

Overview of Member States information on NZEBs Background paper – final report



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By: Jan Grözinger, Thomas Boermans, Ashok John, Felix Wehringer, Jan Seehusen
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1 Introduction

Buildings are central to the EU's energy efficiency policy, as nearly 40%¹ of final energy consumption and 36% of greenhouse gas emissions is in houses, offices, shops and other buildings. The 2030 Communications published by the European Commission in July 2014 underpin the key role of the building sector², stating that "the majority of the energy-saving potential is in the building sector."³ Improving the energy performance of Europe's building stock is crucial, not only to achieve the EU's 2020 targets but also to meet the longer term objectives of our climate strategy as laid down in the low carbon economy roadmap 2050⁴.

The building sector has been identified as one of the key sectors to achieve the 20/20/20⁵ targets of the EU. Beyond these targets, Europe also aims at bringing about drastic greenhouse gas emission reductions in the building sector of 88 to 91% compared to 1990 by 2050 [COM(2011) 112]⁶.

Directive 2010/31/EU on the energy performance of buildings⁷ (hereafter called the 'EPBD') set the framework and boundaries to proceed along this track. Among other items of the EPBD, two mechanisms will be decisive for the development of the building sector:

- The principle of nearly zero-energy buildings (Article 9 and article 2.2).
- The principle of cost optimality (Article 5, article 2.14 and Annex I of the EPBD recast).

In both cases, Member States have to report to the European Commission ('EC') regarding the related activities, progress and results. The EC on the other hand has to set out rules in both cases regarding methodology (explicitly for the methodology to calculate cost optimal levels, but in a guiding sense also for the principle of nearly zero-energy buildings) and the EC also needs to facilitate, steer and evaluate the reporting and implementation activities of the Member States.

The study Towards nearly zero-energy buildings (NZEB): Definition of common principles under the EPBD⁸ (hereafter called Towards NZEB study), supported the Commission in its activities to a) give guidance to the Member States on how to interpret the requirements for nearly zero energy buildings as stated in article 2.2 of the EPBD, to b) develop a common reporting format on nearly-zero energy buildings to be used by Member States and evaluate the adequacy of measures and activities reported by Member States in their national plans on nearly zero-energy buildings and to c) link cost

¹ In 2010. See "Energy, transport and environment indicators, 2012 edition", European Commission. For the purpose of this estimate the final energy consumption for the household and services sectors has been combined. It has to be noted that this includes, for example, electricity consumption for appliances but excludes energy consumption in industrial buildings.

² COM (2014) 15

³ COM (2014) 520

⁴ COM (2011) 112

⁵ 20% of greenhouse gas emissions compared to 1990, 20% energy savings by 2020 (compared to a business as usual scenario) and 20% share of renewables in 2020.

⁶ A roadmap for moving to a competitive low carbon economy in 2050.

⁷ OJ L153 of 18.6.2010, p.13

⁸ http://ec.europa.eu/energy/efficiency/buildings/implementation_en.htm

optimality and the nearly zero-energy buildings principle in a consistent way and facilitate their convergence until 2021.

This background paper summarizes the development of the templates for the submission of the national plans and consolidated information and summarises the evaluation criteria, describing the indicators. At the end the paper briefly evaluates the effectiveness of the templates and makes some suggestions for improvement.

2 Overview of submitted NZEB plans and consolidated information

The following table gives an overview of the countries that have submitted a national report, consolidated information in the word and/or in the Excel template.

Table 1. Overview of the Member States that delivered a national report, an filled in Excel template and a filled in word template

Member state	National plan ⁹	Consolidated information		Comment
		Word template ¹⁰	Excel template ¹¹	
Austria	x	x	x	
Belgium	x	x	x	
Bulgaria	x	x	x	
Croatia	x	x	x	
Cyprus	x	x	x	
Czech Republic		x	x	
Denmark	x	x	x	
Estonia		x	x	
Finland	x	x	x	
France	x	x	x	
Germany	x	x	x	
Greece				No report received.
Hungary	x	x	x	
Ireland	x	x	x	
Italy	x	x	x	
Latvia		x	x	
Lithuania	x	x	x	
Luxembourg	x	x	x	
Malta		x	x	
Netherlands	x	x	x	
Poland		x	x	
Portugal		x	x	
Romania	x			
Slovakia	x	x	x	
Slovenia	x			
Spain				No report received.
Sweden	x	x	x	
United Kingdom	x	x	x	

⁹ As required by Article 9 of the EPBD.

