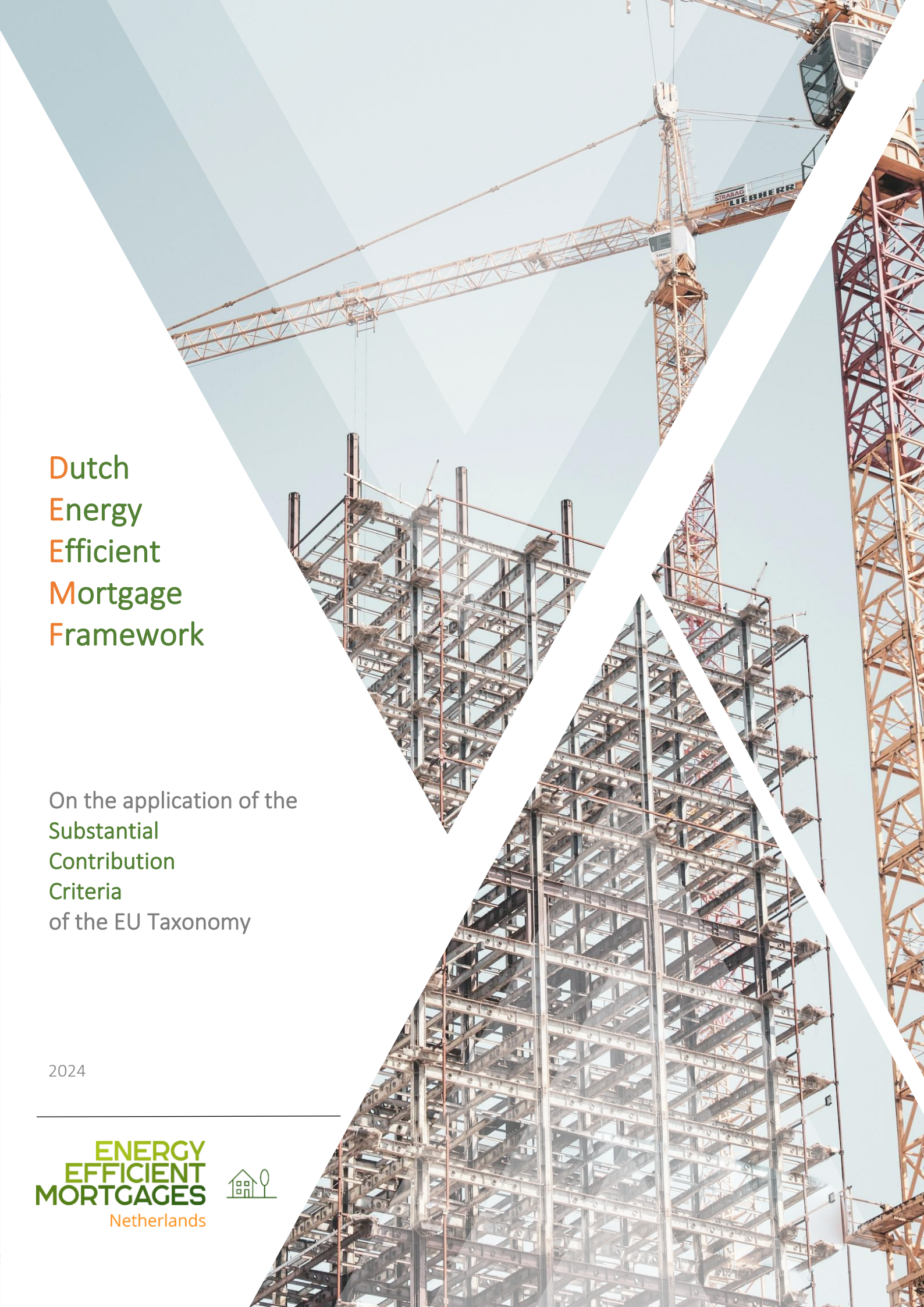

Dutch Energy Efficient Mortgage Framework

On the application of the Substantial Contribution Criteria of the EU Taxonomy

2024

ENERGY EFFICIENT MORTGAGES Netherlands

Version	V1.0
Date	December 2024
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The Energy Efficient Mortgages NL Hub ("EEM NL Hub") is an association set up with the aim of supporting and promoting the acceleration and adaptation of energy efficient housing in the Netherlands and the financing thereof. The Dutch Energy Efficient Mortgage Framework ("DEEMF") is available to all parties directly or indirectly involved in financing Dutch (residential) properties, be it by granting mortgage loans to consumers or investing therein, or otherwise.

The EEM NL Hub has no formal authority when it comes to interpreting (EU or other) legislation. The interpretation of the EU Taxonomy as presented in this document is only that: an interpretation, specific to the Dutch residential real estate market. Applying the framework is voluntary, and the framework is intended to work on a 'comply or explain' basis[1].

DEEMF has been composed based on the input from members and affiliated members of the EEM NL Hub collected as feedback during working group sessions. This document is therefore a summary as composed by the EEM NL Hub but is not necessarily the official position of any of the individual institutions participating in the EEM NL Hub.

Great care has gone into compiling this document. However, it could contain mistakes. We welcome any observations and recommendations for improvement. Please feel free to submit them at: info@eemnl.com.

[1] The option for an institution to "not comply and explain" on individual line-items is intended to leave sufficient flexibility to accommodate those institutions that look to apply stricter criteria than included in DEEMF and to those institutions that are still in the process of working towards a full application of DEEMF.

Important Notice as of 6 December 2024

On 29 November 2024 the European Commission published a new draft Commission Notice: *on the interpretation and implementation of certain legal provisions of the EU Taxonomy Environmental Delegated Act, the EU Taxonomy Climate Delegated Act and the EU Taxonomy Disclosures Delegated Act.* The document has been introduced to the working group and briefly discussed, but there has been limited time to examine its content in depth. The most important elements of this Commission Notice have been incorporated into this document as it contains several useful insights on the application of the SCC. Answer 62 of this Q&A altered the content of this document as it introduces links to other sections of Climate Delegated Act for the renovation criteria of section 7.

The EEM NL Hub working group had, until 29 November 2024, assumed that renovation measures for residential loans were exclusively addressed under Sections 7.2, 7.3, and 7.6 of the Climate Delegated Act (CDA). However, we have since learned that Sections 3.1 and 3.5 must also be assessed for renovation loans. We have included an analysis on the implications answer 62 of this newest draft Commission Notice in Section 5 and 8 of this document.

CONTENTS

Note

Over time several minor corrections and alterations have been made to the official legal text of the Climate Delegated Act and the Disclosure Delegated Act. In this version of DEEMF we have chosen to apply and update, where applicable, this document to the latest version of the Acts, the 01/01/2024 versions. In terms of content, with respect to the wording of Section 7 of the CDA this does not change our analysis. It does however result in different footnote references, whereby we use the footnote number of the latest version of the Act(s)[2][3].

[2] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02021R2139-20240101
[3] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02021R2178-20240101

1 Introduction

The year 2024 has been pivotal for building practical knowledge and experience with the EU Taxonomy, marking the first time many financial institutions have formally incorporated EU Taxonomy reporting in their annual accounts. Additionally, it was the initial year for financial institutions to officially publish the Green Asset Ratio ("GAR") after extensive preparatory efforts by many institutions. Over the past year, theoretical discussions within the EEM NL Hub have been put into practice, enabling institutions to apply the criteria, applying the EEM NL Hub's interpretations and analyses, and collect and manage essential data elements. The resulting experiences have been incorporated into this 2024 update of DEEMF SCC.

Through DEEMF, we are pleased to have supported our members in these endeavours and proud of our framework's role in the process. In the first half of 2024, we organised multiple working group sessions to share insights and lessons learned from the inaugural EU Taxonomy disclosure process. These sessions have enabled participants to exchange insights on critical areas, such as data availability, interpretations, practical applications, assumptions, IT, data governance, audits, and assurance.

These discussions have also clarified practical challenges, such as ambiguities in definitions, gaps between theory and practice, and limitations in certain EU Taxonomy criteria. These insights have been shared with national agencies like RVO and EP-Online, contributing to updates in methodologies and data practices, as well as with the European Commission.

The year 2023 ended with the unannounced—though not unexpected—release of a new EU Taxonomy Commission Notice on Article 8, a Q&A document, with relevant content on the interpretation and application of the Substantial Contribution Criteria (SCC). This document was officially published in the EU Journal at the beginning of November 2024. This publication required rapid interpretation at the start of 2024, as updates were needed for inclusion in annual accounts. The release included impactful content that influenced previous EEM NL Hub working group interpretations, particularly regarding financing new constructions and the evaluation of minimum safeguards.

On 29 November 2024 the European Commission published a new draft Commission Notice. The document has been introduced to the working group and briefly discussed, but there has been limited time to examine its content in depth. The most important elements of this Commission Notice have however been incorporated in this document as it contains several useful insights on the application of the SCC. Answer 62 of this Q&A altered the content of this document as it introduces links to other sections of Climate Delegated Act for the renovation criteria of section 7.

DEEMF 2024 incorporates many incremental yet significant items, such as the Commission Notice documents, the implementation of the Omgevingswet as of 1 January 2024, updates on data availability, and the inclusion of the assessment of Criteria 7.3 and 7.6 (including references towards 3.5 and 3.1 respectively) under the Omgevingswet and many other smaller refinements. Overall, this update ensures the SCC analysis remains current.

The Commission Notice documents should be understood in relation to one another, as their overlaps and cross-references can occasionally lead to ambiguities or apparent conflicts. Additionally, new interpretations provided in subsequent notices may influence the understanding of earlier guidance, underscoring the need to reassess previous positions in light of updated information. This evolving body of Commission notices should be evaluated alongside the original Level 1 (Taxonomy Regulation) and Level 2 (Delegated Acts) texts to ensure a comprehensive and up-to-date interpretation.

This publication is one of three documents planned for the end of 2024, reflecting the latest insights from the EEM NL Hub working group. The EEM NL Hub remains committed to fostering collaboration, promoting knowledge-sharing, and delivering data-driven insights to ensure rigorous and high-quality analysis of sustainable finance regulations for its members.

Looking ahead, the potential revision of the EU Taxonomy Regulation and the Climate Delegated Act (CDA) in the coming year is officially anticipated based on the provisions of the regulation. Ideally, a revision of the CDA would provide an important opportunity to align the EU Taxonomy with related legislative frameworks, such as the Energy Performance of Buildings Directive ("EPBD IV"). More importantly, it presents a chance to significantly enhance the practical applicability of CDA criteria, particularly for renovations and new constructions. In November 2024, Commission President Ursula von der Leyen floated the (political) idea of potentially merging the EU Taxonomy Regulation with the CSDDD[4] and the CSRD[5], via a so-called *omnibus*[6] regulation. Another development to critically monitor in the new year.

The year 2025 will require the EEM NL Hub to play an active role in ensuring that changes to the EU Taxonomy remain practical and implementable. Our focus is to ensure that the essential revision of the EU Taxonomy is not lost amid competing legislative and political developments, and that its outcomes serve pragmatic implementation and application in the Netherlands.

Piet Hein Schram and Vincent Mahieu

Amsterdam, December 2024

What is new or has changed in DEEMF SCC 2024.

This document ("DEEMF SCC 2024") is an update of the DEEMF SCC 2023 document. This version contains several updates that are mainly the result of five developments.

I. Publication of EC Commission Notices on article 8 and the corresponding interpretation;
II. Publication of EC Commission Notices on the CDA, DDA and DDA and the corresponding interpretation;
III. Legal introduction and application of the 'Omgevingwet' as of 1-1-2024;
IV. Continuation of EEM NL Hub working group analysis on several topics;
V. Change in data availability.

Synopsis of changes and updates in the analysis of the interpretation and application of SCC

a) (financing) the economic activity 'new constructions' are no longer considered to be a 7.7(.2) activity but, in most cases, a 7.1 activity;
b) Inclusion of a (partial) assessment of Criteria 7.3 and 7.6 with respect to the Omgevingswet and the SCC of 3.1 and 3.5;
c) Updated analysis on the interpretation and application of economic activity 7.7;
d) Additional clarifications and insights resulting from the Commission Notice document(s).

[4] Corporate Sustainability Due Diligence Directive (CSDDD), Directive (EU) 2024/1760.

[5] Corporate Sustainability Reporting Directive (CSRD), Directive (EU) 2022/2464.

[6] An omnibus regulation in EU law is a legislative act that amends multiple existing EU laws or regulations simultaneously, typically to ensure consistency, update provisions, or implement overarching policy changes across various sectors.

2 Scope, design and development of DEEMF

2.1 Scope

This document is the outcome of the analysis of the EEM NL Hub working group sessions, where we have discussed in much detail the sub-sections of the EU Taxonomy and its application to existing residential[7] mortgage lending practices and related regulations. It covers the Substantial Contribution Criteria documented in Sections 7.1, 7.2, 7.3, 7.6 and 7.7 of the Climate Delegated Act for the environmental objective 'Climate Change Mitigation' ("CCM") and describes the analytical process, methodology and assumptions that the working group(s) have applied in creating this update of DEEMF. Figure 1 provides a summary of the analysis and interpretation of the sections of the CDA that are in scope of this document.

DEEMF does not only serve as a document to explain how certain sections of the EU Taxonomy can be applied in practice but also aims to identify areas of improvement. The working group of the EEM NL Hub follows a phased approach, where we have first focussed on the analysis and interpretation of the most relevant sections of the EU Taxonomy, i.e. those sections that cover existing buildings. Secondly renovations and the construction of new buildings have been considered during 2024 since in those cases only a fraction of the loan is considered for Taxonomy Alignment (in terms of SCC)[8] and therefore the impact on the Green Asset Ratio of a financial institution is relatively limited.

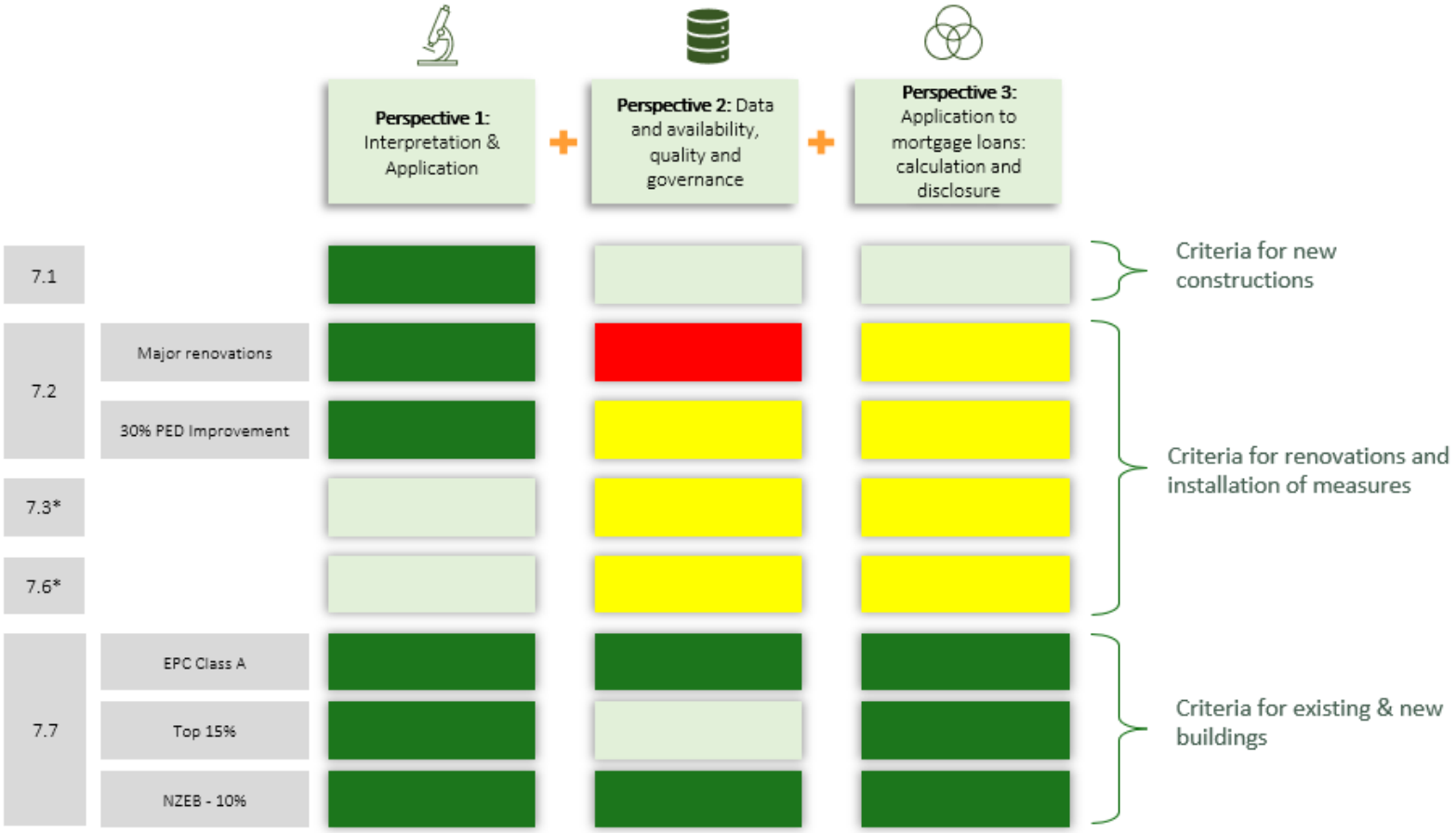
In DEEMF SCC 2023 we concluded that renovations categorised under economic activity 7.2 present significant challenges in practical application. Similarly, the renovation criteria for economic activities 7.3 and 7.6, as addressed in this document, pose comparable difficulties. This conclusion warrants emphasis, as it underscores key practical challenges in applying the EU Taxonomy to renovation projects and their financing, particularly through (mortgage) loans.

