a. A system with regular tests and voluntary training is already in place.</p> <p>b. Introduction of the deep energy renovation recommendations into the training curricula.<br/>Any additional knowledge (competence) requirements for EPC assessors would require a change in a change in Boverket's regulations and general advice (2007:5) for the certification of energy experts (CEX).</p>                                       |   |   | <p>a. No actions needed.</p> <p>b. Suggest this additional element to Boverket.</p>  |
| F) | Voluntary/mandatory advertising guidelines for EPCs   | Already implemented.   |   |   |  |
| G) | Improving compliance with the mandatory use of EPCs in real estate advertisement.   | Responsible body already appointed. Extended control of compliance may be needed.  | 2025  | Human resources at national and local authorities needed.   | Round-table meeting with Boverket or in other way point out the need for extended control of compliance.   |



### 3.8.2 Actions needed for the maximal exploitation of QualDeEPC's tools

4-27. Table: Actions needed in Sweden to ensure the sustainability of the online tool

| Online tool for comparing EPC recommendations to deep energy renovation recommendations |  |
|---|--|
| Related to the priority   | B: Online tool for comparing EPC recommendations to deep energy renovation recommendations   |
| Objective   | To implement this tool (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |
| Key stakeholders and their role in the further exploitation                             |  |
| How the platform is being implemented in Sweden   | Energy and profitability calculations on typical single-family houses with poor energy performance (energy class F or G) are used to develop an interactive Excel-tool. The interactive tool will be available online to all local energy advisors in Sweden in February 2023 and various calculation examples will be available as inspirational material on the national DRNP. Also, energy and profitability examples on multi-family buildings with poor energy performance (energy class F or G), are posted as inspirational material on the national DRNP.  |
| Actions implemented so far  | <p>Calculations for common types of multi-family buildings were finalized in May 2022.</p> <p>Calculations for common types of single-family buildings were finalised in October 2022.</p> <p>An interactive online tool was developed and finalised in December 2022. The user-friendliness of the tool was tested on local energy advisors and discussed in a workshop organised in January 2023.</p>  |
| Actions planned for further implementation and status expected by end of the project    | <p>The interactive tool will be available for all local energy advisors in Sweden in February 2023.</p> <p>The examples will be made available on the national DRNP platform in February 2023.</p>   |
| Technical aspects of sustainability   | <p>After the end of the project, the inspirational material will still be available from either the national DRNP platform or a new platform (please see the next table).</p> <p>It is important to make the user aware that the potential for energy and cost savings is dependent on various aspects, and that the result will vary between specific buildings and local conditions, which is clearly described in the material. To make sure that different aspects will be considered, the tool is initially only distributed to the local energy advisors to be used in discussion with the users (one-family houses owners).</p> |



|   |  |
|---|--|
|   | <p>After the tool has been tested in this way for a period, it can be considered whether the tool would be suitable to be used by the building owners directly. If so, it could be made available for anyone to use by posting it on an open platform, e.g the Swedish QualDeEPC platform. This should be done in dialogue with local energy advisors and authorities.</p> <p>Although conditions for the material is clearly explained, and the tool is made to be useful also with changes in for example investment costs and electricity prices, it will still need to be kept up-to-date with future changes in energy performance class levels (probably in 2026).</p> |
| Financial aspects of sustainability   | <p>In order to keep the interactive tool available and free of charge, financing will be needed for improvements and keeping it up-to-date. By choosing a format that requires minimum updates (see technical aspects above), also the required financing resources after the project end can be kept to a minimum.</p>  |
| Barriers of further use   | <p>Financial barriers of further use are addressed above.</p>  |
| Actions needed for maintaining and further exploitation after the project end | <p>Material on single- and multi-family buildings:</p> <p>If made available from a national platform (see next table), the host would be responsible for ensuring that necessary updates are made.</p>   |
| Possible actions for extending and improving                                  | <p>Produce and make available inspirational material for non-residential buildings.</p> <p>As mentioned above: After the tool has been tested by local energy advisors for a period, it can be considered whether the tool would be suitable to be used by the building owners directly. If so, it could be made available for anyone to use by posting it on an open platform, e.g the Swedish QualDeEPC platform. This should be done in dialogue with local energy advisors and authorities.</p>  |
| Available at  | <p>Examples of energy renovation in single- and multi-family buildings: <a href="http://www.energiroverera.se">www.energiroverera.se</a> (as a first step, please see next table)</p>  |