¹⁰ Key elements are: application of the NZEB definition in practice, intermediate targets, policies and measures for the promotion of NZEBs definition of nearly zero-energy building, policies and measures for stimulating refurbishment into NZEBs.

¹¹ Key elements are: Detailed information on application of the definition of nearly zero-energy buildings in practice.

3 The two common templates

This chapter describes the background of the development of the two common templates by summarising the context of the development, giving an overview of the developed indicators¹². It gives a brief evaluation of the effectiveness of these common templates.

3.1 Context of the development of the templates

EPBD article 9 not only asks the Member States to draw up National Plans for increasing the number of nearly zero-energy buildings but also the Commission to evaluate these plans, “notably the adequacy of the measures envisaged by the Member States in relation to the objectives of this Directive”, to give recommendations to the Member States and to publish tri-annual progress reports summarising the progress and the results of the Commission’s evaluation. The Commission published such progress report in June 2013¹³ concluding that too little progress had been made by the Member States in their preparations towards NZEBs by 2020. Based on “that report the Commission shall develop an action plan and, if necessary, propose measures to increase the number of those buildings and encourage best practices as regards the cost-effective transformation of existing buildings into nearly zero-energy buildings.” However, the Commission 2013 report recognised that only limited information from the Member States was available at the time, preventing a proper evaluation of the national plans, and in particular of the adequacy of the measures envisaged by the Member States in relation to the objectives of the EPBD.

To support the Commission a consortium led by Ecofys undertook the study Towards nearly zero-energy buildings: Definition of common principles under the EPBD¹⁴, for the Commission to provide more guidance to Member States and the Commission as regards the implementation of the requirements for nearly zero-energy buildings under the EPBD during 2012. The study, which was finalised early in 2013, developed an analytical framework for evaluation of the national plans (including a reporting template), identified benchmarks and investigated the convergence between cost optimal levels and nearly zero-energy buildings.

3.1.1 National plans for increasing the number of nearly zero-energy buildings

Member States have to report their plans for increasing the number of nearly zero-energy buildings to the European Commission. The above mentioned study included the task to develop a template for these plans that Member States may use for their reporting.

¹² Source: Towards nearly zero-energy buildings: Definition of common principles under the EPBD, see http://ec.europa.eu/energy/efficiency/buildings/implementation_en.htm

¹³ COM/2013/0483 final/2

¹⁴ See above

Figure 1 illustrates the approach that has been used for developing the template.



Figure 1: Methodology for the development of a nearly zero-energy building reporting template

The study in a first step analysed the EPBD requirements on topics to be included in the national plans for nearly zero-energy buildings. These requirements were clustered into the following six categories (detailed description, see Figure 2):

- Application of the definition of nearly zero-energy buildings,
- Intermediate targets for improving the energy performance of new buildings in order to ensure that by 31 December 2020 all new buildings are nearly zero-energy buildings,
- Intermediate targets for improving the energy performance of new buildings in order to ensure that by 31 December 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings,
- Policies and measures for the promotion of all new buildings being nearly zero-energy buildings after 31 December 2020,
- Policies and measures for the promotion of all new buildings occupied and owned by public authorities being nearly zero-energy buildings after 31 December 2018,
- Policies and measures for the promotion of existing buildings undergoing major renovation being transformed to nearly zero-energy buildings.