The primary obstacles relate to data availability and limitations within the Dutch energy performance certification ("EPC") methodology and associated datasets, which are insufficient to fully meet the requirements of SCC 7.2. For economic activities 7.3 and 7.6, we also find that the level of data granularity within current mortgage data systems remains inadequate. It is important to note that the analysis of economic activities 7.3 and 7.6 is ongoing and not yet finalised. At the time of writing, an EEM NL Hub sub-working group is actively investigating data availability for these criteria.

[7] Commercial real estate is (currently) not in scope for analysis of the EEM NL Hub, on purpose, any (regulatory) references that are relevant for commercial real estate are omitted in this document.

[8] Unless the property obtains an EPC of Class A.

Figure 1: The three perspectives of analysis with respect to the SCC analysis as per 2024.



* Pursuant to Answer 62 of the Draft Commission Notice of 29 November 2024 and Answer 37 of the Commission Notice of 8 November 2024, the assessment of the purchase or acquisition of individual measures must align with the technical screening criteria (TSC) and minimum safeguards (MS) outlined in Section 3 of the Climate Delegated Act, which pertain to the manufacturing of these measures.

Dark green indicates that the perspective is fully understood and can be effectively applied. Light green signifies that adherence to the perspective is achievable, though with some reservations or remarks. Yellow highlights significant practical concerns. Red denotes that applying the perspective is considered unfeasible. Grey indicates that no guidance has been provided.

2.2 Design

DEEMF is made publicly available to all interested parties but is expected to be most relevant to those parties directly or indirectly involved in financing Dutch (residential) properties, be it by granting mortgage loans to consumers, investing therein or otherwise.

DEEMF is designed to work on a 'comply or explain' basis: if applied by an institution, for each definition included in the checklist, the institution can indicate whether it applies the common or baseline interpretation of DEEMF, or, if not, the institution is to provide an alternative definition or application of the relevant term. At this point in time, no formal disclosure guidelines for the comply or explain feature have been developed. In the 2023 version of the DEEMF, a DEEMF checklist was included. However, in the current version, this has been omitted as the EEM NL Hub working group intends to reassess the purpose and design of the checklist. This re-evaluation is scheduled for 2025.

By making DEEMF a voluntary standard on a comply or explain basis, the members of the EEM NL Hub aim to create transparency by providing one common interpretation that can be used by as many institutions as possible: by i) not excluding institutions that are not (yet) able to fully apply the framework and that are still in the process of working towards a full application of the DEEMF, and ii) enabling those institutions that are more ambitious than the applicable version of the framework to indicate where they apply stricter criteria than included in DEEMF.

The option for an institution to 'not comply and explain' on individual line-items is intended to leave sufficient flexibility to accommodate both types of institutions. In addition, the comply or explain nature of DEEMF allows those institutions that are more ambitious than the applicable version of the framework, to make this transparent to its stakeholders by clearly indicating this where relevant.

2.3 Development

DEEMF SCC 2024 (and the previous versions) has been compiled by the EEM NL Hub with extreme care and after extensive consultation with i) the participants in the relevant EEM NL Hub working groups, and ii) other stakeholders. The framework document takes into account the:

1) EU and national regulations;
2) Sustainability and mortgage loan data; and
3) Market best practices in respect of mortgage lending, energy labelling and reporting thereof.

The EEM NL Hub will be monitoring relevant regulatory developments and improvements in respect of data availability or EPC labelling methodology with a view to update the DEEMF for any relevant developments after careful analysis, consideration and evaluation. The exact content of future revisions of the DEEMF will be determined by and subject to approval of the members of the EEM NL Hub.

Working group analysis

DEEMF SCC 2024has been established by the EEM NL Hub working group members building on three key perspectives:

1. Interpretation & application:

   Do we understand the Technical Screening Criteria as laid down for the Climate Change Mitigation environmental objective and can we apply them to the Dutch situation?

   Although this might sound like a basic question to ask, it is important to realise that the process of drafting the EU Taxonomy has taken several years and reflects input from many member states and is thus a document full of (political) compromises and local perspectives. Application of this EU-level wording in a specific jurisdiction is therefore less straightforward than one would expect, particularly given the fact that construction, energy labelling and mortgage lending are highly jurisdiction specific activities.

2. Data availability:

   Do we think there is data available to demonstrate compliance with the Technical Screening Criteria?

   Once we understand the (national) interpretation and (ideal) application, what data is needed to "prove" adherence of these criteria. In the EEM NL Hub we explicitly look into this (quantitative) burden of proof. What data is needed? Do we have the data? Can we use the data or are their data governance topics that are relevant such as GDPR considerations. We also investigate data quality. If data is not available, we also strive to identify what data is needed for our assessment. This can be challenging as regulation changes over time (i.e. on EU or national level) or data availability changes. Analysing data availability is an on-going process. The extent to which we can demonstrate compliance with an EU Taxonomy criterion often depends on the availability of relevant data. At times, we may be able to encourage stakeholders to enhance data access in ways that align more closely with regulatory requirements. Consequently, the EEM NL Hub takes an active role in collaborating with important stakeholders within the data domain.

3. Application to mortgage loan level:

   Can the mortgage loan or mortgage loanpart that is linked to the relevant economic activity, be identified?

   One of the most tangible expressions of EU Taxonomy alignment is the reporting of Taxonomy Alignment and the publication of the Green Asset Ratio, as mandated by the Disclosure Delegated Act. Therefore, determining the loan attached to a sustainable activity is an essential component of the analysis and the calculation underlying the determination of the Green Asset Ratio.

   In the Netherlands we have the somewhat special situation that most residential mortgage loans are composed of multiple loan parts, depending on the redemption profile, interest fixed rate period and loan purpose selected by the borrower. This has also been taken into consideration in determining the definitions as included in the DEEMF.

   Only the amount that can be allocated to the economic activity can be taken into account for the GAR. This means that from the perspective of (mortgage) loans in some cases we have to identify, track and calculate fractions of loans or loan parts. This is challenging from both an IT perspective and a funding perspective. As in most structured finance transactions, this is particularly applicable when funding renovation activities. It is desirable to keep all the loans belonging to a loan agreement and the underlying exposure together.

Figure 2 below provides an overview of the three above perspectives that were discussed and considered in numerous EEM NL Hub working group sessions for each of the subsections of Section 7 of the EU Taxonomy. provides an overview of the analysis of section 7 of the CDA in terms of SCC, DNSH and MS as per end of 2024.

Figure 2: Three perspectives applied in the DEEMF SCC analysis.

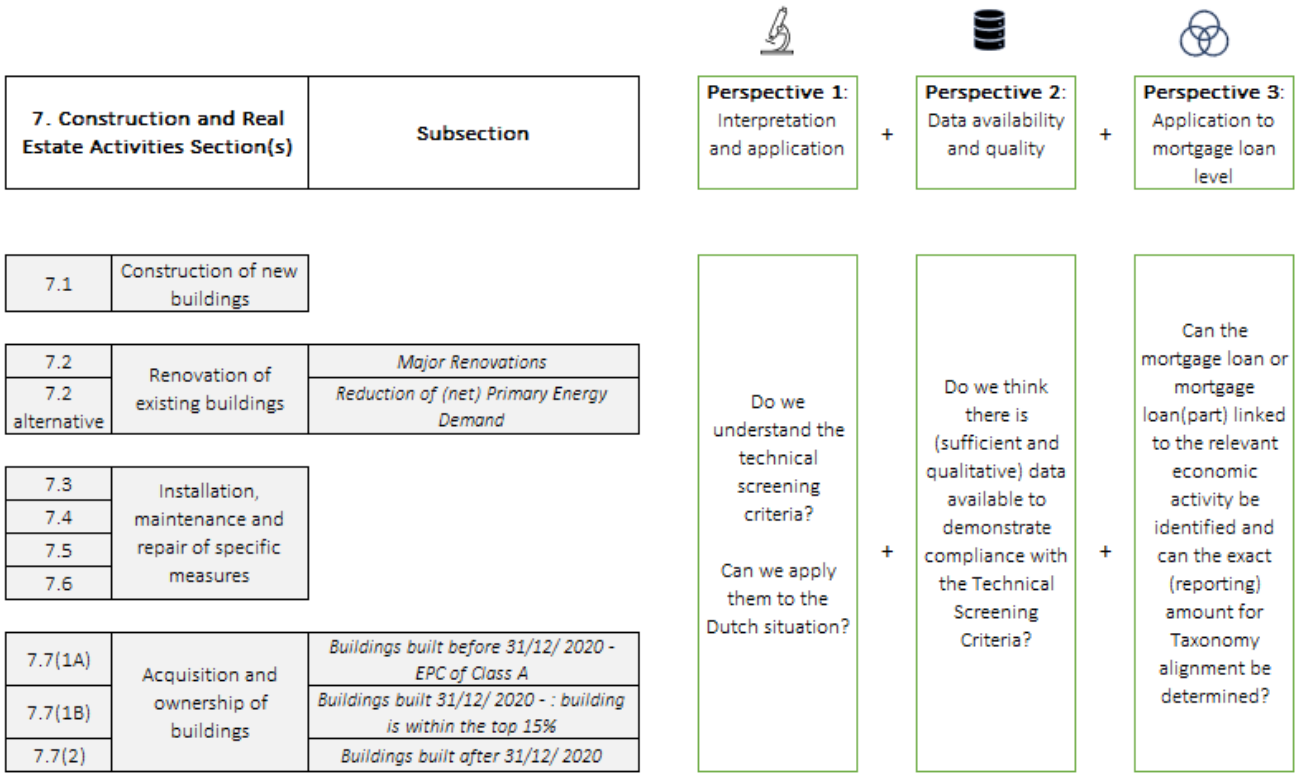
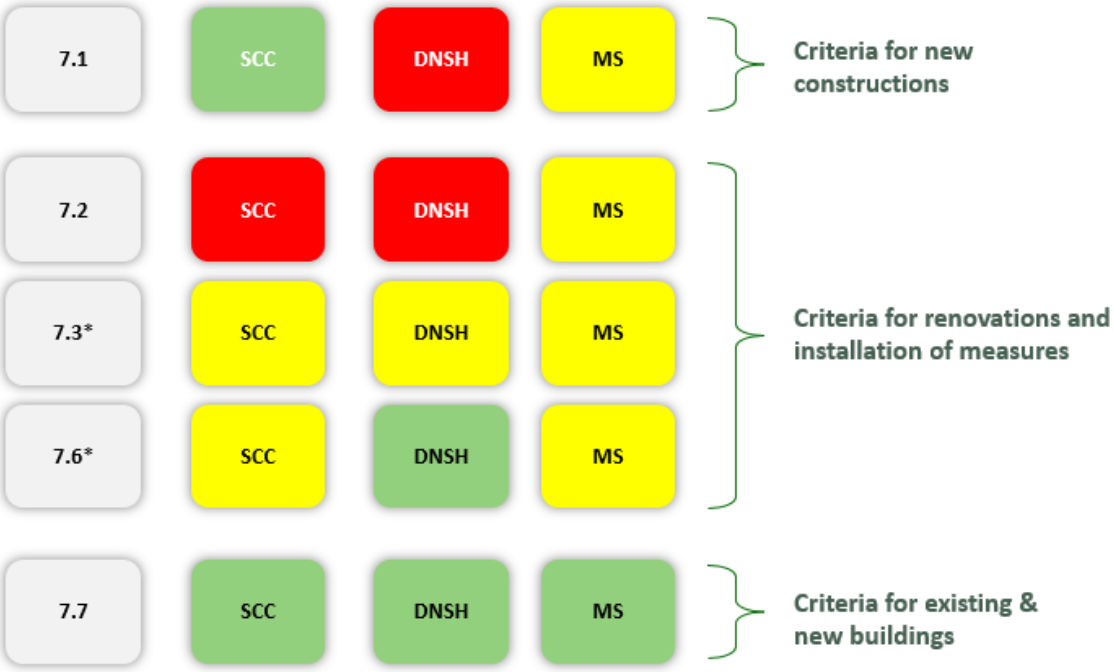


Figure 3: Overview of analysis of economic activities of section 7 of the CDA. Green indicates that the Taxonomy element, in general can be applied. Yellow highlights significant practical concerns. Red denotes that applying the element is considered unfeasible.



* Pursuant to Answer 62 of the Draft Commission Notice of 29 November 2024 and Answer 37 of the Commission Notice of 8 November 2024, the assessment of the purchase or acquisition of individual measures must align with the technical screening criteria (TSC) and minimum safeguards (MS) outlined in Section 3 of the Climate Delegated Act, which pertain to the manufacturing of these measures.

2.4 Review of EU Taxonomy and scope

Although this document is focused on the interpretation and application of the SCC, in certain cases we also highlight some insights with respect to the application of the DNSH criteria or the MS provisions. In addition, in some sections we refer to the DDA where relevant.

Notes on the review of the EU Taxonomy

As described in Article 26 of the Taxonomy Regulation[9], and subsequently every three years thereafter, the Commission shall publish a report on the application of the TR. The report shall evaluate: the progress in implementation, possible need to revise and complete criteria, the effectiveness of the application of the technical screening criteria and the access by financial market participants covered by this Regulation and by investors to reliable, timely and verifiable information and data.

As of the moment of writing of this document, we have not yet seen any preparatory work for an update to the TR. We have however provided input towards the Platform on Sustainable Finance, on multiple occasions, via the Stakeholder Request Mechanism on various occasions.

In addition, the CDA is "*set to be regularly reviewed, at least every three years in the case of activities labelled as transitional activities according to Article 10(2) of the TR and where appropriate, amend this Delegated Regulation in line with scientific and technological developments*[10]".

We anticipate that (certain sections of) the Climate Delegated Act ("CDA") will undergo a review in 2025, as part of the EU's three-year review cycle from the Act's initial applicability in January 2022. This review is essential to refine and update TSC to keep pace with the latest pragmatic insights such as data availability and other related regulations and directives, in sustainable finance.

The CDA and EU Taxonomy depend significantly on the availability of detailed, structured data, particularly when assessing criteria for renovation and other sustainable activities. The high degree of granularity required to fully comply with these standards is often not readily available in digital formats. Much of the relevant information in building renovation, for instance, may exist only in physical form, such as construction plans, invoices, or traditional documents that are not yet fully digitised or standardised across the construction sector and not yet accessible for the financial sector. In the case of the data needed for renovation TSC the criteria are not even embedded in the Dutch building code or energy labelling methodology, even though these abide by the current EPBD requirements.

This review is crucial to align the CDA more closely with the ambitions of the European Commission's Renovation Wave and the recently approved Energy Performance of Buildings Directive IV. Reassessing the CDA in 2025 presents an opportunity to incorporate more specific, actionable criteria, from a data perspective, that can directly support the Renovation Wave's targets for decarbonising the EU's building stock.

Notes on the Disclosure Delegated Act.

Some small updates have been published in the DDA[11]. A particularly relevant change is that 7.1 is an activity that can now be put in the Green Asset Ratio – contrary to previous versions[12] of the DDA, see Figure 4.

