



CONCERTED ACTION
ENERGY EFFICIENCY
DIRECTIVE

Article 4 building renovation strategies – good practices

Executive Summary 1.7

NEEAPs, annual reports and measuring progress in energy efficiency

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1 Summary

Member States (MS) delivered their first Energy Efficiency Directive (EED) Article 4 long term building renovation strategies in spring 2014 alongside their first EED National Energy Efficiency Action Plan (NEEAP). Updated strategies need to be submitted to the Commission as part of the NEEAP-4 (2nd EED NEEAP) by the end of April 2017. The aim of this work was to present an overview of the assessment and MS good practices found in these first strategies. The Horizon 2020 Build Upon project and the Energiesprong initiative were introduced as examples to help MS to deliver improved strategies and implement their plans.

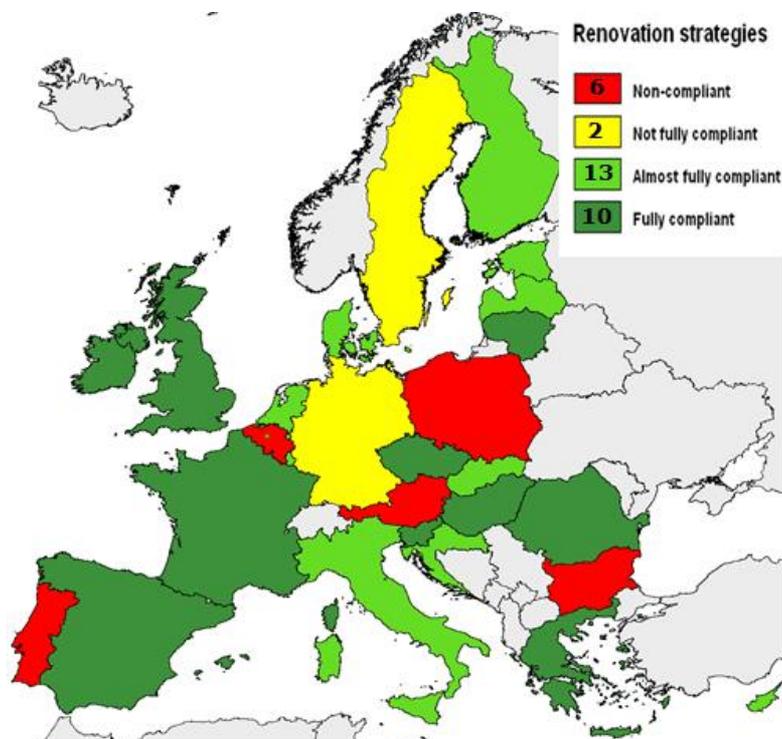
Information in this report is based on [JRC - Synthesis report on the assessment of MS's building renovation strategies](#) and input received during the Plenary Meeting in The Hague in March 2016.

Positive assessment of the first MS long term building renovation strategies – improvement opportunities for the updating round

According to the European Commission's Joint Research Centre (JRC) assessment the majority of the renovation strategies (74%) satisfactorily addressed the Article 4 requirements, a positive result for the first round. However, there were differences between the sections. Section (a), related to the overview of the national building stock, seemed to be the best addressed section while section (d), a forward-looking perspective to guide investment decisions, was the most difficult.

In general, the assessment found that, in addition to the recommended improvements related to separate sections in the strategies improvements could be made to link separate sections to the others in a more relevant, conceptual flow. More detailed conclusions and recommendations can be found in the JRC assessment report (pages 42–43).

Figure 1: Map illustrating the result of the evaluation of the renovation strategies (JRC report Figure 3)



Innovative approaches

MS were urged to use the strategies to develop innovative approaches to overcome the various barriers to broad-scale renovation of the building stock. This included a range of innovative approaches to integrating financing schemes, policies linking the national and local level of renovation, consideration of distinct aspects, and synergies with research and innovation programmes. See for example:

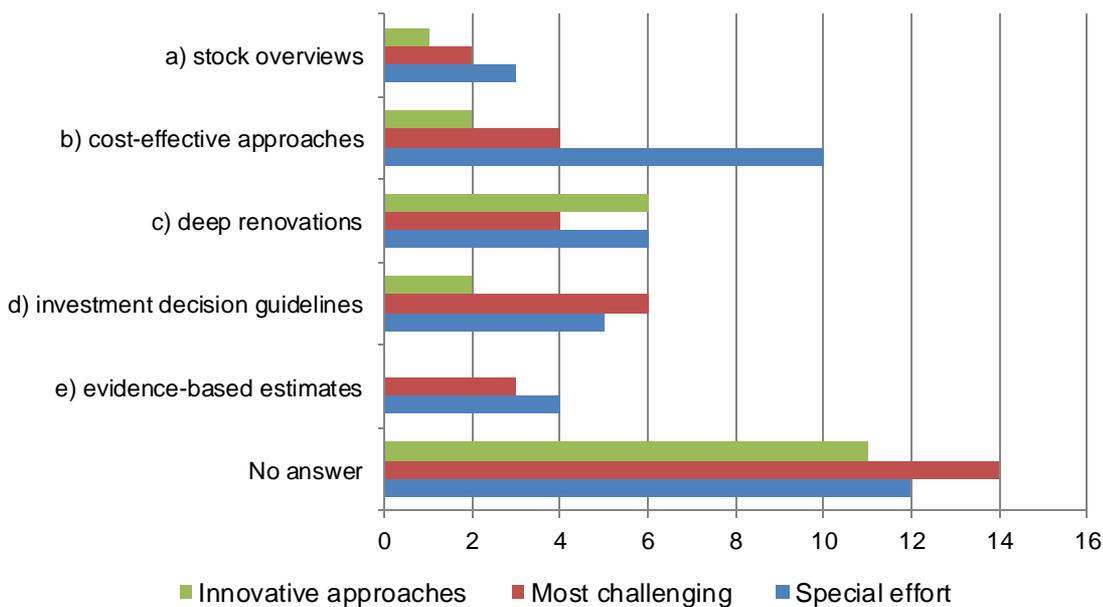
- Regulatory: Mandatory minimum energy efficiency standard for rented properties (UK)
- Financial and fiscal: Innovative renovation financing scheme: Energies Posit'if (France), Energisprong (Energy Leap) (Netherlands), Conto Termico (Thermal Account) (Italy)
- Information Campaign: Lets Live Warmer! (Latvia)
- Other measures: Research and Development programmes (UK and Germany)

Over half of the MS have already started their Article 4 renovation strategy updating process

MS were asked four questions related to the updating process of the long term renovation strategies to be submitted to the Commission as part of the NEEAP-4 (2nd EED NEEAP) by the end of April 2017. Questions were focused on the status of the updating process as well as on possible key challenges and innovative approaches seen in the update. 13 MS out of 22 respondents replied that they have already planned or started the update process. The quality of commercial building stock, energy use and performance characteristics, and the quality of housing stock emerged to be the areas where key data gaps were seen.

Figure 2 highlights the Article 4 requirements on which MS will put special effort, which are perceived as most challenging or which will be introduced as innovative approaches in the planned updated strategies.

Figure 2: Where countries stand relative to Article 4 requirements



2 Highlights from the sessions

Some leading Article 4 strategy examples

The JRC synthesis report provides an assessment of MS building renovation strategies developed under Article 4 of the Directive.

- Best practice examples were provided for each requirement a) to e) in Article 4:
 - a) UK – Best coverage of residential and non-residential sectors
 - b) Brussels Capital Region (Belgium) – Best discussion of the method and ambitious cost-optimal levels
 - c) Spain – Comprehensive description of existing policies. Barriers identified and targeted policies to overcome them (majority of MS only reported existing measures – more new measures and roadmap required)
 - d) Greece – Lots of scenarios, ambitious forward looking perspective (80% renovations by 2050)
 - e) Romania – Detailed estimations, 4 scenarios, multiple benefits assessed, cost benefit analysis

See section 3 below for further details of each of these examples. These countries also represented the best overall scored strategies in the [JRC assessment report](#).

However, it also has to be kept in mind that any strategy itself is not the end result but the starting point for the actions. Thus a clear long term roadmap for implementation is needed in all MS.

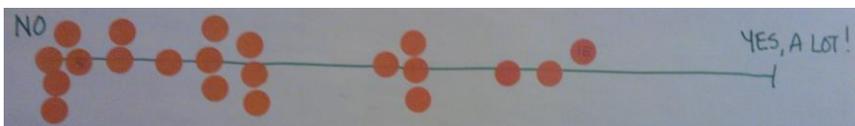
Areas for improvement

- MS could be stronger on future targets and measures, roadmaps and vision.
- R&D is often neglected.
- Some additional scenario analysis for retrofit rates per year would also help to inform MS plans and expectations.
- In general, a more holistic approach is suggested so that all plans include some assessment of costs and benefits beyond investment costs and energy savings (multiple costs/benefits).
- The non-residential sector needs better coverage in all 5 sub-sections.
- Existing and proposed M&V plans could be stronger.
- More integrated and better linked documents will lead to more coherent strategies.

A strategy is only good if it has IMPACT!

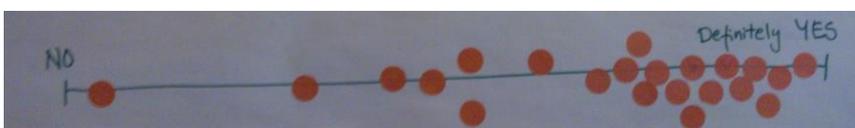
It was evident from a quick poll in the Plenary Meeting that the first renovation strategy has so far not led to an increase in the level of activity in MS. It would be interesting to hear more from MS that felt their strategy had already led to more action as this is the ultimate aim of any planning/strategy process.

Figure 3: Has your existing strategy ALREADY LED to an increase in the level of activity in your country?



When asked to consider if the strategy COULD lead to action in the future, the majority of MS were confident, if not absolutely sure (definitely yes), of at least some additional retrofit activity resulting from the strategy. The two questions, when taken together highlight the need for further discussion about how the strategies can lead to greater uptake. Who should they influence? How do they actually influence decision makers in MS?