Through the NEEAP (national energy efficiency action plans) and NREAP (national renewable energy action plans) templates, the Member States were already asked for some relevant input regarding the process towards the implementation of the nearly zero-energy building obligation. In particular, the new NEEAP template specifically addressed part of the above-mentioned reporting requirements. The study found that 5 out of 6 reporting requirements shown in Figure 2 are already addressed in these existing templates. None of these covered the requirement to establish a national detailed application of the definition in practice for nearly zero-energy buildings (requirement 1). The study concluded that requirement 1 needed special attention in the development of the reporting template.



Figure 2: EPBD Article 9 reporting requirements

In a second step, the study analysed how accurately the EPBD requirements were reflected in the NEEAP and NREAP templates. A general conclusion was that the NEEAP reporting was less complete than the NREAP reporting. It was assumed that a major reason was the lack of a template for the first round of NEEAPs in contrast to the first round of NREAP where there was a template from the start. It was concluded that categories 1-3 in particular were not well covered in the NEEAPs and NREAPs. In contrast, input to categories 4-6 was provided in most of the relevant NEEAP and NREAP sections, therefore reporting on these categories was expected to be less challenging for the Member States.

Based on the previous findings a harmonised reporting template was developed. The main objective was to stimulate comparable input and results from Member States' national plans.

The template had eight main input sections. Apart from the above mentioned six categories, Member States were asked to describe the starting point in their country in as much detail as possible (e.g. historic development of requirements) and also to fill in an overall self-evaluation for possible improvements.

3.1.2 Summarized recommendations regarding the reporting template of the previous study

Based on the previous analyses, the following recommendations regarding the template were derived:

- The major items that should be addressed in the national reports are: the national application in practice of the EPBD framework definition for nearly zero-energy buildings, the intermediate targets and the 'promotional framework' for nearly zero-energy buildings.
- A template should guide the Member States in their reporting and support the European Commission in evaluating the reports. Without a template, the national plans would probably have a widely dispersed format and thus add significant complexity to their evaluation.
- The European Commission should aim to convince Member States to use the template and to fill in all reporting categories. Previous experience where no template was available (e.g. the first NEEAPs) showed that some questions were not answered and reporting format was dispersed.
- It should be possible to integrate the complete nearly zero-energy building report in the National Energy Efficiency Action Plans (NEEAP), as referred to in the EPBD recital 21.
- The four reports 'nearly zero-energy buildings', 'cost-optimality', 'NEEAP' and 'NREAP', should ideally be required at the same point in time. At the moment, the reporting schedules differ significantly.
- To facilitate reporting for Member States, these four reports - all containing building sector related information - might be merged: redundant information in the specific reports may be avoided and more transparency achieved. If this is not feasible, all sections asking for similar information in different reports should be harmonised: questions asking for the same input

should be identical and putting references to another report's section that already includes the information should be encouraged.

- It was concluded that a commonly used template would significantly facilitate the compilation and subsequent evaluation and comparison of national reports on increasing the number of nearly zero-energy buildings. A common format of these reports would contribute to an efficient distribution of examples and strategies on how to achieve nearly zero-energy building standard by 2021 in Europe.

3.2 Development of the analytical evaluation framework

The Towards NZEB study developed for each of the reporting template's categories, a structured table, including criteria, indicators for these criteria and benchmarks. A grading system was used allowing the evaluator to give each of the sub-criteria a specific number of points (out of a maximum number of possible points) and afterwards summing these up. This way it was possible to conduct a quantitative evaluation and clearly illustrate the difference between really achieved points compared to the maximum number of achievable points. The ratio or delta indicated the grade of target achievement in a transparent way. It was recommended that delta for each sub criterion should be explained by the Member States which would allow the evaluator to suggest recommendations for decreasing the delta.

The study developed the following evaluation tables (Table 2 - Table 7) for each of the main reporting categories and a suggestion for a format for an overall evaluation result (Table 8).