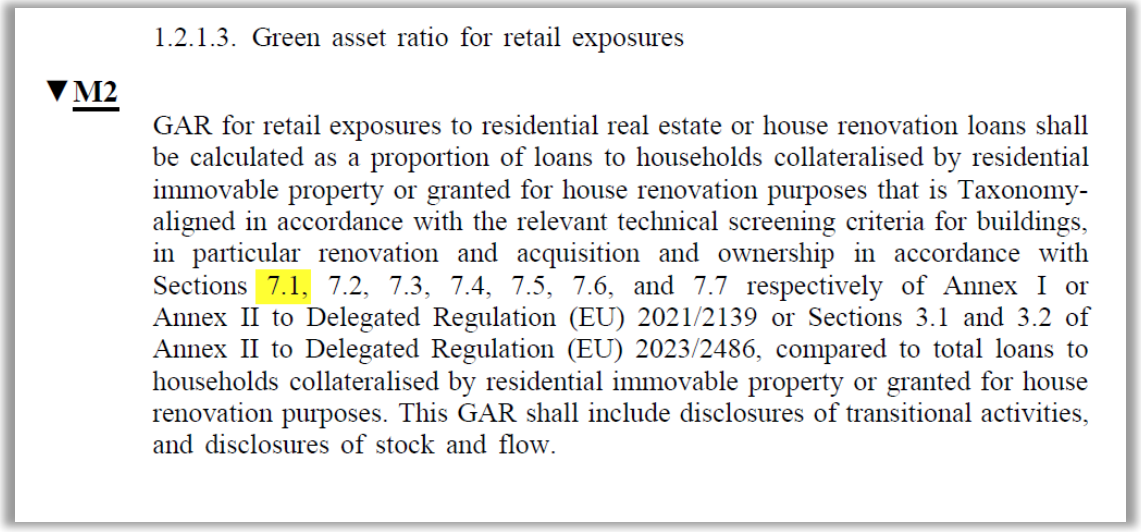
9 Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020

10 European Commission, Commission Delegated Regulation (EU) of 4 June 2021, supplementing Regulation (EU) 2020/852 by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or adaptation and for determining whether that economic activity causes no significant harm to other environmental objectives.

11 European Commission, Commission Delegated Regulation (EU) 2021/2178 of 6 July 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council with regard to disclosure obligations under Article 8 thereof (OJ L 443, 9.12.2021, p. 9-22).

12 The omission of 7.1 seems to have been a mistake in previous versions of this document.

Figure 4: Updated DDA text



1.2.1.3. Green asset ratio for retail exposures

▼M2

GAR for retail exposures to residential real estate or house renovation loans shall be calculated as a proportion of loans to households collateralised by residential immovable property or granted for house renovation purposes that is Taxonomy-aligned in accordance with the relevant technical screening criteria for buildings, in particular renovation and acquisition and ownership in accordance with Sections 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, and 7.7 respectively of Annex I or Annex II to Delegated Regulation (EU) 2021/2139 or Sections 3.1 and 3.2 of Annex II to Delegated Regulation (EU) 2023/2486, compared to total loans to households collateralised by residential immovable property or granted for house renovation purposes. This GAR shall include disclosures of transitional activities, and disclosures of stock and flow.

In the working group we made the assumption that the economic activities of the CDA for CMM can be mapped to the disclosure output in the following way as indicated in Table 1:

Table 1: DDA to CDA Activity mapping

DDA Line item	DDA Description	CDA CCM Sections
24	*Households*	
25	*of which loans collateralised by residential immovable property*	7.7, 7.1
26	*of which building renovation loans*	7.2, 7.3, 7.6

The EEM NL working group has not discussed the economic activities 7.4 and 7.5 as we assume these are not considered to be applied in practice in the short term, by financial institutions in the Netherlands as these are measures that are typically not financed by financial institutions for residential homeowners.

Transition versus enabling activities

In Table 2 we list the definitions for enabling and transitional activities. In Table 3 we provide an overview of the economic activities mapped to their classification as enabling or transitional activities. Note that economic activities 7.1 and 7.7 have no such classification in the CDA.

Table 2: Definition of Enabling and Transitional activities

Reference	Short definition	Definition
Article 16	*Enabling activities are those that directly enable other activities to make a substantial contribution to one or more of the environmental objectives of the EU Taxonomy.*	An economic activity shall qualify as contributing substantially to one or more of the environmental objectives set out in Article 9 by directly enabling other activities to make a substantial contribution to one or more of those objectives, provided that such economic activity: a) does not lead to a lock-in of assets that undermine long-term environmental goals, considering the economic lifetime of those assets; and b) has a substantial positive environmental impact, on the basis of life-cycle considerations.

Article 10.2	*Transitional activities are those that contribute to a transition towards a climate-neutral economy by 2050, but are not currently low-carbon activities. They are essential for reducing greenhouse gas emissions in the interim period.*	An economic activity for which there is no technologically and economically feasible low-carbon alternative shall qualify as contributing substantially to climate change mitigation where it supports the transition to a climate-neutral economy consistent with a pathway to limit the temperature increase to 1,5 0C above pre- industrial levels, including by phasing out greenhouse gas emissions, in particular emissions from solid fossil fuels, and where that activity: a) has greenhouse gas emission levels that correspond to the best performance in the sector or industry; b) does not hamper the development and deployment of low-carbon alternatives; c) and does not lead to a lock-in of carbon-intensive assets, considering the economic lifetime of those assets.

Table 3: Activity designation per economic activity of Section 7

Activity	Economic activity description	Activity type
7.1	Construction of new buildings	Not specified
7.2(1)	Renovation of existing buildings	*Transitional activity*
7.2(2)		
7.3	Installation, maintenance and repair of energy efficiency equipment	*Enabling activity*
7.4	Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	*Enabling activity*
7.5	Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	*Enabling activity*
7.6	Installation, maintenance and repair of renewable energy technologies	*Enabling activity*
7.7(1)	Acquisition and ownership of buildings	Not specified
7.7(1 - top 15 %)		
7.7(2)		

3 Omgevingswet & EPC Methodology

3.1 The *Omgevingswet* and its General Administrative Orders

The Omgevingswet represents a significant restructuring of Dutch legislation in the fields of environmental management, spatial planning, and building codes. Initially planned for implementation in 2021, the law faced multiple delays due to the complexity of the legislation and challenges related to the technical integration of digital systems. It finally came into effect on 1 January 2024. The Omgevingswet is intended to unify and streamline a wide range of fragmented laws governing the built environment. Currently, the Omgevingswet does not contain explicit references to the EU Taxonomy Regulation or its corresponding delegated acts.

By replacing over 26 separate laws, such as the *Wet ruimtelijke ordening* (Spatial Planning Act) and parts of the *Wet Milieubeheer* (Environmental Management Act), the *Omgevingswet* offers a more cohesive legal framework. Residential homeowners are expected (in theory) to benefit from a more streamlined process, such as faster construction permit approvals via a unified omgevingsvergunning (environmental permit) and clearer regulations.

General Administrative Orders under the *Omgevingswet*

The General Administrative Orders, (*Algemene Maatregelen van Bestuur* ("AMVB")), play a pivotal role in implementing the Omgevingswet, translating its high-level objectives into specific and enforceable regulations for sectors such as construction, environmental protection, and spatial planning. It is important to clarify that these AMVB's are formal legal instruments issued by the government, distinct from any broader "general rules" that may also exist within the regulatory landscape[13]. For the substantial contribution criteria, we will be mainly focussing on the Besluit *Bouwwerken Leefomgeving* ("*Bbl*") as this replaces the *Wet Bouwbesluit*. Table 4 contains an overview of the key AMVB's that support the Omgevingswet:

Table 4: Algemene Maatregelen van Bestuur

AMvB	Purpose	Key Provisions
Besluit Activiteiten Leefomgeving (Bal)	Regulates activities with environmental impacts	- Rules on emissions, noise, and water pollution
		- Guidelines for construction and industrial activities
Besluit Bouwwerken Leefomgeving (Bbl)	Establishes technical and safety standards for buildings	- Replaces the Wet Bouwbesluit 2012
		- Emphasis on fire safety, structural integrity, energy performance
Besluit Kwaliteit Leefomgeving (Bkl)	Ensures environmental quality standards	- Noise, air, and water quality regulations
		- Public health protections in urban planning
Omgevingsbesluit (OB)	Governs procedural aspects of the Omgevingswet	- Defines roles and responsibilities of authorities
		- Streamlines the permit process

3.2 Replacing the Wet Bouwbesluit 2012 with the Bbl

A significant change introduced by the *Omgevingswet* is the replacement of the *Wet Bouwbesluit 2012* with the *Besluit Bouwwerken Leefomgeving*. The *Wet Bouwbesluit 2012* was previously the key regulation governing the technical and safety standards for buildings and has been an important reference for the previous versions of DEEMF.

Besluit bouwwerken leefomgeving

The regulations for the construction, renovation, and use of buildings are set out in the *Besluit Bouwwerken Leefomgeving*. The Bbl ensures that the Dutch building stock meets minimum quality standards. It includes rules on room

[13] https://iplo.nl/regelgeving/omgevingswet/algemene-regels/

dimensions, structural strength, fire safety, burglary resistance, sound insulation, daylight access, ventilation, thermal insulation, and utilities like electricity and drinking water.

It also covers noise, vibration control during construction, and waste separation. The Bbl is organised into 8 chapters, 30 sections, and 99 subsections, containing 143 regulations for existing buildings and 245 for new buildings.

Bbl and Building Regulations

Under the Environment and Planning Act (*Omgevingswet*), homes must meet safety, health, sustainability, and usability requirements (Article 4.21, National Building Regulations). Key elements are:

- **Technical Requirements**: These apply not just to homes but also to offices, schools, and other non-building structures like tunnels. These requirements apply to both new builds, renovations, and existing buildings. The technical specifications are outlined in the *Besluit bouwwerken leefomgeving* (Bbl), not the Housing Act.
- **Performance Standards and NEN Norms**: The Bbl's performance standards often reference NEN (Dutch Normalisation Institute) norms, which set quality and safety standards for products, services, and processes. These norms help measure or calculate compliance with required performance levels.
- **Environmental Permit**: Citizens, businesses, and authorities must apply for an environmental permit to build homes. According to the Omgevingswet, home construction is considered an activity impacting the living environment. The *Besluit activiteiten leefomgeving* (Bal) and Bbl outline which activities require permits.

Bbl regulations set minimum standards for residential quality, leaving room for homeowners to set higher requirements based on personal preferences, though they cannot fall below these standards. New buildings are subject to stricter requirements in terms of energy performance compared to existing structures.

Structure of *Besluit bouwwerken leefomgeving* (Bbl)

Chapters 3 through 6 of het Bbl distinguish between regulations for existing buildings (Chapter 3), new constructions (Chapter 4), renovations, relocations of structures, and changes to building functions (Chapter 5). In addition to construction requirements, the Bbl sets standards for building use (Chapter 6) and construction and demolition work (Chapter 7).

Chapters 3 to 5 cover technical construction regulations based on safety, health, sustainability, and usability. Each chapter ends with installation regulations. Topics like sound insulation are grouped into specific sections, each beginning with a functional requirement outlining the government's objective. This is followed by performance standards that clarify the functional requirement.

"New constructions" in het Bbl refer to the construction of a completely new structure or replacing a demolished building down to the foundation. Once completed, a newly built home is considered an existing home under the Bbl. However, it can still be assessed against new build regulations. One principle is that the standards for existing buildings should not exceed those for new builds. A building unit built to new build standards also complies with the requirements for an existing building.

Existing Buildings

Immediately after the final completion of a newly constructed building unit, it is classified as an existing building unit under the Bbl. Every existing building in the Netherlands must comply with the regulations for existing buildings. Once a homeowner has moved into a newly built building unit, the new construction requirements of the Bbl no longer apply.

The difference between the regulations for existing buildings and those for new construction is also reflected in the number of regulations. The section on new construction covers significantly more topics than the section on existing buildings.

3.3 Definitions used in the Bbl

In this section we outline some key definitions that are frequently used in the Bbl and that are relevant for the application of the EU Taxonomy SCC, in particular for renovation criteria. This text in this section is based on the information provided on www.IPLO.nl, an online knowledge base on the Omgevingswet.

Some relevant definitions:

- Thermal insulation and airtightness are key components of the BENG 1 calculation, but the Bbl includes separate regulations and performance standards for these areas. This ensures that energy efficiency is not solely achieved through installations but also through structural measures. An energy-efficient design prioritises reducing energy consumption, achieved through proper insulation and airtight construction. Structural measures, such as insulation, have a longer lifespan compared to mechanical systems and are harder to replace, making them a more sustainable long-term solution.
- The *Rc value* (thermal resistance) of a structure indicates how well solid parts (such as brick walls) are insulated. The higher the *Rc value*, the better the insulation. It's not just about the insulation material itself – the entire structure plays a role. For example, a brick wall's thermal resistance is determined by the inner wall, insulation, cavity, and outer wall. Each part contributes to the overall insulation of the structure.
- The *U value* (heat transfer coefficient) measures the thermal insulation of windows, doors, panels, and frames[14]. The lower the *U value*, the better the insulation. A higher thermal resistance and a lower heat transfer coefficient result in better insulation for the building unit.
- Air permeability measures how much air escapes from a building through joints and gaps between different building elements. From an energy-efficiency perspective, these air leaks cause heat loss. A building's air permeability is also known as its airtightness.

Thermal Insulation

The thermal insulation requirement is a construction standard. The Bbl does not specify how this requirement must be met. The insulation material can range from mineral wool, synthetic materials, sheep's wool, cellulose, or any other type of material. The required level of thermal resistance varies depending on the structure:

- Floors must meet an *Rc value* of 3.7 $m^2 \cdot K/W$.
- External walls require an *Rc value* of 4.7 $m^2 \cdot K/W$.
- Roofs must meet a higher standard, with an *Rc value* of 6.3 $m^2 \cdot K/W$.

Roofs are subject to a significantly stricter requirement than external walls. This is because it is easier and more cost-effective to install a thick layer of insulation in a roof structure. For windows, doors, and panel construction, thermal insulation is not expressed in terms of thermal resistance, but rather through the *U-value* (heat transfer coefficient).

The *U-value* applies to the entire window or door assembly, including the frame. Windows and doors must have a *U-value* of no more than 2.2 $W/m^2 \cdot K$, although the average *U-value* of these elements must not exceed 1.65 $W/m^2 \cdot K$. Windows, doors, and similar structural components must meet a *U-value* of no more than 1.65 $W/m^2 \cdot K$. In Table 5 we summarised these.

[14] Panel constructions in frames, including the side wall of a dormer, are considered equivalent to windows and doors. The *uitwendige scheidingsconstructie* (external separation structure) refers to the external walls, roof, and ground floor of a building.

Table 5: Insulation measures

Topic	Explanation	Key Points	Bpl Article
Thermal Insulation	Thermal insulation reduces heat loss through a building's structure. It must comply with specific energy performance standards.	Required for external walls, roofs, floors, and windows to meet energy efficiency targets.	Article 4.152
U-value, Heat Transfer Coefficient (*warmtedoorgangscoëfficiënt*)	Measures heat transfer through elements like windows and doors. A lower U-value means better insulation.	Maximum U-value: ≤ 2.2 W/m²·K for windows/doors, with an average U-value across surfaces not exceeding 1.65 W/m²·K.	Article 4.153
Thermal Resistance (Rc-value) (*warmteweerstand*)	Rc-value reflects the insulating capacity of materials. A higher Rc-value indicates better insulation.	Minimum Rc-values: Floors ≥ 3.7 m²·K/W, Walls ≥ 4.7 m²·K/W, Roofs ≥ 6.3 m²·K/W.	Article 4.152

Energy Performance Requirement for Technical Building Systems

A technical building system refers to all the components of a building's installation, including insulation features, designed for space heating, cooling, ventilation, hot water, built-in lighting, building automation and control, on-site electricity generation, or a combination of these. This also includes systems that use renewable energy sources. The energy performance requirement for technical building systems is also part of the BENG standards. However, these requirements are listed separately to ensure that the standard for existing or new installations in an existing building is not higher than the new-build requirements.

A technical building system must meet the energy performance values listed below in Table 6 (Article 4.248, paragraph 1 of the Bbl). The formulas for calculating these values are provided in Annex VIII of the Environment Regulation (Article 5.2 of the *omgevingsregeling*).

