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Highlights from QUALICheck webinars

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The QUALICheck project began on 1 March 2014 and was completed on 28 February 2017.

The project brought forward major aspects of compliance of Energy Performance Certificates (EPCs) and quality of the works, in support of better energy performance of buildings. Several communication channels, physical and virtual, were utilised to disseminate QUALICheck results. One of these were webinars (web seminars) offered free of charge to a broad audience of building professionals. In total, sixteen webinars took place within the course of the QUALICheck project. Most of these were produced after the first half of the project implementation period, when there were already substantial results to present.

This article provides an overview of interesting highlights from these sixteen virtual events. The QUALICheck webinars have been recorded and are available for viewing on demand on the project website at www.qualicheck-platform.eu and on the QUALICheck YouTube channel (link available through the website homepage). Access is provided both to the full webinars and to the individual presentations and Question & Answer sessions. As all QUALICheck outputs, the webinars have been developed across four aspects (status on the ground, compliance of Energy Performance Certificates, quality of the works and compliance frameworks) and have focused mainly on four technologies (thermal transmission characteristics, ventilation and airtightness, sustainable summer comfort and renewables in multi-energy systems). The QUALICheck website allows users to find webinars either chronologically or through the above classification.

Compliant Energy Performance of buildings Certificates and better quality of the works – ground status, initiatives and perspectives | Webinar #01, 27 April 2015

The Energy Performance of Buildings Directive (EPBD) recast set ambitious goals for the building

sector to reduce energy use as well as greenhouse gas emissions. It requires member states to engage in the generalisation of Nearly Zero-Energy Buildings and to set up the necessary actions to support the mandatory availability of Energy Performance Certificates (EPCs), both for new and existing buildings.

This webinar highlighted several issues, on the quality of the EPC input data and on the quality of the works, which can be critical in order to achieve EPBD compliance in practice. It also presented preliminary results of three field studies, in Austria, Cyprus and Estonia, evaluating such issues. The studies showed that there is reasonable cause for concern in respect to the compliance with relevant energy performance regulations.

Building airtightness and initiatives to improve the quality of the works | Webinar #03, 12 January 2016

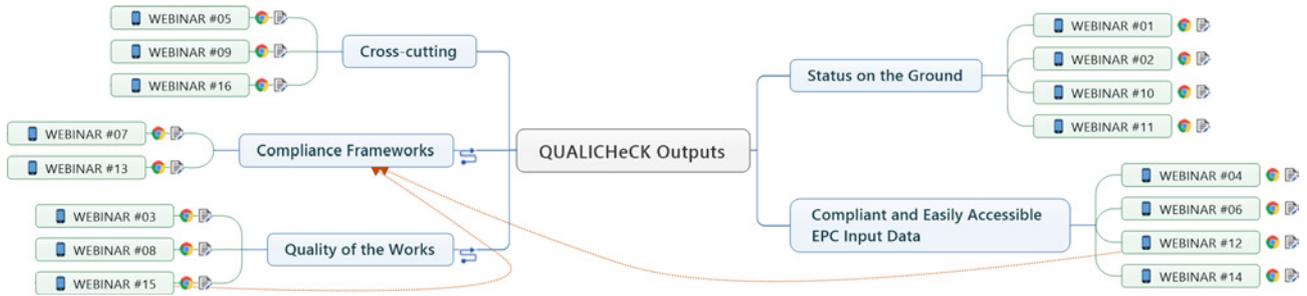
Building airtightness is a critical factor for Nearly Zero-Energy Buildings and represents a key challenge for the building sector. The objective of this webinar was to give background information on selected initiatives to improve the quality of the works with respect to building airtightness under real world conditions. Such initiatives include the path to quality of works for airtightness decomposed to 10 practical steps under the Etanch'air project, specific market drivers for the development and correct use of new building airtightness products, and the Isov'Air Test for airtightness evaluation.