The respective tables are presented below:

Table 2. Evaluation table for requirement 1 of the nearly zero-energy building reporting template

Evaluation of national detailed applications in practice of NZEB definition	
Element	Points
Does a definition exist? [Yes=1; No =0; In case of no, total points =0]	
Numerical indicator of primary energy use expressed in kWh/m ² per year [Yes=1; No=0]	
Primary energy factors clearly defined (Also whether national or regional) [Yes=1; No =0]:	
Minimum levels of energy from renewable sources in new buildings and in existing buildings [Yes, a very significant extent is required (incl. convincing explanation)=2; Yes (RE requirement is part of national NZEB definition)=1; No=0]:	
Energy demand should be nearly zero or very low [Yes and well explained=1; No=0]	
SUM (Grade of target achievement):	X/6 (X%)
Reasons for delta to maximum achievable points clearly explained? (Yes/No):	
Recommendations for decreasing delta:	

Table 3. Evaluation table for requirement 2 of the NZEB reporting template

Evaluation of intermediate targets (all buildings)	
Qualitative 2015 targets: Interim energy related requirements for new buildings	
Requirements on fraction of renewable energies [Yes=1; No=0]	Residential: Non-residential:
Requirements on useful energy demand [Yes=1; No=0]	Residential: Non-residential:
Requirements on primary energy demand [Yes=1; No=0]	Residential: Non-residential:
Quantitative 2015 targets: Number / floor area of newly constructed NZEB buildings according to official NZEB definition	
Share of NZEB: [Yes and it is convincingly explained why it helps to achieve 2020 target =2; Yes, without sufficient explanation=1; No=0]	Residential: Non-residential:
SUM (Grade of target achievement):	X/10 (X%)
Reasons for delta to maximum achievable points clearly explained? (Yes/No). Also consider Self evaluation:	
Recommendations for decreasing delta:	

Table 4. Evaluation table for requirement 3 of the NZEB reporting template

Evaluation of intermediate targets (public buildings)	
Qualitative 2015 targets: Interim energy related requirements for new public buildings	
Requirements on fraction of renewable energies [Yes=1; No=0]	
Requirements on useful energy demand [Yes=1; No=0]	
Requirements on primary energy demand [Yes=1; No=0]	
Quantitative 2015 targets: Number / floor area of newly constructed public NZEB buildings according to official NZEB definition	
Share of NZEB: [Yes and it is convincingly explained why it helps to achieve 2020 target =2; Yes, without sufficient explanation=1; No=0]	
SUM (Grade of target achievement):	X/5 (X%)
Reasons for delta to maximum achievable points clearly explained? (Yes/No). Also consider Self evaluation:	
Recommendations for decreasing delta:	

Table 5. Evaluation table for requirement 4 of the NZEB reporting template

Evaluation of policies and measures (all new buildings)	
Grade the policies and measures by giving them a value between 0-3: No policy/measure implemented = 0 points; Seems to be insufficient=1 point; Seems to be sufficient at current point in time=2 points; A package is implemented and completely convincing=3 points.	
Residential buildings	SUM residential: X/21
Relevant regulations	
Relevant economic incentives and financing instruments	
Energy performance certificates' use and layout in relation to NZEB standard	
Supervision (energy advice and audits)	
Information (tools)	
Demonstration	
Education and training	
Non-residential buildings	SUM non-residential: X/21
Relevant regulations	
Relevant economic incentives and financing instruments	
Energy performance certificates' use and layout in relation to NZEB standard	
Supervision (energy advice and audits)	
Information (tools)	
Demonstration	
Education and training	
SUM residential and non-residential (Grade of target achievement):	X/42 (X%)
Reasons for delta to maximum achievable points clearly explained? (Yes/No). Also consider Self evaluation:	
Recommendations for decreasing delta:	

Table 6. Evaluation table for requirement 5 of the NZEB reporting template

Evaluation of policies and measures (new public buildings)	
Grade the policies and measures by giving them a value between 0-3: No policy/measure implemented = 0 points; Seems to be insufficient=1 point; Seems to be sufficient at current point in time=2 points; A package is implemented and completely convincing=3 points.	
Residential buildings	SUM residential: X/21
Relevant regulations	
Relevant economic incentives and financing instruments	
Energy performance certificates' use and layout in relation to NZEB standard	
Supervision (energy advice and audits)	
Information (tools)	
Demonstration	
Education and training	
Non-residential buildings	SUM non-residential: X/21
Relevant regulations	
Relevant economic incentives and financing instruments	
Energy performance certificates' use and layout in relation to NZEB standard	
Supervision (energy advice and audits)	
Information (tools)	
Demonstration	
Education and training	
SUM residential and non-residential (Grade of target achievement):	X/42 (X%)
Reasons for delta to maximum achievable points clearly explained? (Yes/No). Also consider Self evaluation:	
Recommendations for decreasing delta:	