4-28. Table: Actions needed in Sweden to ensure the sustainability of the DRNP

| National Deep Renovation Network Platform   |  |   |  |
|---|--|---|--|
| Related to the priority   | C: Creating Deep Renovation Network Platforms (DRNP)   |   |  |
| Objective   | To implement the basic/minimum form of DRNP in participating countries (during project) and ensure future operation and updates, either by project partners themselves or by third parties   |   |  |
| Key stakeholders and their role in the further exploitation   | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Stakeholders:</i> Building owners, potential buyers, renters; students, professionals (consultants, EPC assessors, energy advisors, etc.)</p> <p><i>Role: Users</i></p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>Stakeholders:</i> Energikontoren Sverige, Local Energy Agencies, the Swedish Energy Agency and the National Board of Housing, Building and Planning</p> <p><i>Role:</i> Hosting and/or dissemination. Please also see the row below.</p> </td> </tr> </table>   | <p><i>Stakeholders:</i> Building owners, potential buyers, renters; students, professionals (consultants, EPC assessors, energy advisors, etc.)</p> <p><i>Role: Users</i></p> | <p><i>Stakeholders:</i> Energikontoren Sverige, Local Energy Agencies, the Swedish Energy Agency and the National Board of Housing, Building and Planning</p> <p><i>Role:</i> Hosting and/or dissemination. Please also see the row below.</p> |
| <p><i>Stakeholders:</i> Building owners, potential buyers, renters; students, professionals (consultants, EPC assessors, energy advisors, etc.)</p> <p><i>Role: Users</i></p> | <p><i>Stakeholders:</i> Energikontoren Sverige, Local Energy Agencies, the Swedish Energy Agency and the National Board of Housing, Building and Planning</p> <p><i>Role:</i> Hosting and/or dissemination. Please also see the row below.</p>   |   |  |
| How the tool is being implemented in Sweden   | <p>The national information platform ICHB is currently closed but will be reopened in 2023, then operated by the National board of Housing Building and Planning directly in cooperation with the Swedish Energy Agency. There might be a possibility to include additional content in line with the joint concept of the DRNPs developed within QualDeEPC.</p> <p>While waiting for the national governmental platform to be established, a new DRNP platform is created by the project partner, based on the joint concept developed within QualDeEPC.</p> <p>Information on deep energy renovation could also be disseminated by the regional energy agencies (and local hubs with energy advisors) and Energikontoren Sverige. These are well established platforms suitable for reaching a wide range of building owners.</p> |   |  |
| Actions implemented so far  | <p>The platform was completed in December 2022 and launched in January 2023.</p> <p>A meeting with the Swedish Energy Agency and the National Board of Housing, Building and planning was arranged to discuss possibilities to incorporating selected content of the QualDeEPC DRNP with the upcoming national information platform described above, or an existing national platform. This was a positive start, and it was decided to continue the discussions in the beginning of 2023.</p>   |   |  |
| Actions planned for further implementation and status expected by end of the project  | <ul style="list-style-type: none"> <li>• Invite intended users (e.g. building owners) to test the platform and answer a questionnaire for feedback.</li> <li>• Advertise via social media, professional network and on relevant events.</li> <li>• In dialogue with the Swedish Energy Agency and the National Board of Housing, Building and planning: If and when possible, incorporating selected content with the</li> </ul>   |   |  |



|   |   |
|---|---|
|   | upcoming national information platform described above.   |
| Technical aspects of sustainability (after the project end)                   | Keeping the platform open and up-to-date requires an active host.   |
| Financial aspects of sustainability   | Since it is important that the platform remains independent, and parts of it require regular up-dates, funding will be needed after the project time. Possibly, the information will be included in the national governmental platform described above. If not, the project partner will maintain the platform for 3 years.   |
| Barriers of further use   | Financial barriers are addressed above. Also, a potential scenario could be that other platforms offering similar information are developed. Hence, lowering the need and use of the DRNP developed within this project.  |
| Actions needed for maintaining and further exploitation after the project end | In dialogue with the Swedish Energy Agency and the National Board of Housing, Building and planning: If and when possible, incorporating selected content with the upcoming national information platform described above, or existing platform.<br><br>The project partner continues to host the platform, either until it can be incorporated into the governmental platform, or during 3 years after the project ends. |
| Possible actions for extending and improving                                  | -   |
| Available at  | The initial platform is available at: <a href="http://www.energirenovera.se">www.energirenovera.se</a>  |



## 4 CONCLUSIONS AND INDICATORS

To reach the policy goals appointed, usually a longer time and a constant effort is needed. This document has summarized the tasks and will help implementing partners to continue the policy dialogue if needed and to ensure the conditions to maintain and update the tools developed in the frame of the project.