Figure 4: Do you feel that the renovation strategy for your country COULD lead to more energy efficiency retro-fit activity?



3 Practical Examples

Results of the JRC assessment of MS first long term building renovation strategies and good practice examples were presented in The Hague, in addition to presentations from Build Upon project and Energiesprong.

All presentations are available at the CA EED website: <http://www.ca-eed.eu/themes/neeaps-ct1> (>Presentation>March 2016)

3.1 Member state good practice examples regarding the five requirements a)–e) for the Article 4 Building Renovation Strategy

a) Overview of national building stock – UK

The UK's presentation highlighted good data sources for both the residential and non-residential building stock. The analysis included a disaggregation of the stock into building types, tenure and other important characteristics for tailoring policies to specific cohorts of buildings. An interesting aspect was the use of metered data for modelling purposes including the estimation of the impact of retrofit. Refer to the National Energy Efficiency Database (NEED) for more detail (<https://www.gov.uk/government/collections/national-energy-efficiency-data-need-framework>).

b) Identification of cost-effective approaches to renovation – Brussels Capital Region

The focus of the presentation was on the cost effective approach for refurbishment, based on the Brussels Capital Region's strategy for the Energy Performance in Buildings Directive (EPBD) cost-optimum study. A disaggregated view of the building stock was again an important part of the work. Detailed modelling was used to look at the range of cost-optimal investments. The key conclusion is that it is important to consider total package costs, not just individual measures. The analysis presented formed only part of the Article 4(b) considerations: the results were also considered by various groups in the Brussels Capital Region dealing with the other parts of the Article.

The presentation is available at the CA EED website <http://www.ca-eed.eu/themes/neeaps-ct1> (>Presentation>March 2016>BE Art 4 renovation strategy b) – Brussels Capital Region)

c) Policies to stimulate cost-effective renovations – Spain

This presentation described the process for developing Spain's renovation strategy. 6 working groups with stakeholders were established. They addressed SWOT analysis, how stakeholders could help deliver the strategy, proposals for measures to develop the strategy and a forward looking perspective. Innovative approaches included the use of GIS tools for analysis of the building stock. A description of regulatory measures deployed is also included. Future actions are grouped under the headings information and communications actions, administrative measures, and actions to facilitate financing and the development of rehabilitation operations.

d) Forward-looking perspective to guide investment decisions – Greece

Greece has set a vision for a sustainable building stock by 2050. Their strategy is strong, especially on scenario analysis, providing detailed energy efficiency market analysis, analysing the multiple-benefits of energy efficiency, and for using the CRISP methodology for thinking about future prospects <http://www.crisp-futures.eu/display/CRISPSITE/The+Project>. This presentation is an excellent example of a comprehensive strategy.

e) Estimate of expected energy savings and wider benefits – Romania

Romania's strategy was particularly strong on assessment of the wider benefits of energy efficiency improvements. A range of useful international reports that provide practical methodologies for MS to apply to their own strategies were highlighted. The total benefits approximated are expected to be worth 4.6 times the value of the energy savings from energy efficiency retrofits.

3.2 Other presentations

Assessment of the MS first long term building renovation strategies – JRC

The JRC presented their assessment of MS first long term building strategies commissioned by the Commission. According to the assessment, a large majority of strategies satisfactorily addressed the EED Article 4 main elements but there is still room for improvement e.g. regarding the forward looking perspective and linking separate parts of the strategy.

Horizon 2020 / Build Upon project – World Green Building Council

World Green Building Council presented the Horizon 2020 project Build Upon which aims to help MS to deliver updated building strategies by the 30 April 2017. The main idea of the project is to bring together governments, businesses, NGOs and householders to enable the achievement of the challenging European renovation targets. Interested MS are directed to the presentation and website for more information which includes a RenoWiki to aid collaboration by the national renovation strategy community as well as MS level detail (<http://buildupon.eu/>).

Energiesprong initiative – Energiesprong/Netherlands

The goal of the initiative is to make Net Zero Energy refurbishments a market reality (<http://energiesprong.nl/transitionzero/>). This initiative from the Netherlands was also assessed in the JRC assessments report as one of the innovative approaches MS had reported in their first Article 4 renovation strategies. The ground-breaking project is being rolled out in the UK and France. It is based on ensuring retrofits are done to a very high quality, that are non-intrusive, affordable and improve the look and feel of dwellings.

3.3 Good Practice Factsheets

In addition to presentations above, Good Practice Factsheets relating to Article 4 Building Renovation Strategies have been developed and are available on the CA EED website: <http://www.ca-eed.eu/themes/neeaps-ct1> (>Good Practice Factsheet>March 2016).

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The Concerted Action for the Energy Efficiency Directive (CA EED) was launched by Intelligent Energy Europe (IEE) in spring 2013 to provide a structured framework for the exchange of information between the 29 Member States during their implementation of the Energy Efficiency Directive (EED).

For further information please visit www.ca-eed.eu or contact the CA EED Coordinator Lucinda Maclagan at lucinda.maclagan@rvo.nl



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