Table 7. Evaluation table for requirement 6 of the NZEB reporting template

Evaluation of policies and measures (major renovation)	
Grade the policies and measures by giving them a value between 0-3: No policy/measure implemented = 0 points; Seems to be insufficient=1 point; Seems to be sufficient at current point in time=2 points; A package is implemented and completely convincing=3 points.	
Residential buildings	SUM residential: X/21
Relevant regulations	
Relevant economic incentives and financing instruments	
Energy performance certificates' use and layout in relation to NZEB standard	
Supervision (energy advice and audits)	
Information (tools)	
Demonstration	
Education and training	
Non-residential buildings	SUM non-residential: X/21
Relevant regulations	
Relevant economic incentives and financing instruments	
Energy performance certificates' use and layout in relation to NZEB standard	
Supervision (energy advice and audits)	
Information (tools)	
Demonstration	
Education and training	
SUM residential and non-residential (Grade of target achievement):	X/42 (X%)
Reasons for delta to maximum achievable points clearly explained? (Yes/No). Also consider Self evaluation:	
Recommendations for decreasing delta:	

Table 8. Overall evaluation table for the NZEB reporting template

Overall evaluation	
Category	Sub-evaluation result:
Application of the definition of nearly zero	%
Intermediate targets for improving the energy performance of new buildings in order to ensure that by 31 December 2020 all new buildings are nearly zero	%
Intermediate targets for improving the energy performance of new buildings in order to ensure that by 31 December 2018, new buildings occupied and owned by public authorities are nearly zero	%
Policies and measures for the promotion of all new buildings being nearly zero	%
Policies and measures for the promotion of all new buildings occupied and owned by public authorities being nearly zero	%
Policies and measures for the promotion of existing buildings undergoing major renovation being transformed to nearly zero	%
Overall evaluation result [(Sub-evaluation result)/6]:	%
Summarise main recommendations for decreasing the delta:	

3.3 Brief evaluation of the common templates

This section analyses the national plans and the consolidated information in respect to the quality of the template and the corresponding guidance document. This section gives an overview of the effectiveness of the template and summarizes to what extent the guidance in the template is sufficient and does still fit its purpose. Specific suggestions for improvements of the common templates are made in chapter 4.

Compared to the information from the Member States reflected in the 2013 Commission progress report, there are clear positive signals in quantity and quality of the information submitted to the Commission. To date, with exception of Greece and Spain, all Member States submitted the national plans and almost all Member States submitted the consolidated information. The template obviously helped to structure the information and made it assessable. At the same time, it seems that it helped the Member States to fill in the required information. However, in many national plans, still part of the information is missing or vague, which hampers a consistent and detailed evaluation and comparison of all national plans on NZEBs at this stage.

Detailed information on how the template helped the MS to submit the information is difficult to generate, as an improvement of the reporting is caused by multiple reasons, e.g. that MSs:

- had more time to fill in the template,
- were more willing to do the task,
- had additional information to fill in (e.g. where the detailed NZEB definition in practice has been set up and agreed in the meanwhile)

The reporting manner in national reports still varies to some extent. The main challenges for the reporting template for national plans for increasing the number of nearly zero-energy buildings are especially to get comparable results on the content of each Member State's national plan. Regarding the category national detailed applications in practice of the definition for nearly zero-energy buildings, there are still some difficulties, since the national plans as well as the consolidated information among various Member States differ significantly in quality and quantity. Some Member States make good use of the template and filled in all required fields (e.g. Netherlands), other Member States have filled in most of the fields some Member States left empty most of the fields and few Member States did not submit the consolidated information at all (Greece, Spain, Romania and Slovenia).