The webinar was organised in cooperation with TightVent Europe (www.tightvent.eu) and the Air Infiltration and Ventilation Centre (www.aivc.org).

Thermal Bridges – input data, calculation and verification methods | Webinar #04, 15 June 2016

The objective of this webinar was to present good examples of how to deal with thermal bridges in relation to energy calculations and investigation of the real performance, and to provide a platform for discussion. The webinar presented standard approaches to calculations for thermal bridges under the Swedish and Flemish EPBD regulations, as well as common errors

QUALICHeCK Outputs - Webinars



and deviations. In addition, the results from a relevant new field study from Cyprus were presented, identifying the misreporting of U-values and highlighting the practical challenges of correctly documenting thermal transmission characteristics.

Interesting and innovative approaches for improved building envelope performance | Webinar #13, 24 January 2017

The energy challenges for the building stock require ambitious but feasible approaches to secure their performance, including the performance of the building envelope. This webinar provided insights into interesting approaches including voluntary guidelines for high thermal performing roofs, real examples of using vacuum insulation panels for retrofitting, and an approach fully implemented in the UK for acoustic performance based on robust details, with potential relevance for thermal and overall building performance.

Prevention of summer overheating – methods and results | Webinar #11, 2 December 2016

This QUALICHeCK webinar focused on summer thermal comfort by discussing available national requirements, related assessment methods, as well as results from field studies. Overheating prevention is addressed by EPBD Annex I which states that the energy performance of a building shall be determined and shall reflect the cooling energy needs (energy needed to avoid overheating) to maintain the envisaged temperature conditions. This highly important requirement for occupant's comfort and wellbeing has led to variety of practices and regulations in Member States. In principle, overheating is a dynamic problem highly depending on the solar gain, thermal mass, shadings, window airing etc. Some countries address the issue with dynamic simulation based requirements, whereas in other countries more simplified methods are in use. Field studies show that this quite a new issue has not yet been fully established in design and construction practice and more efforts are needed for successful implementation.

Solar Control in the context of quality and compliance | Webinar #05, 23 June 2016

Energy Performance Certificates (EPCs) depend significantly on the behaviour of glazing, which in turn is

determined using a well-defined set of data characterising the thermal performance of its transparent elements (glass and frame) and of the shading devices used. The set of data itself, its availability and its quality, as well as the quality of the relevant works are the main concerns from the QUALICHECK point of view. This webinar reviewed some aspects directly related to this topic, including the Spanish building technical code provisions and certification of solar control, the database on shading performance properties ES-SDA prepared under the direction of ES-SO, and the objectives of a training framework for the various type of professionals involved with shading, in order to ensure quality of the works. The webinar was organised in cooperation with ES-SO (www.es-so.com), the European Solar Shading Organisation.

Cool Roofs in the context of quality and compliance | Webinar #09, 28 September 2016

Rejection of solar gains is the aim of passive cooling strategies in any type of building and any climatic region. Cool materials work by reflecting solar radiation and therefore rejecting solar heat gains at the opaque external surfaces of the building.

This QUALICHeCK webinar outlined efforts for the promotion of cool roofs, related to compliance and quality of the works in the European context, including the role and work of the European Cool Roofs Council (ECRC), cool roofs standards and the ECRC product rating programme, as well as practical experiences from relevant markets.

Ventilative Cooling potential and compliance in energy performance regulations | Webinar #02, 17 December 2015 (Belgium, Estonia, Greece) and Webinar #10, 1 December 2016 (Spain and Germany)

Ventilative cooling – i.e., the use of natural or mechanical ventilation strategies to cool indoor spaces – can be very effective in reducing the cooling energy demand in buildings in summer or mid-season conditions. Its importance increases given the rising trends in cooling loads, as well as local climate change and spreading energy poverty. These QUALICHeCK webinars were part of a broader series focusing on ventilative cooling in energy performance, within the context of compliance with building regula-

tions in several countries. In addition, each presentation in the two webinars highlighted an aspect of broader interest, such as the key challenges and limitations of ventilative cooling, the benefits of night ventilation in particular, and the results of new field studies on compliance. The webinar series was organised in collaboration with the venticool platform (www.venticool.eu).