Table 6: Technical Building System Requirements

Technical Building System	Energy Performance Value for Residential Function	Energy Performance Value for Other Functions
Space Heating	≤ 1.31	≤ 1.31
Space Cooling	≤ 1.33	≤ 1.33
Ventilation	-	≤ 3.8 kWh/m³/u
Hot Water Supply	≤ 3.45	≤ 3.45
Built-in Lighting[15]	-	≤ 75 kWhprim/m²

[15] kWhprim stands for kilowatt-hours of primary energy, which includes the total amount of energy needed, including losses in energy production and distribution.

3.4 Bbl – New Constructions

As of 10 March 2020, the revised European Energy Performance of Buildings Directive ("EPBD III") has been implemented into Dutch legislation. From this date onwards, compliance with the new regulations and energy performance standards is mandatory. The Bbl sets requirements for the energy efficiency of newly constructed buildings. The BENG ('*Bijna EnergieNeutrale Gebouwen*') standards is the Dutch incorporation of the NZEB requirement of the Energy Performance of Building Directive. These BENG standards apply to thermal insulation, airtightness, and technical building systems. The Bbl includes a functional requirement for energy efficiency: that buildings must be nearly energy neutral (Article 4.148, paragraph 1). This near energy neutrality is expressed in three components (Article 4.149, paragraph 1) and is reflected in Box 1 below. Box 2 reflects all the energy performance related requirements for new buildings.

Box 1: BENG

BENG

The BENG standards are based on the *Trias Energetica*, a three-step approach to designing energy-efficient buildings. Previously, the EPC requirement for BENG did not take into account *energy loss* due to the building's form, meaning there was no correlation with energy use per square metre. The current BENG requirements address this. There is a specific standard for the building's exterior, known as the *schil* (building envelope), to limit energy demand. This is referred to as BENG 1. Furthermore, the building's energy needs should be met, as much as possible, through renewable energy sources, as outlined in BENG 3. Finally, any remaining energy demand must be met as efficiently as possible, covered under BENG 2. The precise requirements for different types of building units are outlined in the *Bbl.* The energy use specified in BENG is a theoretical estimate.

Energy performance under BENG must meet four key criteria:

- BENG1: The maximum energy demand, measured in kWh per square metre of usable floor area per year.
- BENG2: The maximum primary fossil energy use, also in kWh per square metre per year.
- BENG3: The minimum share of renewable energy, expressed as a percentage.
- TO_{juli} (a requirement related to controlling overheating during summer). The risk of excessively high temperatures is determined for an apartment unit based on calculation zones and orientation (TO_{juli} indicator, which is automatically generated by the calculation software). The assessment of the TO_{juli} requirement for new homes is only necessary for calculation zones where no active cooling system is installed. The Bbl specifies threshold values for the TO_{juli} indicator for these zones. Calculation zones without an active cooling system must meet this criterion.

The first 3 BENG-eisen are described in Bbl Article 4.148. The TO_{juli} indicator and threshold is described in Bbl article 4.149b.

Box 2: Summary of all energy efficiency requirements for new constructions

Summary of all energy efficiency requirements for new constructions

Articles 4.148, 4.154, 4.156, and 4.247 to 4.249 of the Building Decree (Bbl) pertain to the Energy Efficiency Requirements:

- A building unit must comply with BENG standards (Nearly Energy-Neutral Building).
- The external separation structure of a living area, as well as that of a toilet or bathroom, must be thermally insulated. The thermal resistance (Rc value) varies depending on the structure:
  - The Rc value of a floor above ground or a crawl space must be at least 3.7 $m^2 \cdot K/W$.
  - The Rc value of solid walls must be at least 4.7 $m^2 \cdot K/W$.

- The Rc value of a roof must be at least 6.3 m²·K/W.

- Windows and doors must have a heat transfer coefficient (U value) of no more than 2.2 W/m²·K. However, the average U value for these surfaces must not exceed 1.65 W/m²·K.
- Windows, doors, and similar structural elements must have a U value of no more than 1.65 W/m²·K.
- A portion of the surface area is exempt from the thermal insulation requirements. This portion must not exceed 2% of the usable floor area.
- The air permeability of the building unit must not exceed 200 m³/h.
- The energy performance of technical building systems must not exceed: 1.31 for space heating, 1.38 for space cooling, and 3.45 for domestic hot water.

3.5 Energy Label requirements for building and building units

When applying for planning permission and upon completion of a new residential building, the BENG requirements must be assessed at the building level (building ID). For residential buildings, these BENG standards apply to the entire structure, the building[16]. In addition, the energy performance of each individual dwelling, the building unit (for example, the individual apartments within a residential building) must also be calculated and registered. This is essential so that the energy performance is available to potential buyers and users (renters). It is possible for different apartments within the same building to have varying energy label ratings.

For newly constructed apartments, the BENG NTA 8800 method assesses energy performance based on factors like optimal insulation, modern heating, and high-performance windows. In well-designed new buildings, each apartment benefits from advanced materials and installations, but differences may still arise based on orientation (with southern exposures using less heating) and floor position, as top-floor units might lose more heat compared to those on middle floors, which are buffered by neighbouring units.

In existing apartments, energy performance can vary more significantly due to the diversity in original building materials, insulation levels, and the age of heating and ventilation systems. Older windows, variable insulation, and original or retrofitted HVAC systems[17] create performance differences, especially between apartments on upper floors, which often face higher heat loss, and those sheltered by surrounding units.

According to the Bbl, calculations must be made for:

- EP1 Energy demand;
- EP2 Primary fossil energy use;
- EP3 The proportion of renewable energy.

These calculations must be carried out by a BRL 9500 certified company using BRL 9501 certified software. The BRL 9500 also specifies:

- For both planning applications and project completions, a detailed calculation method must be used. For apartment building units, this involves calculations both at the building level and for each individual apartment (building unit)[18].
- Only a qualified advisor is allowed to carry out these assessments. The advisor must demonstrate their expertise with a Certificate of Competence.

Municipal building plan examiners will check whether these conditions have been met. This can be done by simply searching for a registration in EP-online. When registering the energy performance at the building unit level for a permit application, a preliminary energy label is issued (status = *vergunningsaanvraag*).

[16] Pandniveau.

[17] HVAC stands for Heating, Ventilation, and Air Conditioning, encompassing systems that regulate indoor temperature, humidity, and air quality for comfort and efficiency.

[18] Building unit level is *verblijfsobjectniveau*.

Upon completion, each individual apartment must have a registered energy performance certificate (with status = *oplevering*). For this, the energy performance is determined following an on-site visit. A final energy label is issued for the registered energy performance with the status 'definitive' (status = *oplevering*). In Table 7 we copied and translated a table from the RVO[19] website which indicates the EPC requirements per building type and per status. This content of this table is also reflected in the data (availability) in EP-Online for the various (NTA) registrations.

Table 7: Requirements at the start and completion of a residential building and building unit.

	Detached House (*Grondgebonden woning*)	Building Level (*Gebouwniveau/pand*)	Building unit level (*Appartement-niveau/verblijfsobject*)	Choice of Energy Label Method (*Keuze opname energielabel*)
Permit Application (*Aanvraag omgevings-vergunning*)	▪ Energy performance calculation (*Energieprestatie-berekening*) ▪ Compliance check for BENG requirements (*Toets aan BENG-eisen*) ▪ TO_{luli} (TO_{luli}) ▪ Preliminary energy label (*Voorlopig energielabel*)	▪ Energy performance calculation (*Energieprestatie-berekening*) ▪ Compliance check for BENG requirements (*Toets aan BENG-eisen*)	▪ Energy performance calculation (*Energieprestatie-berekening*) ▪ TO_{luli} (TO_{luli}) ▪ Preliminary energy label (*Voorlopig energielabel*)	Detailed method (*Detailmethode*)
Completion (*Oplevering*)	▪ Energy performance calculation (*Energieprestatieberekening*) ▪ Compliance check for BENG requirements (*Toets aan BENG-eisen*) TO_{luli} (TO_{luli}) ▪ Final energy label (*Definitief energielabel*)	▪ Energy performance calculation (*Energieprestatieberekening*) ▪ Compliance check for BENG requirements (*Toets aan BENG-eisen*)	▪ Energy performance calculation (*Energieprestatieberekening*) ▪ TO_{luli} (TO_{luli}) Final energy label (*Definitief energielabel*)	Detailed method (*Detailmethode*)
Existing Building (*Bestaande bouw*)	▪ Energy performance calculation (*Energieprestatieberekening*) ▪ Final energy label (*Definitief energielabel*)	▪ Energy performance calculation (*Energieprestatieberekening*) ▪ Final energy label (*Definitief energielabel*)	▪ Energy performance calculation (*Energieprestatieberekening*) ▪ Final energy label (*Definitief energielabel*)	Basic or detailed method (*Basis-of detailmethode*)

[19] The Rijksdienst voor Ondernemend Nederland ("RVO") is the Dutch government agency responsible for supporting businesses, sustainable development, and innovation. RVO oversees the administration of energy labels in the Netherlands, ensuring compliance with regulations and maintaining the national energy performance register for buildings.

3.6 Bbl – Renovations and energy efficiency requirements

Renovations

Almost any modification to a building or replacement of a building component falls under the category of renovation. The Bbl defines renovation in the following cases:

- Partial renewal of a building (*gedeeltelijk vernieuwen van een bouwwerk*) – This includes situations where a house is completely stripped and rebuilt, or when one or more components of the house are replaced.
- Alteration of a building (*veranderen van een bouwwerk*) – This applies when a house or part of the house is modified without changing its size, such as internal renovations.
- Expansion of a building (*vergroten van een bouwwerk*) – In this case, the size of the house increases, for example by adding an extension, building an annex, or installing a dormer.
- A major renovation (*ingrijpende renovatie*) - The *Besluit bouwwerken leefomgeving (Bbl)* defines a major renovation (ingrijpende renovatie) as a renovation where more than 25% of the surface area of the building envelope (the outer shell of the building) is being replaced or renovated. This threshold triggers additional requirements for improving the energy performance of the building in accordance with current standards (Articles 5.20, paragraph 5, and 5.21c, paragraph 3 of the Bbl).
- Renovations involving technical building systems (*verbouw met aanpassing van het technisch bouwsysteem (installatie)*): If a renovation includes changes to key systems like heating, ventilation, or other technical installations, there are additional standards that must be adhered to, ensuring these systems meet modern efficiency benchmarks. These updated requirements apply to technical building systems in both existing and new buildings. The goal is to ensure that standards for older buildings are aligned with those for new constructions, maintaining consistency across the building sector in the Netherlands. The system requirements apply in the following situations:
    1. When a new technical building system is installed.
    2. When, in existing systems, the energy generator, ventilation unit, or at least one-third of the heat emitters or lighting fixtures are installed, replaced, or upgraded. Examples of ventilation units include boilers, central air conditioners, water heaters, or ventilation systems.

These regulations only apply to the parts of the building being renovated. For instance, if a dormer is added to the roof, the renovation regulations only apply to the new dormer. The roof on which it is installed must meet the requirements for existing buildings.

In addition to energy performance requirements for new buildings, there are also energy efficiency standards in place for renovations and refurbishments. We list these in Table 8 below.

Table 8: Types of renovation according to Bbl.

Subject	Description
Renovation *(Verbouw)*	Renovation refers to the partial renewal, alteration, or extension of a building. According to the Bbl (Article 5.20, paragraph 1), thermal insulation must meet the legally acquired level[20], with a minimum of Rc = 1.4 m²K/W.
Replacement of insulation layers *(Vervangen van isolatielagen)*	When renewing or replacing insulation layers, Article 5.20, paragraph 2, states that thermal insulation must meet the legally acquired level with the following minimum values: - Rc = 2.6 m².K/W for floors; - 1.4 m².K/W for walls; - 2.1 m².K/W for roofs. If windows, doors, or frames are replaced, the U-value must not exceed 2.2 W/m².K.
Dormer windows *(Dakkapellen)*	For the construction or complete renewal of a dormer window or similar structure, the new-build requirements for thermal insulation must be met, according to Article 5.20, paragraph 3: - Rc = 3.7 m².K/W for floors; - 4.7 m².K/W for walls; - 6.3 m².K/W for roofs. When replacing windows, doors, or frames, a U-value of no more than 2.2 W/m².K must be achieved. For air leakage, the legally acquired level applies.
Renewable energy at a major renovation *(Hernieuwbare energie bij ingrijpende renovatie)*	From 1 February 2022, a minimum renewable energy (RE) value is required when undertaking a major renovation and installing, renewing, altering, or expanding a heating or cooling system. The required RE value depends on the ratio between the roof surface area and the usable floor area after the renovation. At the website of the RVO website a calculation engine in the form of a spreadsheet if available to make the appropriate calculations[21].
Renovations involving technical building systems (*verbouw met aanpassing van het technisch bouwsysteem (installatie)*	Rules apply to technical building systems during renovations (Article 5.21 Bbl) to ensure optimal energy use for all functions. These rules pertain to significant changes, such as altering heating or ventilation systems, but do not apply to minor modifications like simple repairs that have little impact on energy performance. Also see Table 6.

3.7 Minor updates to the NTA 8800 methodology.

Periodically the NTA 8800 methodology is subject to (minor) updates. In EP-Online, per NTA 8800 registration also the version number is indicated, by the year of the version that was applied. These updates are often highly technical and relevant for energy labelling experts and the software they use. In EP-Online the measurement version is depicted per NTA 8800 registration. Table 9 below provides an overview of the versions:

Table 9: NTA versions

Version	Publication Date	Key Changes
NTA 8800:2021	01-Jan-21	Introduction of methods for calculating energy performance under the new BENG requirements. Certification requirements for competence have been updated. Refinements in the methodology for residential and utility buildings.

[20] De betekenis van het "rechtens verkregen niveau" staat beschreven in de Algemene bepalingen in hoofdstuk 1 van het Besluit bouwwerken leefomgeving.

[21] https://www.rvo.nl/onderwerpen/wetten-en-regels-gebouwen/energieprestatie-eisen-verbouw-renovatie/hernieuwbare-energie

NTA 8800:2022	01-Jun-22	Refinements in the calculation methodology for ventilation systems and tap water. The BENG requirements have been further tightened to meet regulatory standards. New rules for energy performance in permit applications.
NTA 8800:2023	01-Jan-23	Minor adjustments in input parameters for heating systems. Simplification of the input for insulation of heating pipes within the thermal envelope. No significant changes to BENG requirements or TO-juli in this version.
NTA 8800:2024	01-Jul-24	Key simplifications: insulation data for heating pipes within the thermal envelope are no longer required. The TO-juli requirement for new buildings has been tightened: active cooling must now prove it effectively prevents overheating.

3.8 Developments in EPC Quality Assurance

Over the past 24 months, the Dutch Ministry of Housing, Spatial Planning and the Environment (Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer – MINVRO, formerly BZK) has introduced several initiatives to improve the quality and reliability of Energy Performance Certificates (EPCs). These steps focus on strengthening quality assurance, improving oversight, and ensuring that certified energy experts meet stricter standards. The ministry has also worked on improving data accuracy and addressing inconsistencies, recognising the vital role EPCs play in energy policy and the housing market. To inform Parliament about these developments, MINVRO has published several policy letters (*Kamerbrieven*), outlining progress and planned actions:

See for an instance: *Kamerbrief over verbetering kwaliteitsborging energielabel* (*Policy letter on improving the quality assurance of energy labels*), 14 maart 2024[22].

[22] https://www.tweedekamer.nl/kamerstukken/brieven_regering/detail?id=2024D09907&did=2024D09907

4 Data & Definitions

4.1 New data fields in EP-Online (2024)

As per 1 July 2024, several new data fields have been included in EP-Online. In the appendix we have included an up-to-date data definition list.

- BerekendeCO2Emissie
- BerekendeEnergieverbruik
- Compactheid
- Bouwjaar
- Certificaathouder

Working with EP-Online Data

Note that EP-Online can be accessed in multiple ways: either via the direct online user interface or by accessing batch files with an API-key. The latter contains complete sets of EPC registrations. The former contains single look-up registrations and does not need to be accessed via an API key.

Not all registrations in EP-Online are EPC registrations on building unit level. In some cases, the registrations refer to building level. In the user interface version of EP-Online this can be easily identified by looking at the data field 'Scope'. However, at the moment of writing this document, this data field is not available via the batch file[23].

Definitions

In Table 10 below we have provided some additional clarification on the definitions of these new fields. We have provided some additional information on the field *bouwjaar* in Table 11: A note on the field year of construction (*bouwjaar*).