This strategy is planned to be revised by the end of the project and then, from time to time, by each partner to proceed with the policy dialogue if any of the recommendations are still not embedded in the national legislation/standards.

The monitoring of the project's results is based on key performance indicators (KPIs) under development in Task 5.6. Monitoring of Results and KPIs and presented in the table below.

5-1. Table: KPIs related to this sustainability strategy

|   | WP6:<br>Online Dissemination  | Related KPI  |
|---|---|--|
|   | Project website visits  | Poor impact: < 30,000<br>Good impact: 30,000 – 100,000<br>Excellent impact: > 100,000  |
|   | WP 3 and 5:<br>QualDeEPC Development<br>Priority  | Related KPI  |
| A | Improving the EPC recommendations towards deep energy renovation                        | Minimum target: Priority developed to a stage that it could be implemented in practice in general and in each of the 7 countries; tested and discussed with all stakeholders in all partner countries<br><br>Bonus 1: additional tool(s) for aiding implementation has/have been developed<br><br>Bonus 2: requirement for EPC recommendations towards deep energy renovation adopted in at least one of the 7 countries or beyond<br><br>Bonus 3: principle of EPC recommendations towards deep energy renovation included in EPBD revision |
| B | Online tool for comparing EPC recommendations to deep energy renovation recommendations | Minimum target: Priority developed to a stage that it could be implemented in practice in general and in each of the 7 countries; and either new tool implemented or existing one improved<br><br>Bonus 2: adopted in at least one other country beyond QualDeEPC<br><br>Bonus 3: requirement for MS to operate such tools or to provide the respective contents included in EPBD revision   |
| C | Creating Deep Renovation Network Platforms  | Minimum target: Priority developed to a stage that it could be implemented in practice, both in general and in each of the 7 countries<br><br>Bonus 1: Deep Renovation Network Platform implemented in each of the 7 countries (new Platform or improvement of existing one)   |



|   |   |  |
|---|---|--|
|   |   | <p>Bonus 2: policy proposal adopted in at least one of the 7 countries or beyond</p> <p>Bonus 3: policy proposal included in EPBD revision</p>   |
| D | Regular mandatory EPC assessor training on assessment and recommendations required for certification and registry | <p>Minimum target: Priority developed to a stage that it could be implemented in practice in general and in each of the 7 countries</p> <p>Bonus 1: additional tool(s) for aiding implementation has/have been developed</p> <p>Bonus 2: training content implemented or improved by partners or others in at least one of the 7 countries or beyond</p> <p>Bonus 3: policy proposal adopted in at least one of the 7 countries or beyond</p> <p>Bonus 4: requirement for MS to mandate regular EPC assessor training or exams included in EPBD revision</p> |
| E | High user-friendliness of the EPC   | <p>Minimum target: Priority developed to a stage that it could be implemented in practice in general and in each of the 7 countries; tested and discussed with stakeholders in all partner countries.</p> <p>Bonus 1: additional tool(s) for aiding implementation has/have been developed</p> <p>Bonus 2: enhanced template or elements thereof has/have been adopted in at least one of the 7 countries or beyond</p> <p>Bonus 3: enhanced template or elements thereof has/have been included in EPBD revision</p>  |
| F | Voluntary/mandatory advertising guidelines for EPCs   | <p>Minimum target: Priority developed to a stage that it could be implemented in practice in general and in each of the 7 countries</p> <p>Bonus 1: additional tool(s) for aiding implementation has/have been developed</p> <p>Bonus 2: adopted (voluntary or mandatory) in at least one more of the 7 countries (Sweden already had it before) or beyond</p> <p>Bonus 3: requirement for MS to offer voluntary or mandate the use of such advertising guidelines included in EPBD revision</p>   |
| G | Controlling and enforcing the mandatory use of EPCs in real estate advertisements                                 | <p>Minimum target: Priority developed to a stage that it could be implemented in practice in general and in each of the 7 countries</p> <p>Bonus 1: additional tool(s) for aiding implementation has/have been developed</p> <p>Bonus 2: one or more or elements of the scheme proposed has/have been adopted in at least one of the 7 countries or beyond</p> <p>Bonus 3: one or more or elements of the scheme proposed has/have been included in EPBD revision</p>  |