Renewable energy systems for buildings and EPC compliance | Webinar #14, 25 January 2017

On the route to achieve Nearly Zero-Energy Buildings, building services systems increasingly rely on renewable energy sources: solar thermal, heat pumps, geothermal, biomass, photovoltaics. This webinar dealt with the handling of renewable energy systems under the EPC (Energy Performance Certificate) and covered the challenges of providing compliant input data for EPC calculation, and an EPC which can be trusted, as well as the proposed revision of the Energy Performance of Buildings Directive (EPBD), in particular the introduction of a 'smartness indicator' for buildings and the relevance to renewable energy systems.

Product databases and compliance of input data for the Energy Performance Certificates (EPCs) of buildings | Webinar #06, 28 June 2016

Product databases provide validated information about the characteristics of construction products and building systems. They can be used to determine input data for the energy performance rating of buildings on their EPC, provided that the procedures of the national regulation authorise this.

This webinar presented the findings of the QUALICHeCK project on the compliance of EPC input data and the links with product databases, explored the potential of BIM (Building Information Modelling) as a future information source for EPC input data, and discussed possible ways to use product databases in order to improve the compliance of EPCs.

Databases of Energy Performance Certificates (EPCs): structure, content, operation | Webinar #07, 5 July 2016

The EPC database is a precondition for the implementation of an effective control system towards EPC compliance. In addition, data from the EPC database can support decision making, e.g. in shaping policies and financing instruments. Overall, data quality is of utmost importance. In this webinar, an overview of EPC databases across EU member states was presented, with particular focus on the databases and control systems of France and Sweden. In addition, an interesting approach on how to make use of

EPC data, with reference to the EU-funded projects EPISCOPE and ENERFUND, was highlighted.

Certification schemes for installers | Webinar #08, 16 September 2016

The trend towards Nearly Zero-Energy Buildings (NZEB) implies the correct execution of classic building works, in line with the NZEB principles of good workmanship, and the use of advanced technologies requiring specific skills of the workforce. Several countries are developing or have already ongoing training and certification schemes for the workforce in place.

This QUALICHeCK webinar presented schemes for training and certifying installers, from Austria, Cyprus and Romania, including their market acceptance, the lessons learnt and the costs involved.

A guide for policy makers to develop better frameworks for EPC compliance and enforcement |

Webinar #12, 13 December 2016

Checking and enforcing building compliance with the requirements set by the Energy Performance of Buildings Directive (EPBD) is essential in order to achieve the EU-wide agreed energy efficiency and CO₂-reduction targets by 2020 and beyond. This QUALICHeCK webinar presented lessons learnt and best practices throughout Europe on relevant enforcement, compliance checking and control systems. It also presented elements from the QUALICHeCK Source Book on EPC compliance, aimed at supporting policy makers and other stakeholders in developing and implementing effective compliance frameworks.

A guide for policy makers to develop better frameworks for quality of the works | Webinar #15, 23 February 2017

Quality of the works is essential in order to achieve actual energy savings and CO₂ reductions in the building sector. This webinar presented elements from the QUALICHeCK Source Book on quality of the works, including examples of technical procedures to obtain and prove good quality of the works, and of compliance frameworks for better quality of the works.

Overview of main QUALICHeCK results and insights |

Webinar #16, 28 February 2017

This webinar briefly presented the main results and insights contributed by the QUALICHeCK project, and ways these can be used further to improve the quality and compliance of buildings, towards better energy performance. It covered the found status on the ground, as well as good practices and guidance for EPC (Energy Performance Certificate) compliance and for quality of the works. ■