Table 10: RVO definitions of new fields

Field	RVO Explanation
BerekendeCO2Emissie	The calculated CO_2 emissions in kilograms per square metre per year (kg/m².year). *De berekende CO2-emissie in kilo per vierkante meter per jaar (kg/m2.jaar).*
BerekendeEnergieverbruik	The calculated total energy consumption in kilowatt-hours per square metre per year (kWh/m².year). *Het berekende totale energieverbruik in kilowattuur per vierkante meter per jaar (kWh/m2.jaar).*
Compactheid	Ratio between loss area and usable area. *Verhouding tussen verliesoppervlakte en gebruiksoppervlakte.*
Bouwjaar	Year of construction of the building. *Bouwjaar van het gebouw.*
Certificaathouder	The name of the certificate holder who registered the energy label, energy performance calculation, or tailored advice.

[23] There is a work-around to identify these in the batch file by filtering the EPC registrations that do not possess an EPC Class.

	De naam van de certificaathouder die het energielabel, de energieprestatieberekening of het maatwerkadvies heeft geregistreerd.

Table 11: A note on the field year of construction (bouwjaar).

A note on the field year of construction (*bouwjaar*).	
From an additional inquiry with RVO we have learned that the definition of this data field is as follows.	
De NTA8800:2024 schrijft voor: 3.20 Bouwjaar *Jaartal waarin de aanvraag voor de vergunning is ingediend, zoals vermeld staat op de bouwvergunning van het desbetreffende gebouw(deel) of, indien de bouwvergunning niet (meer) beschikbaar is, het jaartal dat als bouwjaar geregistreerd staat bij het kadaster of zoals wordt gehanteerd bij de WOZ-bepaling* *Het opnameprotocol (ISSO 82.1, 2024) zegt, voor het geval de datum van vergunningaanvraag niet bekend is:* *Het bouwjaar is het jaartal dat staat vermeld op de aanvraag van de omgevingsvergunning (bouwvergunning) van het betreffende gebouw(deel). Als de aanvraag van de bouwvergunning niet beschikbaar is, dan houd je het jaar van de bouwvergunningverlening aan. Is die ze ook niet bekend dan hanteer je het jaar van oplevering van het gebouw(deel).* *Het jaar van oplevering van het gebouw kun je, ook bij bestaande gebouwen, achterhalen bij het kadaster (BAG). Je mag hier alleen van afwijken als het jaar van oplevering in het Kadaster aantoonbaar niet correct is. Bewijs hiervan moet je opnemen in het projectdossier.* *Het bouwjaar t.b.v. energielabel, in tegenstelling tot de BAG, het jaar van de vergunningsaanvraag en niet het jaar van de oplevering.*	The NTA8800:2024 prescribes: 3.20 Construction Year The year in which the application for the permit was submitted, as stated on the building permit of the relevant building (or part of the building), or, if the building permit is no longer available, the year that is registered as the construction year in the cadastre or used for WOZ (property valuation) determination. The recording protocol (ISSO 82.1, 2024) specifies, in case the date of the permit application is unknown: The construction year is the year stated on the application for the environmental permit (building permit) of the relevant building (or part). If the application for the building permit is unavailable, you use the year the building permit was granted. If that is also unknown, then you use the year of completion of the building (or part of it). The completion year of the building can be determined, even for existing buildings, from the cadastre (BAG). You may only deviate from this if the completion year in the cadastre can be demonstrably proven incorrect. Evidence of this must be included in the project file. The construction year for the purpose of the energy label, unlike the BAG, is the year of the permit application and not the year of completion.

4.2 EPC Classes

In the Netherlands, all energy performance data of the total property stock is recorded in a database maintained by RVO and made accessible through an online portal called *"*EP-Online*"*. In this database all information on all valid EPCs is available. In total, there are 37 data fields available in EP-Online. The quantity of information, in number of data fields varies greatly depending on the:

- **Building Type**: family house vs apartments (see example in Table 12 below).
- **Label Methodology**: for instance; an EPC based on the most recent methodology NTA 8800 (EP-Online lists many EPCs that are still valid[24] based on older (previous) methodologies).
- **Label Status**: for instance: construction permit, completion or existing building[25].

[24] We assume *valid* means it is listed in EP-Online, as of the assessment date.
[25] This distinction was introduced as of 1 January 2021 with the introduction of NTA 8800.

These differences in data (in)availability have been taken into account explicitly in the description of DEEMF and the corresponding definitions.

Building types and NZEB thresholds

Table 12 lists the different building types as distinguished by the RVO in EP-Online. In Table 12 we have only listed buildings that are classified as residential (*"met woonfunctie"*). In the second column we have added if the building type is classified as either *"grondgebonden"* (fixed to the ground) or *"niet-grondgebonden"* (not fixed to the ground), the latter term is used for building units and the former to indicate buildings.

Table 12: Building types distinguished in EP-Online, building type according to the building code and associated BENG2 thresholds.

Building Sub-type (*pand_gebouwtype*)	**Building Type** (*Grondgebonden of niet-grondgebonden*)	**Residential designation** (*Woonfunctie*)	**BENG2 Threshold** (BENG2 eis)[26], [27]	**BENG2 Threshold (10% lower)**
Detached house (*Vrijstaande woning*)	House (*grondgebonden*)	yes	30	27
Terraced House (*Rijwoning tussen*)	House (*grondgebonden*)	yes	30	27
Semi-detached/corner Terraced House (*Twee-onder-een-kap/rijwoning hoek*)	House (grondgebonden)	yes	30	27
Apartment (*Appartement*) *	Apartment or other (*niet-grondgebonden*)	yes	50	45
Shared dwelling *(Woongebouw met niet-zelfstandige woonruimte)*	Apartment or other (*niet-grondgebonden*)	yes		
Holiday Home (*Logieswoning/vakantiebungalows*)	Holiday Home (*grond gebonden*)	yes		
Mobile home (*Woonwagen*)	Not in scope	yes		
Houseboat new berth (*Woonboot nieuwe ligplaats*)	Not in scope	yes		
Houseboat existing berth (*Woonboot bestaande ligplaats*)	Not in scope	yes		
Apartment house-other (*Flatwoning (overig)*)*	Apartment or other (*niet-grondgebonden*)	yes	50	45
Porch house (*Portiekwoning*)*	Apartment or other (*niet-grondgebonden*)	yes		
Maisonnette (*Maisonnette*)*	Apartment or other (*niet-grondgebonden*)	yes	50	45
Flat (*Galerijwoning*)*	Apartment or other (*niet-grondgebonden*)	yes	50	45

[26] Remarks:
- *Houses and apartments with a light-weight construction structure will receive a surcharge of 5 kWh/m²/yr for BENG-1 (see also Comments below).*
- *A house is officially 'other residential function' in this context and, e.g. a terraced house (row house), corner house, semi-detached, detached house.*
- *A residential building is (for instance an apartment complex or a building for student housing.*
- *A residential building does not have to meet the minimum value for the share of renewable energy insofar as it is not possible to meet this due to location-specific circumstances.*

[27] These values are taken from Bbl Article 4.148

** For these building types an additional "subtype" exists: "Pand_gebouwsubtype" with the following domains: Appartement, Hoekvloer, Hoekdak,Tussendak, Tussenvloer, Hoekmidden, Tussenmidde, Tussendakvloer, Hoekdakvloer*

5 EC Guidance – Commission Notice Publications

5.1 Commission notices

Since the publication of the EU Taxonomy Regulation in 2020, the European Commission has issued several Commission Notice documents to provide supplementary guidance on the interpretation and implementation of the Climate Delegated Act ("CDA"), the Disclosure Delegated Act ("DDA"), the Environmental Delegated Act ("EDA")[28] and other related frameworks such as the SFDR[29] and the CSRD[30]. In this section we present the (most) relevant questions that have been addressed in these Commission Notice documents pertaining to SCC.

Table 13 provides an overview of the Commission Notice and guidance documents that have been published on the EU Taxonomy. For the purposes of this DEEMF SCC 2024, we will mainly refer to:

- The CDA Q&A (draft version published on 19 December 2022 and final version on 20 October 2023); and
- The DDA Q&A (draft version published on 21 December 2023 and final version on 8 November 2024),
- The ADA Q&A (draft published on 29 November 2024)

No formal public consultation or public notification was given to send in questions for these publications. However, the EEM NL Hub submitted several sets of questions on an unsolicited basis, some of which have been addressed in various Commission Notice documents.

These documents should not be viewed or interpreted in isolation but rather be considered in the context of how they overlap and interact. This approach is made more complex by the presence of cross-references within these documents, which can sometimes create ambiguities or seemingly conflicting interpretations. Furthermore, it should be noted that subsequent Commission notices may occasionally provide new interpretations or clarifications that cast a different light on previously issued guidance or answers. This evolving context underscores the necessity of reassessing earlier positions in light of updated information to ensure alignment with the latest regulatory interpretations. In addition, this collection of notices forms a substantial body of work that must be taken into account alongside the original Level 1 (Taxonomy Regulation) and Level 2 (Delegated Acts) texts.

Table 13: Overview of Commission Notices

Date	Status	Official title	Short name[31]
20/10/2023	Official Journal of the European Union (C/2023/267) (Draft published on 19/12/2022)	*COMMISSION NOTICE on the interpretation and implementation of certain legal provisions of the EU Taxonomy Climate Delegated Act establishing technical screening criteria for economic activities that contribute substantially to climate change mitigation or climate change adaptation and do no significant harm to other environmental objective*	CDA Q&A
20/10/2023	Official Journal of the European Union (C/2023/305)	*COMMISSION NOTICE on the interpretation and implementation of certain legal provisions of the Disclosures Delegated Act under Article 8 of EU Taxonomy Regulation on the reporting of*	KPI Q&A

[28] The Environmental Delegated Act (Commission Delegated Regulation (EU) 2023) establishes technical screening criteria for four environmental objectives of the EU Taxonomy: sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems.

[29] Sustainable Finance Disclosure Regulation (SFDR): The SFDR (Regulation (EU) 2019/2088) requires financial market participants and advisers in the EU to disclose sustainability-related information. It aims to increase transparency on how financial products consider ESG factors and to combat greenwashing by providing standardised disclosure requirements for sustainability risks and impacts.

[30] The CSRD (Directive 2022/2464/EU) expands on the NFRD by requiring more companies to report on sustainability, standardising reporting frameworks, and aligning with EU taxonomy. It introduces mandatory assurance of reported data and detailed requirements on sustainability information, starting from financial year 2024 for certain companies.

[31] The short name is used by the EEM NL Hub and is not an official title.

	(Draft published on 19/12/2022)	*Taxonomy-eligible and Taxonomy-aligned economic activities and assets (second Commission Notice)*	
16/06/2023	Official Journal of the European Union (C/211/01) (Draft published on 19/12/2022)	*COMMISSION NOTICE on the interpretation and implementation of certain legal provisions of the EU Taxonomy Regulation and links to the Sustainable Finance Disclosure Regulation*	SFDR Q&A
07/08/2024	Draft	*DRAFT COMMISSION NOTICE on the interpretation of certain legal provisions in Directive 2013/34/EU (Accounting Directive), Directive 2006/43/EC (Audit Directive), Regulation (EU) No 537/2014 (Audit Regulation), Directive 2004/109/EC (Transparency Directive), Commission Delegated Regulation (EU) 2023/2772 (first set of European Sustainability Reporting Standards "first ESRS delegated act"), and Regulation (EU) 2019/2088 (Sustainable Finance Disclosures Regulation "SFDR") as regards sustainability reporting*	CSRD Q&A
08/11/2024	Official Journal of the European Union (C/2024/6691) 8/11/2024 (Draft published on 21/12/2023)	*COMMISSION NOTICE on the interpretation and implementation of certain legal provisions of the Disclosures Delegated Act under Article 8 of the EU taxonomy Regulation on the reporting of taxonomy-eligible and Taxonomy-aligned economic activities and assets (approved in principle)*	DDA Q&A
29/11/2024	Draft published on 29/11/2024	*DRAFT COMMISSION NOTICE on the interpretation and implementation of certain legal provisions of the EU Taxonomy Environmental Delegated Act, the EU Taxonomy Climate Delegated Act and the EU Taxonomy Disclosures Delegated Act*	ADA Q&A

5.2 CDA Q&A

In this section we highlight and analyse the 22 relevant answers and assess their usability with respect to the SCC as described in the CDA Q&A. We use the word 'answer' to relate to the guidance provided in the CDA Q&A Document. We have only included answers relevant for the SCC of section 7 of the Climate Delegated Act environmental objective I (Climate Change Mitigation).

Table 14: Summary of relevant items listed in the CDA Q&A of 15 December 2022.

#	CDA Answer	Short description	Relevant for SCC
1	104	Underlying method in EPC standard.	7.2 / 7.7
2	105	National NZEB application.	7.7(2) / 7.1
3	106	The date of submission of the permit application is the relevant date for deciding which TSC to apply.	7.7 / 7.1
4	107	Acquisition and ownership of buildings including new constructions, for the entity owning the building (i.e. the homeowner) it is also possible to use the relevant criteria of 7.7.	7.7 / 7.1
5	109	If only one PED is available for a whole building, that value can be used for an individual apartment if the national regulation permits this.	7.7(2)
6	114	The SCC applicable at the time of the construction permit application should be used.	7.7

7	115	The PED on building level can be used when it is not available on building unit level (often the case for apartments (in the Netherlands)). Unfortunate use of the word Provisional in this answer. We understand it to mean that the PED as noted in the construction permit status = "vergunningsaanvraag" might be used before / during construction.	7.7(2)
8	129	(Confirmation of) Major Renovation definition.	7.2
9	130	The answer given provides for a definition of 'primary energy' and clarifies that the measures that can be take Section 7.6. – "Installation, maintenance and repair of renewable energy technologies", are to be interpreted "energy from renewable sources".	7.2
10	132	The calculation of reduction should be based on the values in an EPC before and after the renovation, based on the numeric indicators in kWh/m2 indicated in the EPC.	7.2
11	133	Mainly repeat of regulation wording (footnote 300)	7.2
12	134	All renovation measures taken during a three-year period be counted to determine the 30% reduction.	7.2
13	141	We do not have to take into account the DNSH criteria for SCC 7.1 only the SCC (of 7.1) when applying SCC 7.7(2).	7.7(2)
14	143	For the application of the SCC, the date of the application for a construction permit is relevant. This is useful so one can assess if for a building (unit) the SCC of section 7.7(1(B) or 7.7(2) should be applied.	7.7
15	144	Lending to a (prospective) homeowner is a SCC 7.7 activity. SCC 7.1 does not need to be applied. This has a significant impact as the DNSH criteria of activity 7.7 differ from activity 7.1.	7.7
16	147	Lending to a (prospective) homeowner is a SCC 7.7 activity. SCC 7.1 does not need to be applied. This has a significant impact as the DNSH criteria of activity 7.7 differ from activity 7.1.	7.7
17	148	EPBD (III) has nationally been implemented in the EPC methodology. BENG2 in the Netherlands.	7.7
18	150	In large part this answer is a repeat of the wording in the regulation. However certain elements are emphasised.	7.7
19	151	It is not possible to use proxies, such as the year of the construction of the building. We assume this answer should be read in conjunction with answer 143.	7.7
20	152	No grandfathering in the CDA and TSC. The DDA lists provisions akin to grandfathering such as Article 7(5) thereof.	all
21	153	As incorporated nationally with the implementation of EPBD (III). In the Netherlands BENG2 is related to the EPC Class.	7.2 / 7.7
22	157	No special clause for monuments but there is a section in one of the DDA Annexes to explain a certain approach.	7.7

Reference	Excerpt
104	**104. As of today many Energy Performance Certificates (EPC) in some Member States are based on energy consumption rather than energy demand. Can these consumption-based energy certificates be used as an equal basis to prove Taxonomy-alignment?** If it is an officially produced EPC, it can be accepted, and used on equal terms.
Comment on answer	EPC methodologies differ per country or sometimes within a country. Some jurisdictions use energy demand instead of energy consumption. As long as it is an official Energy Performance Certificate this does not matter.

Reference	Excerpt
105	**105. What are the actual Nearly Zero-Energy Buildings (NZEB) thresholds in each Member State (region)?** This information can be obtained from national authorities. Any new building in the EU should have an Energy Performance Certificate (EPC), and the EPC indicates the relevant value for the respective building and how it compares to reference values, such as NZEB.
Comment on answer	This confirms our interpretation that in the Netherlands we should look at NTA 8800 as this is the official methodology that determines the EPC threshold values including NZEB.