With the exception of Romania all Member States that submitted a report¹⁵ used the template for their reporting of consolidated information. From the reports, 3 cases had some deficiencies (AT, HU, SI). In the case of AT, cross-references to the National Plan were made instead of filling in the required content. In the HU report, questions are partly answered only with "Yes" or "No" without giving more information.

Comparing the different reporting categories (NZEB definition, interim targets, policies and measures), the first category (application of the definition of nearly zero-energy buildings) is the one that seems to be the most difficult to be reported for the MS.

3.3.1 Detailed application in practice of the definition of nearly zero-energy buildings at national level

Indicator	Comment
Does a definition exist?	<p>The template requires the Member States to indicate how a nearly zero-energy building is defined in practical details in the national context. The majority of the Member States filled in the template. In some cases it would be necessary to look into national regulations to fully understand the information given.</p> <p>The consolidated information does not always clarify the state of the implementation the definition is (approved, under approval etc.). Nor does the national plan. In addition, some Member States make vague or contradictory statements in the Excel and in the Word templates. E.g. Croatia stated in the consolidated information (word) that the "NZEB definition is at this instance given for single family buildings only, whereas NZEB definitions for other</p>

¹⁵ ES and GR did not send a report

Indicator	Comment
	building uses are under development". In contradiction in the excel template Croatia selects as implementation status "to be considered".
Numerical indicator of primary energy use expressed in kWh/m ² per year:	The template requires the Member States to fill in numerical values. On EU level this seems to be the most difficult field to fill in. Member States often report numerical indicators, but refer to different types of energy and do not use the official terminology "primary energy use" or they state numerical values without being clear if it is e.g. primary energy or final energy, etc. Thus it is not clear what type of energy is considered in their practical application of the NZEB definition. E.g. Sweden reports the "maximum energy use".
Primary energy factors clearly defined (also whether national or regional):	<p>The Ecofys guidance in the template indicates "Primary energy factors used for the determination of the primary energy use may be based on national or regional yearly average values and may take into account relevant European standards". The guidance document did not explicitly require the Member States to fill in the primary energy factors. The template should be more clear and ask Member States to report the primary energy factors used per energy carrier).</p> <p>Thus it is not surprising that in the submitted plans and consolidated information, few Member States reported the primary energy factors used for the determination of the primary energy use.</p>
Minimum levels of energy from renewable sources in new buildings and in existing buildings:	A few Member States included the share of renewable energy in the primary energy indicator and no minimum level for renewable energy sources is set. This should be considered when assessing the information.

3.3.2 Intermediate targets for improving the energy performance

Indicator	Comment
Qualitative/ quantitative 2015 targets: Interim en-	Member States rarely distinguish between residential and non-residential buildings.



Indicator	Comment
energy related requirements for new buildings:	
Requirements on fraction of renewable energies:	As it is the case in the category practical application of the NZEB definition, the fraction of renewable energies is often only considered within the primary energy demand and no extra numerical value is given.

3.3.3 Policies and measures for the promotion of nearly zero energy buildings

Indicator	Comment
Evaluation of policies and measures	<p>The connection between the policies and measures and NZEB is not always clear.</p> <p>Many Member States do not describe the policies and measures in a detailed way. Member States (e.g. Hungary) fill in Yes and No without further explanation. In contrast a positive example would be the Netherlands which have provided some of the information on the policies/measures (e.g. title, status of implementation, description) that was asked for and structured it clearly.</p> <p>The information field regarding the policy measures aiming at different types of buildings is (sometimes) just copied from one to the next cell. This makes it difficult for the assessor to evaluate the instruments without specific details.</p>

4 Suggestions for the improvement of the two common templates

Article 9 paragraph 3 of the EPBD requires Member States to include in national plans:

- "The Member State's detailed application in practice of the definition of nearly zero-energy buildings, i.e. their EPBD based national definition of nearly zero energy buildings.
- Intermediate targets for improving the energy performance of new buildings, by 2015, with a view to all new buildings being nearly zero-energy buildings after 31 December 2020 or new buildings occupied and owned by public authorities being nearly zero-energy buildings after 31 December 2018 respectively.
- Information on the policies and financial or other measures for the promotion of nearly zero-energy buildings with a view to new buildings.
- Information on the policies and financial or other measures for the promotion of nearly zero-energy buildings with a view to buildings undergoing major renovation."¹⁶

The fact that most Member States that submitted a national plan or the consolidated information used the document structure of the proposed template shows the broad acceptance of the template. The basic structure of the templates covers all of the required content and should be retained. As the quality and quantity of the information is still very disperse, further improvements can be made in the description of what is required under the single points.

A questionnaire around Member States (e.g. in connection to an EPBD committee meeting) could be used to pin down the specific influence of the template and gather recommendations for improvement. Options (other than a template structure) for collecting information from the Member States could be explored such as e.g. setting a web portal to collect structured information and allowing Member States to upload background documents.

4.1 Word Template

In general, regarding the document structure of the template, it is proposed to add a field for the date of the submission of the report. Currently, it is not clear if the date in the templates ("15 May 2013") is the date of the submission, the date of the deadline or the creation of the template. It would be helpful to know how up to date the given information is. The same applies also for the consolidated tables.

The reporting under the different categories matched the requirements in quite some cases. In order to make the evaluation easier and more comparable, it is recommended to facilitate a format which clearly indicates what needs to be filled in by the Member States (e.g. in form of a matrix or table).

¹⁶ Hermelink et al. (2012) - Template for national plans for increasing the number of nearly zero-energy buildings

This would support the Member States to organise its own information in a more structured way. This indication should match exactly what is being assessed later on (evaluation criteria), which does not seem to be the case at the moment (e.g. primary energy factors).

Taking this into account it may be considered to let the Member States know the evaluation criteria, leaving out the proposed scores for the assessment in order to avoid discussion. Letting the Member States know, how the information is going to be evaluated would a) serve as a checklist for the Member States itself and b) motivate the Member States to really fill in what is asked for.

We suggest some improvements for the various sections:

- Regarding the category detailed application of NZEB definition in practice we suggest various improvements:
 - o There should be given more guidance on how to fill in numerical values especially for energy. In some cases, it does not become clear if a Member State refers to “energy need”, “energy demand” or “primary energy” when reporting the numerical indicator. Therefore, it would be helpful to clarify the terminology, e.g. by referring to the EN standards for the terminology of numerical identifier in the template (e.g. in the Annex).
 - o The guidance does not explicitly require the Member States to fill in the primary energy factors (although according to template the evaluator should assess this). The template should be clearer and ask Member States to report the primary energy factors used per energy carrier). Showing the evaluation criteria would be a possible solution.
 - o All points that are going to be evaluated by an assessor should be clearly named in the indication for the Member States on how to fill in the template (e.g. primary energy factors, energy demand should be nearly zero or very low).

- Regarding the category intermediate targets we suggest to improve the following:
 - o In the template (evaluation part) a Member State should not only be evaluated by the minimum level for renewable energies, but it should be taken into account that some Member States include the share of renewable energies in the primary energy indicator.
 - o It should be made clear to the Member States to report the interim targets separately for residential and non-residential buildings.

- Regarding the category policies and measures we suggest to improve the following:
 - o The template should indicate that the connection between the policy and measure and NZEB should be established.
 - o We suggest to provide in form of a matrix all necessary fields that should be required under this section to make clear to the Member States what information is expected for every measure to be filled out (e.g. title, timeframe, description, etc.).

4.2 Excel template

As in the case of the consolidated tables, it is proposed to add a field for the date of the submission in the consolidated table template.

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ECOFYS Germany GmbH

Am Wassermann 36
50829 Cologne

T: +49 (0) 221 27070-100

F: +49 (0) 221 27070-011

E: info@ecofys.com

I: www.ecofys.com