Reference	Excerpt
106	**106. For the activity "Construction of new buildings" in Section 7.1., is the date of submission of the building application decisive for the technical screening criteria to be applied?** Yes, the date of submission of the complete application is the relevant date for deciding which TSC apply at that point in time.
Comment on answer	These answers confirm the interpretation as included in v1.0 of DEEMF. The date of submission of the application is the relevant date for deciding which SCC to apply. Particularly relevant for new construction. This is also relevant for the top 15% analysis. This is relevant in determining which criteria to apply of SCC 7.7 before and after 31-12-2020. This answer has overlap with A143.

Reference	Excerpt
107	**107. Is the scope of the activity "Construction of new buildings" in Section 7.1. only limited to companies constructing the new buildings or also companies, which commission the construction of buildings (e.g. car manufacturing company which contract a construction company to build an office building)?** This applies to both construction companies and entities that commission a new building. However, the way they can claim relevant turnover/CapEx/OpEx as Taxonomy-eligible/aligned may differ, and for the entity owning the building it is also possible to use the relevant criteria in Section 7.7. of Annex I.
Comment on answer	Overall conclusion is that the SCC allow for a residential property under construction to be considered under Section 7.7 (from the consumer / user perspective) and not require it to be considered under Section 7.1.

Reference	Excerpt
109	**109. For residential buildings, can compliance with the technical screening criteria of the activity "Construction of new buildings" in Section 7.1. be demonstrated by using a limited sub-set of apartment units, instead of checking compliance for the whole property? Does this possibility also apply in non-residential buildings?** For the energy threshold, this depends on national regulations, i.e. if the EPC applies to the whole building, or to each apartment. Whichever is the requirement at national level, it should apply for both residential and non-residential buildings. The correct EPC will be provided in any case, in line with the national regulations. For identical apartments, having normally identical EPCs, a limited sub-set can be used. However, if there are different types of apartments, with different EPCs, all types need to be checked.
Comment on answer	This is a topic that was also addressed in v1.0 of DEEMF: if only one PED is available for a whole building, can that value be used for each individual apartment? – see also answer 115. In the Netherlands it can be the case that the energy performance for the status construction permit ("*vergunningsaanvraag*") is only available on building level and not on building unit level.

Reference	Excerpt
114	**114. Point 1 of the substantial contribution criteria of the activity "Construction of new buildings" in Section 7.1. provides that *"the Primary Energy Demand (…) is at least 10 % lower than the threshold set for the nearly zero-energy building (…) in national measures implementing Directive 2010/31/EU (…)"*. Where national legislation related to Energy Performance of Buildings Directive and the NZEB concept has recently changed, should compliance with this criterion be performed using the legislation applicable at the time of the building licensing (the old one) or the legislation currently in force?** The TSC applicable at the time of the building permit should be used (i.e. the date of the complete application for receiving the building permit).
Comment on answer	This is relevant in determining which criteria to apply of SCC 7.7 before and after 31 December 2020. This question and answer confirm the interpretation as used in v1.0 of DEEMF that we should consider the PED as required under NTA 8800 for new buildings (with permit application date after 1 January 2021 – the date of implementation of NZEB in the Netherlands).

Reference	Excerpt
115	**115. The substantial contribution criteria of the activity "Construction of new buildings" in Section 7.1. indicate that the energy performance is certified using an *'as built Energy Performance Certificate (EPC)'*. What is meant by 'as built'? Can during the construction phase a calculated estimated primary energy demand (PED) be used to determine Taxonomy-alignment until the final energy performance assessment has been performed? If during the construction phase the calculated estimated PED value is only available on building level and not on individual building unit level (which is often the case for apartments), can the PED value for the total building be used as a proxy for the PED of the individual apartment during the construction phase?**

	For new buildings, either an EPC (valid for 10 years) or an EPC as-built are valid. It is understood that often for construction projects the loan is provided before the works start and funds are made available as the works progress. Since it is not possible to obtain the EPC as-built until the very end of the project, it should be possible as a provisional measure to obtain and use an EPC as-designed. This would allow the building process to start. However, upon completion of the works, there needs to be an EPC as-built to certify that indeed the building complied with the criterion 10% better than NZEB. This depends also on the availability of the EPCs and the scope of the project as such. When the project concerns a whole building, there is no need to check the EPC for each individual apartment. When the project is about construction or acquisition/ownership of an apartment, the EPC for the respective apartment can be used.
Comment on answer	We can use the PED on building level when it is not available on building unit level (often the case for apartments (in the Netherlands)). Unfortunate use of the word *provisional* in this answer. We understand it to mean that the PED as noted in the construction permit status (“*vergunningsaanvraag*”) might be used before / during construction.

Reference	Excerpt
129	***C. Renovation of existing buildings in Section 7.2.*** **129. For the activity “Renovation of existing buildings” in Section 7.2., what is the definition of major renovation in each Member State?** According to Article 2(1)(10) of the Energy Performance of Buildings Directive, “*major renovation*” means the renovation of a building where: (a) the total cost of the renovation relating to the building envelope or the technical building systems is higher than 25 % of the value of the building, excluding the value of the land upon which the building is situated; or (b) more than 25 % of the surface of the building envelope undergoes renovation. Member States may choose to apply option (a) or (b) or both. The information can be checked with the Member State concerned.
Comment on answer	This question and answer confirm the interpretation of a major renovation in the Netherlands as used in v1.0 of DEEMF.

Reference	Excerpt
130	**130. Footnote 299 in Annex I Section 7.2. on “Renovation of existing buildings” specifies that *"the reduction of the net primary energy demand of energy from renewable sources shall not be taken into account"*. How is this to be interpreted?** It follows that the reductions in the primary energy demand are to be validated by an EPC, and should be estimated based on the methodology applicable, in line with the provisions of the Energy Performance for Buildings Directive. The directive clarifies that ‘primary energy’ means energy from renewable and non-renewable sources which has not undergone any conversion or transformation process. Improving the energy source to use renewable energy can qualify under Section 7.6. – “Installation, maintenance and repair of renewable energy technologies”.

comment on answer	The answer given provides for a definition of *'primary energy' means energy from renewable and non-renewable sources which has not undergone any conversion or transformation process*. The answer clarifies that the measures that can be take Section 7.6. – "Installation, maintenance and repair of renewable energy technologies", are to be interpreted "energy from renewable sources". (Unfortunately) this answer confirms the interpretation as included in v1.0 of DEEMF – making it difficult under the currently existing energy labelling methodology to demonstrate the improvement to PED excluding the reduction of the net primary energy demand resulting from renewable energy sources.

Reference	Excerpt
132	**132. To determine whether or not a 30% reduction in Primary Energy Demand (PED) will be/has been achieved, a starting-PED-value and an end-PED-value needs to be determined. Does the term *"validated through an Energy Performance Certificate"* as included in the technical screening criteria of the activity "Renovation of existing buildings" in Section 7.2. mean that the end-PED-value is only valid / acceptable if it is a PED value as included in a new EPC? Is the preceding sentence (*'is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method'*) also applicable to the end- PED-value (post-renovation PED value)?** The calculation of reduction should be based on the values in an EPC before and after the renovation, based on the numeric indicators in kWh/m2 indicated in the EPC.
comment on answer	This answer appears to leave even less room in determining the pre-renovation PED than one would initially think when reading footnote 300. This answer appears contradictory to answer 133 where an (almost) verbatim copy of footnote 300 is repeated.

Reference	Excerpt
133	**133. For the activity "Renovation of existing buildings" in Section 7.2., does the wording *'is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method'* mean that to determine the starting Primary Energy Demand (PED) value in addition to an on-site measurement of the PED, alternative methods are acceptable as long as they are *'transparent and proportionate'*? Would it be acceptable to determine (e.g. by using property characteristics and year of construction) upper and lower estimated PED-values for existing energy labels and use the upper PED-values as the starting-PED-value to determine the starting point of a renovation?** Where an Energy Performance Certificate (EPC) is not available or cannot be generated, the initial primary energy demand and the estimated improvement can be based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method. The 30 % improvement should result from an actual reduction in primary energy demand (where the reductions in net primary energy demand through renewable energy sources are not taken into account), and can be achieved through a succession of measures within a maximum of three years.
Comment on answer	The answer is a word-for-word repetition of the actual SCC wording – potentially not completely consistent with answer to question 132.

Reference	Excerpt
134	**134. For the activity "Renovation of existing buildings" in Section 7.2., can all renovation measures taken during a three-year period be counted to determine if the 30% reduction (compared to the starting-PED-value as at the beginning of the three-year period) has been realised?** Yes.
Comment on answer	This has influence on the 'size' of the portion that can be allocated to be aligned with SCC 7.2(2) – in line with what was incorporated in v1.0 of DEEMF.

Reference	Excerpt
141	**141. The substantial contribution criteria of the activity "Acquisition and ownership of buildings" in Section 7.7. state that *'For buildings built after 31 December 2020, the building meets the criteria specified in Section 7.1 of this Annex that are relevant at the time of the acquisition'*. Does this refer both to the substantial contribution and DNSH criteria of Section 7.1 ("Construction of new buildings")?** As this text is included under the substantial contribution criteria, and there are specific criteria listed below for DNSH, the text refers only to the relevant criteria specified in Section 7.1. for substantial contribution to climate change mitigation. Where the DNSH criteria under Section 7.7 indicate N/A it means there are no specific requirements for the respective environmental objective.
Comment on answer	This is very useful (and relevant) input for our DNSH analysis (i.e. N/A indeed not applicable to existing build, even if built after 1 January 2021). We do not have to take into account the DNSH criteria for SCC 7.1, only the SCC (of 7.1) when applying SCC 7.7(2).

Reference	Excerpt
143	**143. For the activity "Acquisition and ownership of buildings" in Section 7.7., to determine when a property was 'built', which date should be used:** • **the date a property was actually completed and delivered to the owner / occupier;** • **the date of the application for a construction permit; or** • **the date of the confirmation of completion of a construction permit?** For the application of the Taxonomy criteria, the date of the application for a construction permit is relevant.
Comment on answer	For the application of the SCC, the date of the construction permit application is relevant. This is useful so one can assess if for a building (unit) the criteria of section 7.7(1) or 7.7(2) should be applied.

Reference	Excerpt
144	**144. For buildings built after 31 December 2020, can the construction phase of a newly constructed property be considered as being part of the acquisition process? Can the drawn part of a construction mortgage loan therefore be considered under Section 7.7 ("Acquisition and ownership of buildings"), paragraph 2? Put differently: should Section 7.7 paragraph 2 only be used for buildings that have been completed or also for buildings that are being built? Or alternatively, should the consumer be seen as the entity undertaking the economic activity of Section 7.1 ("Construction of new buildings") and the realised part of a property be considered for EU Taxonomy alignment according to 7.1 only?** In the case of the construction of a new building, for the construction company (and for its revenues to be considered under the EU Taxonomy), the criteria under Section 7.1. apply. For the owner of the new building (whether it acquires the building through an acquisition, or if it is building its own building), the value of the building can be considered under the EU Taxonomy based on the criteria under Section 7.7.
Comment on answer	Lending to a (prospective) homeowner is a SCC 7.7 activity. SCC 7.1 does not need to be applied in respect of homeowners. This has a significant impact as the DNSH criteria of activity 7.7 differ from activity 7.1.

Reference	Excerpt
147	**147. Can the construction of a building for own use count towards the activity "Construction of new buildings" in Section 7.1. or "Acquisition and ownership of buildings" in Section 7.7.?** Yes, the construction of a new building for own use can be covered under Section 7.1 "*Construction of new buildings*", or Section 7.7 "*Acquisition and ownership of buildings*".
Comment on answer	Lending to a (prospective) homeowner is a SCC 7.7 activity. SCC 7.1 does not need to be applied. This has a significant impact as the DNSH criteria of activity 7.7 differ from activity 7.1.

Reference	Excerpt
148	**148. Does the Energy Performance Certificate (EPC) class A in the substantial contribution criteria for activities related to the construction and real estate sector refer to primary energy demand or total energy demand?** The Energy Performance Certificate (EPC) 'class A' that is required under the substantial contribution criteria of activity in Section 7.7. ("*Acquisition and Ownership of buildings*") refers to the EPC class of the EPC scheme in the relevant Member State. The numerical indicator expressed in kWh/m2, mentioned in the EPC, is relevant and should be considered.
Comment on answer	As EPBD (III) has nationally been implemented in the EPC methodology. BENG2 in the Netherlands.

Reference	Excerpt
150	**150. What should be done if it is currently not possible to quantitatively name the top 15 % of the building stock before 31.12.2020, and there is no corresponding national evaluation of the Energy Performance Certificates (EPCs) already issued, and there is no valid data based on the operating energy demand of the existing building stock? As a first simplification, can calculated energy efficiency data (e.g. from energy performance certificates with standardised energy requirements for household electricity / operating electricity) be used as opposed to real consumption data (from buildings in operation) to determine Taxonomy-alignment with the substantial contribution criteria of the activity "Acquisition and ownership of buildings" in Section 7.7.?** In order to use the option of demonstrating that the building is within the top 15% of the national or regional building, adequate evidence should be provided (e.g. a recent study), which at least compares the performance of the relevant asset to the performance of the national or regional stock built before 31 December 2020 and at least distinguishes between residential and non-residential buildings. If such data is not available, a study can be conducted to perform such an assessment. Alternatively, the option of an EPC class A can be used. There is no requirement to conduct the assessment based on real consumption data for demonstrating that a building is within the top 15% of the building stock. In fact, it is recommended to use estimated energy consumption, which better reflects the energy performance of the building (being less influenced by occupancy and behaviour patterns). Only for large non-residential buildings (with an effective rated output for heating systems, systems for combined space heating and ventilation, air-conditioning systems or systems for combined air-conditioning and ventilation of over 290 kW), it is required to show that the building is also efficiently operated through energy performance monitoring and assessment.
Comment on answer	In large part this answer is a repeat of the wording in the regulation. However, certain elements are emphasised: the distinction between residential and non-residential and the distinction of buildings built before 31 December 2020 (keep in mind answer 143 here). It is recommended to use estimated energy consumption. This is contrary to how EPC methods in the Netherlands work ("*gebouwgebonden energieverbruik*") which are based upon calculations made on the basis of building, installation and material characteristics, thus not based on characteristics of the inhabitants or actual energy usage.

Reference	Excerpt
151	**151. Is it permissible to use a weighted requirement value based on the valid new building regulations of the last 15 years for the definition of the necessary requirement value for "the best 15 % of the stock" as referred to in substantial contribution criteria of the activity "Acquisition and ownership of buildings" in Section 7.7.?** The technical screening criteria require "*adequate evidence, which at least compares the performance of the relevant asset to the performance of the national or regional stock built before 31 December 2020 and at least distinguishes between residential and non-residential buildings*" if the option of the "*top 15% of the national or regional building stock*" is used. It is not possible to use proxies, such as the year of the construction of the building.
Comment on answer	We assume this answer should be read in conjunction with answer 143.

Reference	Excerpt
152	**152. The top 15% is a dynamic metric. Is grandfathering guaranteed for properties, e.g. over the entire term of a green bond, if they were among the top 15% at the time of issue?** There is no grandfathering of the technical screening criteria themselves. If the criteria are revised and changed, or an activity falls out of compliance with criteria that are dynamic, a new assessment of (and where relevant effort to ensure) compliance is needed, as of the date when the criteria apply. This is distinct from the grandfathering of financial instruments or transactions on the basis of the criteria at the time of issuance or conclusion of a loan, where separate rules apply. (see for instance Article 7(5) of the Disclosures Delegated Act which allows financial undertakings to report financed Taxonomy-aligned activities as such for up to five years after the application of revised criteria/changed coverage of criteria).
Comment on answer	No grandfathering in the CDA and SCC. The DDA lists provisions akin to grandfathering, such as Article 7(5) thereof.

Reference	Excerpt
153	**153. What is the definition of operational Primary Energy Demand (PED)?** The Annex I to the Delegated Act clarifies in footnote 281 that the Primary Energy Demand is '*the calculated amount of energy needed to meet the energy demand associated with the typical uses of a building expressed by a numeric indicator of total primary energy use in kWh/m^2 per year and based on the relevant national calculation methodology and as displayed on the Energy Performance Certificate (EPC).*' The Energy Performance of Buildings Directive defines in Article 2(5) primary energy as "*energy from renewable and non-renewable sources which has not undergone any conversion or transformation process*". It also explains in Annex I that "*the energy performance of a building shall be determined on the basis of calculated or actual energy use and shall reflect typical energy use for space heating, space cooling, domestic hot water, ventilation, built-in lighting and other technical building systems*".
Comment on answer	As incorporated nationally with the implementation of EPBD (III). In the Netherlands BENG2 is related to the EPC Class.

Reference	Excerpt
157	**157. Are heritage or protected buildings that are exempt from the Energy Performance Certificates (EPC) under national law, also exempt from demonstrating compliance with the EPC or Primary Energy demand requirements specified in Section 7.7 ("Acquisition and ownership of buildings")?** Section 7.7 does not provide a derogation for buildings with heritage or protected status. Therefore, in order to qualify as making a substantial contribution to climate change mitigation, all buildings that are built before 31 December 2020 must have at least an Energy Performance Certificate of Class A or be within the top 15% of the national or regional buildings stock expressed as operational Primary Energy Demand. However, entities have the option to explain in the narrative part of their reporting under Section 1.2.3. of Annex I to the Disclosures Delegated Act why certain assets are not Taxonomy-aligned, e.g. because they are heritage buildings.
Comment on answer	No special clause for monuments but there is a section in one of the DDA Annexes to explain a certain approach.

5.3 DDA Q&A

In this section we highlight and analyse the eight relevant answers of the DDA Q&A and assess their usability. We use the word 'answer' to relate to the guidance provided in the DDA Q&A Document (see Table 15 for a summary).

Table 15: Relevant topics in the DDA Q&A.

#	DDA Answer	Short description	Relevant for SCC
1	19	Changes in NZEB criteria requires reassessment of compliance with TSC. No grandfathering allowed.	7.7(1) / 7.7(2) / 7.1
2	20	No double counting in the designation of building units towards SCC 7.1 should occur. In short: a building (unit) that is built before 2021 is either in the top 15% or has an EPC label of class A.	7.7(1)
3	22	Extrapolation of EPCs cannot be used for EU Taxonomy KPI's. Each individual building (unit) should be assessed to the degree it meets the Substantial Contribution Criteria.	7.7
4	23	Properties with expired EPCs of Class A are not automatically in the Top 15%.	7.7(1)
5	24	The client's contractual relationship underlying the building is to be assessed when considering whether a property should be considered a 7.7 or 7.1 activity.	7.7 / 7.1
6	34	Confirmation that Taxonomy-alignment should be reviewed annually.	All
7	36	Compliance with the TSC (both for substantial contribution as well as DNSH) should be demonstrated with documentary evidence obtained from the client or through third-party verifications. No reference to minimum requirements under local/EU legislation.	All
8	37	An entity that claims EU Taxonomy Alignment must check Minimum Safeguards for e.g. solar panels financed for retail clients.	MS

Reference	Excerpt
19	19. **The criteria for substantial contribution to CCM in Section 7.1. ('Construction of new buildings') and Section 7.7. ('Acquisition and ownership of buildings') of the Climate Delegated Act refers to the nearly zero energy building (NZEB) criteria, which are defined at national level. When a Member State changes NZEB criteria, should financial undertakings reassess the Taxonomy-alignment of the buildings that they finance by taking into account the new NZEB criteria?** Yes. The TSC laid down in Sections 7.1. and 7.7. of Annex I to the Climate Delegated Act refer to NZEB requirements, which are defined at national level. Therefore, the grandfathering treatment specified in Article 7(5) of the Disclosures Delegated Act for loans and instruments where the use of proceeds is known in cases where TSC are amended does not apply to the situation when a Member States changes the NZEB criteria in its jurisdiction. Hence, as of when changes to these NZEB criteria become applicable, exposures by financial undertakings to the relevant real estate assets should be reassessed for the purposes of claiming their Taxonomy-alignment (see also question 152 in the Commission Notice on the Climate Delegated Act).
Comment on answer	"when changes to these NZEB criteria become applicable, exposures by financial undertakings to the relevant real estate assets should be reassessed for the purposes of claiming their Taxonomy-alignment." No grandfathering is applied.

Reference	Excerpt
20	20. **For the purpose of assessing the Taxonomy-alignment under Section 7.7. ('Acquisition and ownership of buildings') of Annex I to the Climate Delegated Act, buildings built before 31 December 2020 must have at least an Energy Performance Certificate (EPC) class A label or be *'within the top 15 % of the national or regional building stock expressed as operational Primary Energy Demand (PED) and demonstrated by adequate evidence'*. Similarly, the TSC for activity under Section 7.2. ('Renovation of existing buildings') of Annex I to the Climate Delegated Act, provide for two TSC for substantial contribution to CCM. Could these two criteria be used simultaneously for assessing the Taxonomy-alignment of the respective activities ?** Point (1) of Section 7.7 of Annex I to the Climate Delegated Act pertaining to the TSC for substantial contribution to CCM provide for two TSC to assess Taxonomy-alignment for buildings built before 31 December 2020. Similarly, Section 7.2 of Annex I to the Climate Delegated Act pertaining to the TSC for substantial contribution to CCM provide for two TSC to assess Taxonomy-alignment for buildings renovation. Financial undertakings may choose to apply any of the two TSC, but they should not double count the same exposures in the numerator of the relevant KPIs where a building meets both TSC. For instance, for activity 'Acquisition and ownership of buildings' in section 7.7 of Annex I to the Climate Delegated Act, this implies that: — an exposure to a building without an EPC class A label can be counted in the numerator of the KPI on grounds that it meets the top 15 % criterion, and — an exposure to a building with an EPC class A label, cannot be counted twice in the numerator of the KPI on grounds that it also meets the top 15 % criterion.
Comment on answer	This section highlights that no double counting in the designation of building units towards SCC 7.1 should occur. In short: a building (unit) that is built before 2021 is either in the top 15% or has an EPC label of class A.

Reference	Excerpt
22	22. **For the purpose of assessing Taxonomy-alignment under Section 7.7. ('Acquisition and ownership of buildings') of Annex I to the Climate Delegated Act, if a credit institution extrapolates the known national distribution of EPC A-labels to its own mortgage portfolio in a geographic area, and does not use its own mortgage information but fully relies on external data sources with no further assurance on the external data, would this constitute an estimate that could only be used for voluntary reporting?** An extrapolation of the EPC-composition of a mortgage portfolio based on national statistics alone would constitute an estimate for the purposes of assessing the Taxonomy-alignment of the mortgage portfolio that cannot be included in the KPIs of financial undertakings. For example, if national statistics show that a certain proportion of buildings built before 31 December 2020 have EPC class A, it does not imply that a mortgage portfolio automatically has the same proportion. However, estimates may be disclosed on a voluntary basis separately from the mandatory KPIs together with the methodology used to calculate such estimates.
Comment on answer	Extrapolation of EPCs cannot be used for EU Taxonomy KPI's. Each individual building (unit) should be assessed to the degree it meets the Substantial Contribution Criteria.

Reference	Excerpt
23	23. **If a credit institution assumes that buildings with an expired EPC class A which constitute collateral of residential mortgages in its portfolio are within the top 15 % of the national or regional building stock expressed as operational primary energy demand (PED), would this constitute an estimate that could only be used for voluntary reporting?** It could still be assessed whether buildings with expired EPC class A label meet the top 15 % criterion listed in paragraph (1) of Section 7.7 of Annex I to the Climate Delegated Act, if substantiated with further 'adequate evidence' as required by the TSC as further explained in the responses to questions 149 to151 of the Commission Notice on the Climate Delegated Act. Assuming that buildings with expired EPC class A labels are automatically in the top 15 % performance bracket alone would not on its own suffice to ascertain their Taxonomy-alignment and their inclusion into the numerator of relevant KPIs. Estimates of Taxonomy-alignment may, however, be disclosed on a voluntary basis separately from the mandatory KPIs together with the methodology used to calculate such estimates.
Comment on answer	Properties with expired EPCs of Class A are not automatically in the Top 15%.

Reference	Excerpt
24	24. **Should a credit institution which grants a mortgage loan for the construction of a building assess the Taxonomy-alignment of this loan against the criteria in Section 7.1. ('Construction of new buildings') or Section 7.7. ('Acquisition and ownership of buildings') of the relevant Annex to the Climate Delegated Act?** A credit institution should consider its client's contractual relationship underlying the building. Where the contract of the client is for construction of a new building, the credit institutions should assess the exposure against the criteria in Section 7.1 of the relevant Annex to the Climate Delegated Act. Where the contract of the client is a purchase contract, the credit institution should assess the exposure against the criteria in Section 7.7 of the relevant Annex to the Climate Delegated Act.
Comment on answer	According to this answer we should assess the client's contractual relationship underlying the building. For a financial institution granting a mortgage loan for the construction of a new home. We therefore must assess the contract of the contact of the client.

	In the Netherlands typically a *koop-/ aannemingsovereenkomst* is used. Therefore, in part, the underlying contract is for construction and in part it is for the purchase of the building (unit) and typically also the land on which it is constructed. The contract underlying the building, can be assessed has having both construction and purchase elements in the contract. However, see section 6 of this document for a more elaborate analysis as this answer should be assessed in conjunction with 107, 144 and 147 of the CDA Q&A.

Reference	Excerpt
34	34. **Do financial undertakings need to annually review the Taxonomy-alignment of their exposures?** it is necessary that data on Taxonomy-alignment of exposures are reviewed, and, where necessary, revised annually to ensure that the sustainability statement includes a fair view of the development and performance of the undertaking's business, including its compliance with the TSC. By virtue of the grandfathering clause in Article 7(5) of the Disclosures Delegated Act applicable to special purpose loans and certain environmentally sustainable bonds or debt securities, if the TSC are amended, financial undertakings could report the Taxonomy-alignment of such loans and instruments with the amended TSC up to five years after the date of application of the amended TSC. It is therefore not necessary to check compliance with the amended TSC during the 5-year grandfathering period. Nevertheless, financial institutions are encouraged to engage with their counterparties in view of aligning their economic activities with the amended TSC during that transitional period.
Comment on answer	Confirmation that Taxonomy-alignment should be reviewed annually.

Reference	Excerpt
36	36. **In the case of retail clients, can credit institutions verify compliance with the TSC, in particular DNSH for adaptation, using specific evidence, e.g. domestic certifications or information in EPC)?** Section 1.2.1.3. of Annex V DDA prescribes two categories of disclosures on retail exposures, namely: — residential real estate lending where compliance with the TSC as laid down in Sections 7.1., 7.2., 7.3., 7.4., 7.5., 7.6. and 7.7. of Annex I or Annex II to the Climate Delegated Act or Sections 3.1. and 3.2. of Annex II to the Environmental Delegated Act is required; and — retail – credits/consumptions loans for cars, where compliance with the TSC as laid down in Section 6.5. of Annex I to the Climate Delegated Act is required. With respect to such retail exposures, credit institutions should obtain adequate documentary evidence showing that all TSC specified under the corresponding economic activity in the respective Delegated Acts are met (see also responses to question 33 of this Notice). This applies equally to the assessment of DNSH criteria for the CCA objective. The evidence can be obtained directly from the client or can take the form of third-party independent and reliable verifications or external reviews, which could include domestic certifications by public authorities or information in EPCs. Evidence provided by third parties and public authorities could be relied upon to ascertain compliance with the TSC as long as it is specific and directly related to the underlying exposures of credit institutions. The same evidence can be used to demonstrate compliance with the TSC for several exposures to which it pertains. However, in the absence of exposure-specific evidence, estimates of Taxonomy-alignment may be disclosed on a voluntary basis separately from the mandatory KPIs together with the methodology used to calculate such estimates.

Comment on answer	Compliance with the TSC (both for substantial contribution as well as DNSH) should be demonstrated with documentary evidence either obtained from the client or through third-party verifications. No reference to minimum requirements under local or EU legislation.

Reference	Excerpt
37	37. **Do financial undertakings have to comply with minimum safeguards in conducting their activities or is compliance with minimum safeguards only relevant at the level of the investee company?** The specific requirement to comply with the minimum safeguards under Article 18 of the Taxonomy Regulation applies to the entity that performs an economic activity and which claims that its activity is Taxonomy-aligned. For the purposes of computing in their KPIs the Taxonomy-alignment of exposures to other undertakings, financial undertakings themselves do not need to comply with the minimum safeguards given that financing activities are not as such Taxonomy-eligible. However, financial undertakings should obtain adequate documentary evidence, such as Taxonomy-disclosures by the non-financial undertakings under the Disclosures Delegated Act, ascertaining that undertakings to which they are exposed meet the minimum safeguards to be able to compute as Taxonomy-aligned the exposures to those undertakings. Compliance with minimum safeguards is an integral part of the non-financial undertakings' Taxonomy KPIs that financial undertakings apply to their exposures. As for credit institutions' GAR for known use of proceeds exposures, such as the exposures referred to in Sections 1.2.1.3. and 1.2.1.4. of Annex IV DDA regarding retail clients and public authorities, credit institutions do not need to verify compliance with minimum safeguards by those retail clients and public authorities. However, for those exposures, credit institutions should obtain adequate documentary evidence, such as Taxonomy-disclosures under the Disclosures Delegated Act by the respective producers of goods and service providers, ascertaining that undertakings producing goods and providing services that are purchased by retail clients and public authorities comply with the relevant TSC and with minimum safeguards to compute their exposures as Taxonomy-aligned. This situation concerns for instance a loan provided to a retail client or public authority for the purchase of electric cars or solar panels where the credit institution needs to ascertain the compliance with the relevant TSC and the minimum safeguards by the manufacturer of those goods to assess such a loan as Taxonomy-aligned. Financial undertakings should comply with the minimum safeguards only if the financial services they provide are Taxonomy-eligible and they claim that those services are Taxonomy-aligned. This concerns a small number of activities in Section 6 of Annex I to the Climate Delegated Act on transport, which refers to 'financing' as part of the activity description, and non-life insurance and reinsurance underwriting activities in Sections 10.1. and 10.2. of Annex II to the Climate Delegated Act. For guidance, undertakings are nonetheless invited to consult the Commission Notice of 16 June 2023 on the interpretation and implementation of certain legal provisions of the EU Taxonomy Regulation and links to the Sustainable Finance Disclosure Regulation ([44]).For further informal advice on best practices, they are invited to consult the Final Report on Minimum Safeguards of the Platform on Sustainable Finance published in October 2022 ([45]), in particular Sections 6 and 7.
Comment on answer	An example is given in this answer whereby a credit institution provides a loan to a (residential) homeowner and the homeowner uses these funds to purchase solar panels. In this case the Minimum Safeguards will not need to be assessed towards the residential homeowner (who is not an undertaking) but the credit institution should check the TSC and Minimum Safeguards of the manufacturer, to assess such a loan as Taxonomy-aligned. This is an interesting answer for several reasons: • In this case there is no economic, financial or legal relationship between the manufacturer and the credit institution. • Neither the Level 1 nor Level 2 texts of the EU Taxonomy explicitly require financial institutions to perform due diligence on third-party manufacturers. Without clear legislative intent, such obligations cannot be assumed. • The example, in this case solar panel, seems arbitrarily chosen. Using funds for solar panels in the context real estate would be a classified as a 7.6 economic activity (*Installation, maintenance and repair of renewable energy technologies*). More specifically. One could argue that by extension the

	same argument holds for the other elements of economic activity 7.6, for instance where a homeowner uses funds to install a heat pump. Or going further when employing activities described in section 7.3 (Installation, maintenance and repair of energy efficiency equipment) for situations where the homeowner uses funds to install energy efficient windows or doors. Or activities described in section 7.2 (major renovations). • The EU Taxonomy is designed to evaluate the alignment of economic activities rather than individual products or services. This distinction establishes that the Taxonomy does not provide a direct framework for assessing or certifying products. • Product-level alignment could only be conceivable in highly theoretical cases where 100% of a company's activities are Taxonomy-aligned. Only under such circumstances could all products or services produced by the company inherently meet the necessary Technical Screening Criteria and minimum safeguards. • In practice, most companies engage in a mix of aligned and non-aligned activities. This operational reality makes it unrealistic to consistently claim that individual products are fully Taxonomy-aligned, given the lack of explicit product-level evaluation mechanisms within the current framework. In addition, this answer does not only impact renovations but potentially also newly built building units in the Netherlands. As in the Netherlands for new buildings at least 50% of the energy demand must be met by renewable energy, via the BENG3 indicator and corresponding threshold. Typically, also solar panels are part of the design of new buildings in the Netherlands and therefore this answer of the Commission would also impact new buildings in the Netherlands. To classify the loan as sustainable, a credit institution must gather proof from the solar panel manufacturer demonstrating their compliance with the relevant TSC and minimum safeguards. The credit institution itself does not need to verify the minimum safeguards compliance of the retail client. This guidance seems however consistent with answer 62 of the ADA Q&A, which mentions that for economic activities 7.3 and 7.6 we should also assess the criteria of sections 3.5 and 3.1 respectively.

5.4 ADA Q&A

In this section we highlight and analyse the relevant answers of the ADA Q&A and assess their pragmatic usability and implications for the interpretation of the SCC. We use the word 'answer' to relate to the guidance provided. Note that the Working Group has considered the following questions and answers provided in the ADA Q&A to be potentially relevant for the SCC of Section 7 of the CDA: 10, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62 and 63.

Reference	Excerpt
46	**46. The application of technical screening criteria (TSC) for activities in Section 7.1. 'Construction of new buildings' and Section 7.2. 'Renovation of existing buildings' raises a question regarding how updates to TSC should be managed for activities spanning multiple years. The reply to FAQ 106 in the Commission Notice C/2023/267[70] clarifies that the building application is the determining factor for the applicable TSC at a given point in time. Does this principle also apply when reporting turnover?** The building application is the starting point of application in time of the TSC laid down in Sections 7.1. and 7.2. However, if the TSC are amended during construction or renovation, the amended TSC should apply to such buildings and renovation at the point in time when the amended TSC become applicable. When reporting the turnover KPI, reporting undertakings should assess the activity based on the TSC that were applicable to the activities at the time when the turnover is generated (see the replies to FAQs 106 and 152 in Commission notice C/2023/267).
Comment on answer	When the TSC are amended during construction or renovation, the amended TSC should apply to such buildings and renovation at the point in time when the amended TSC become applicable. The response provided is clear and effectively addresses the question posed.

Reference	Excerpt
47	**47. How should one define 'operational primary energy demand' , to which reference is made in the substantial contribution criteria of Section 7.1. 'Construction of new buildings'? The definition provided in the reply to FAQ 153 in Commission Notice C/2023/267 is confusing because it cites the legal definition of primary energy demand without explaining what 'operational' means in that context.** 'Operational' means that it refers to the 'in use' phase of the building (i.e. the construction phase of the building) and that the resultant embedded energy is not considered. The 2018 Energy Performance in Buildings Directive (EPBD) required an indicator for primary energy use, but this could be interpreted as energy from renewable and non-renewable sources. For now, therefore, it could be whichever indicator the Member State uses in its national calculation methodology for energy performance certificates (EPCs) and for minimum energy performance requirements. The 2024 EPBD makes it clear that it is total primary energy use (residential and non-residential). This will be obligatory from the 2024 EPBD's transposition date (for EPCs and for minimum energy performance requirements).
Comment on answer	No reference is made in Section 7.1 to 'operational primary energy demand'. See for latest official version of the CDA Annex I (02021R2139 — EN — 01.01.2024 — 002.001). We are not sure (yet) that the '2024 EPBD' makes it clear that the operational primary energy demand is total primary energy use (residential and non-residential). As the EPBD IV is still to be implemented in national regulation. The EPBD IV transposition date is May 2026. The question and the response provided may require further analysis to ensure a proper understanding.

Reference	Excerpt
48	**48. For Section 7.1. 'Construction of new buildings', how should the substantial contribution criterion regarding primary energy demand (PED) be interpreted? Should the PED be at least 10% lower than the established benchmark? For instance, if the Nearly Zero-Energy Building (NZEB) threshold is set at 100 kWh/m2, would compliance with technical screening criteria mean that the building's primary energy usage should range from 0 to 90 kWh/m2?** If the NZEB threshold is set at 100 kWh/m2, compliance with technical screening criteria mean that the building's primary energy demand should be less than 90 kWh/m2.
Comment on answer	Confirmation that we calculate '10% lower' correctly. The response provided is clear and effectively addresses the question posed.

Reference	Excerpt
72	**Section 7.2. 'Renovation of existing buildings' in Annex I to the Taxonomy Climate Delegated Act** **57. Can the renovation of a building for own use count towards Section 7.2. 'Renovation of existing buildings'?** The EU Taxonomy does not differentiate between the different uses (own use or otherwise) of a building that is to be renovated. The activity of renovating a building for own use should therefore be counted under Section 7.2. 'Renovation of existing buildings' (see also the reply to FAQ 147 in the Commission Notice C/2023/267).
Comment on answer	The EU Taxonomy treats all building renovations the same, regardless of whether the building is for own use or other purposes. The response provided is clear and effectively addresses the question posed.

Reference	Excerpt
58	**58. Does the expansion of an existing building fall under Section 7.1. 'Construction of new buildings' or 7.2. 'Renovation of existing buildings'? Are there certain conditions that influence the scope/definition of the activity (new construction vs. renovation)?** The classification of an expansion of an existing building will be influenced by the size (e.g. in m^2 of useful area) of the expansion. For expansions that require a building permit, national building requirements should be used to classify the expansion as an activity under Section 7.1. or 7.2.
Comment on answer	The classification of a building expansion depends on its size (e.g., m^2 of useful area). Expansions requiring a building permit must comply with national building requirements to determine whether they fall under Section 7.1 (construction of new buildings) or Section 7.2 (renovation of existing buildings). In this context, the definition of 'major renovation' ('ingrijpende renovatie') as outlined in the Besluit bouwwerken leefomgeving (Bbl), established under the Omgevingswet, is applicable. The response provided is clear and effectively addresses the question posed.

Reference	Excerpt
59	**59. The footnote to the substantial contribution criteria in Section 7.2. 'Renovation of existing buildings' state that '(…) The 30 % improvement results from an actual reduction in primary energy demand (where the reductions in net primary energy demand through renewable energy sources are not taken into account), and can be achieved through a succession of measures within a maximum of three years.' What should be considered as the starting point of this period – the first renovation action, the start date of the financing for the renovation action or another date?** The criterion allows for adaptation to different situations, but the application should be consistent. For example, the comparison should be made between (i) the end of the first step and (ii) the second (or last) step in the renovation that leads to 30% energy savings. It should not be made between (i) the end of the fist step and (ii) the initial phases of the second step.
Comment on answer	The criterion allows flexibility but must be applied consistently. Energy savings should be compared between (i) the completion of the first step and (ii) the final step achieving 30% savings, not between (i) the first step's completion and (ii) early phases of the second step. The response provided is clear and effectively addresses the question posed.

Reference	Excerpt
60	**60. For Section 7.2. 'Renovation of existing buildings', if the category of the building is changed during the renovation (e.g. if a hotel is transformed into an office), how can a project be evaluated in terms of energy reduction through the specified method of comparing the energy performance certificate primary energy demand value before and after the renovation?** In this case, a fictional 'before' EPC could be used for comparison purposes. This fictional 'before' EPC would represent the building as if it were an office before the renovation. In the example provided, a hotel is transformed into an office. Following the renovation there is an 'after' EPC. For the 'before' status, an expert could create a fictional 'before EPC' based on the technical elements of the building when it was a hotel, but adapting its use. For example, this may require the adaptation of certain parameters (e.g. occupation, use of domestic hot water and opening hours).
Comment on answer	A fictional "before" EPC can be used for comparison when renovating a hotel into an office. This "before" EPC represents the building as if it were an office before renovation, using the hotel's technical elements but adjusted for office parameters in this case. The methodology for addressing conversions to residential buildings has not been specified. Furthermore, it remains unclear how a hypothetical EPC can be utilised for comparison purposes in such cases.

Reference	Excerpt
61	**61. FAQ 139 of Commission Notice C/2023/267 states that Section 7.6. 'Installation, maintenance and repair of renewable energy technologies' covers installation, maintenance and repair activities conducted on wind turbines installed on-site as technical building systems, but it also states that Section 4.3. 'Electricity generation from wind power' covers construction or operation of electricity generation facilities that produce electricity from wind power in all other situations. Is 'construction' the equivalent of 'installation' and is 'operation' the equivalent of 'maintenance' and 'repair'?** The difference in terminology used in Section 7.6. and Section 4.3. stems from the different scale of projects covered by these two sections. The term 'installation' is a relevant term for smaller renewable energy sources attached to a building that are intended to provide electricity that is primarily used by that building (as is the case in Section 7.6. 'Installation, maintenance and repair of renewable energy technologies'). The activity in Section 7.6. does not cover the manufacturing or operation of the renewable energy source. The term 'construction' covers large scale, commercial type, self-standing renewable energy sources (RES) plants as is the casein Section 4.3. 'Electricity generation from wind power', where the electricity is intented for commercial use or sale. Similarly, the term 'operation' is used for a larger RES plant where management can more typically be a commercial activity than in an individual building context. The term 'operation' includes 'maintenance and repair' but could also include further activities related to the management of wind turbine(s).
Comment on answer	The terminology differences in Sections 7.6 and 4.3 reflect project scale. Section 7.6 refers to "installation" for small renewable energy systems serving individual buildings, while Section 4.3 uses "construction" and "operation" for large commercial renewable energy plants, with "operation" including maintenance, repair, and broader management activities.

Reference	Excerpt
60	**62. Does the acquisition of the specific 'measure' referred to in Sections 7.3. 'Installation, maintenance and repair of energy efficiency equipment' to 7.6. 'Installation, maintenance and repair of renewable energy technologies' fall within the scope of the activities?** Operators should follow accounting rules to determine whether to report expenditures on the services of installation, maintenance, and repair referred to in Sections 7.3. to 7.6. as CapEx or OpEx. The expenditure on the acquision of respective products and equipment, to which the installation, maintenance and repair services activities in Sections 7.3. to 7.6. refer, should be assessed against the respective criteria for the manufacturing of those products and equipment: • expenditures on the acquisition of energy efficient equipment for buildings or instruments and devices for measuring, regulating and controlling energy performance of buildings, should be assessed against the respective criteria in Section 3.5. 'Manufacture of energy efficiency equipment for buildings'; • expenditures on renewable energy technologies should be assessed against the respective criteria in Section 3.1. 'Manufacture of renewable energy technologies'; • expenditures on the acquisition of charging stations for electric vehicles in buildings (and parking spaces attached to buildings) should be assessed against the respective criteria in Section 3.20. 'Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution that result in or enable a substantial contribution to climate change mitigation'.

Comment on answer	Operators must follow accounting rules to classify expenditures on installation, maintenance, and repair services under Sections 7.3 to 7.6 as either CapEx or OpEx. It is unclear whether the referenced manufacturing sections—Section 3.1 ('Manufacture of renewable energy technologies') and Section 3.5 ('Manufacture of energy efficiency equipment for buildings')—adequately cover all measures described in Sections 7.3 and 7.6. This ambiguity raises important questions about the practical scope of these requirements. Additionally, the guidance seems to impact renovations under Section 7.2, as these projects often involve similar equipment and technologies, however 7.2 is not mentioned in answer 62. Traditionally, the Taxonomy has focused on assessing whether the primary economic activity being financed aligns with environmental objectives, such as building renovations under Section 7.2. However, the new guidance introduces a requirement to assess products and equipment—such as renewable energy technologies, energy-efficient systems, and EV charging stations—against criteria outlined in sections that were previously considered unrelated, such as Sections 3.1, 3.5, and 3.20. This represents a shift from how the Taxonomy was originally understood and makes its implementation more complex. A concern is that this guidance introduces a dual-layer framework of "primary" and "secondary" criteria for some activities. For instance, activities under Section 7.3 now need to meet not only their own TSC but also the criteria for manufacturing activities in Sections 3.1 and 3.5. As in practice, in the Netherlands, in many cases the installation and the acquisition is financed – for instance in the case of purchasing and installing solar panels or a heatpump. The Technical Screening Criteria (TSC) for Sections 7.3 and 7.6 do not explicitly reference the criteria in Sections 3.1 ('Manufacture of renewable energy technologies') or 3.5 ('Manufacture of energy efficiency equipment for buildings'). If compliance with these manufacturing criteria were intended to be part of the assessment for 7.3 and 7.6, it would be reasonable to expect this requirement to be clearly stated in the CDA. The absence of such references raises questions about whether this dual-layer interpretation aligns with the regulator's original intent. Moreover, there are criteria and sections in the CDA that explicitly refer to other sections. An example is SCC 3.5.k which clearly refers to technical screening criteria set out in section 4.16 of the CDA. This guidance also updates our understanding of the term "installation" within activities 7.3 and 7.6. Initially, it was interpreted broadly to include the acquisition of the equipment or measure being installed. However, in practice, "installation" now appears to have a narrower definition, focusing solely on the service or activity of installing the equipment. This guidance seems consistent with answer 37 of the DDA Q&A, which illustrates the example that for the financing of a solar panel for a residential homeowner, the credit institution should check the relevant TSC of the manufacturer of the solar panel.

5.5 A note on ADA Answer 62

The guidance provided by the Commission introduces a dual-layer framework for the application of Technical Screening Criteria (TSC), distinguishing between what can be described as *primary* TSC criteria and *secondary* TSC criteria for an economic activity. This development fundamentally alters the practical application of the EU Taxonomy, creating both conceptual and operational challenges for stakeholders.

Primary TSC Criteria: Focus on Economic Activities

The EU Taxonomy was initially conceived as an activity-based framework, where compliance is assessed directly against the criteria specific to the economic activity in question, unless explicitly stated otherwise. For example, renovation

activities under Section 7.2, 7.3 or 7.6 have clear and specific TSC that focus on aspects such as improving energy performance. This "primary" layer of criteria provides the foundation for assessing whether an activity contributes substantially to climate objectives.

Secondary TSC Criteria: The New Layer of Complexity

Under the new guidance of answer 62 of the ADA Q&A, certain economic activities—such as those under Sections 7.3 and 7.6—are now subject to a secondary layer of criteria. These secondary criteria refer to the manufacturing standards of the products and equipment used in these activities, as outlined in unrelated chapters, such as Section 3.1 (*renewable energy technologies*) and Section 3.5 (*energy efficiency equipment for buildings*). For example, the installation of solar panels under Section 7.6 now requires financial institutions to verify the compliance of those panels with the manufacturing criteria in Section 3.1.

A point of critique

The dual-layer approach introduced by the EU Taxonomy Commission Notice represents a potential departure from the original intent of the Taxonomy as an activity-based framework. In its current interpretation, taking into account ADA answer 62 and DDA answer 37, activities such as residential renovations are no longer assessed solely on their compliance with Technical Screening Criteria (TSC) but also on the compliance of products and materials used within those activities. This shift may extend the Taxonomy's focus toward supply chain-level type of considerations.

Notably, the TSC for Sections 7.3 ('Installation, maintenance and repair of energy efficiency equipment') and 7.6 ('Installation, maintenance and repair of renewable energy technologies') do not explicitly reference the criteria outlined in Sections 3.1 ('Manufacture of renewable energy technologies') and 3.5 ('Manufacture of energy efficiency equipment for buildings'). If the intention were to require compliance with these manufacturing criteria as part of the assessment for 7.3 and 7.6, one would reasonably expect such a requirement to be clearly and explicitly stated within the TSC. Or visa versa one could argue.

The absence of any direct reference raises questions about whether this dual-layer interpretation aligns with the regulator's original intent. Moreover, introducing this interpretation without an explicit legal basis risks creating confusion and inconsistency in how the Taxonomy is applied.

Based on our understanding, the Level 1 Regulation and Level 2 Delegated Acts do not appear to include a dual-layer TSC requirement for financial institutions to conduct due diligence on third-party manufacturers, unless clearly otherwise stated. Financial institutions financing residential homeowners typically lack a direct relationship with the manufacturers of the equipment or measures used. Imposing an expectation to verify compliance with manufacturing criteria risks expanding their responsibilities beyond their established role, potentially leading to inefficiencies and pragmatic data challenges.

Requiring compliance with manufacturing criteria may also impose disproportionate burdens, particularly for smaller residential loans, where the cost of compliance could outweigh the associated (benefits. This is in particular the case for the DNSH criteria relevant for manufacturers. Furthermore, this interpretation seems to fragment compliance obligations, requiring renovation projects assessed under Sections 7.2, 7.3, and 7.6 to potentially meet additional criteria from multiple other, previously understood to be unrelated, sections of the CDA.

From a practical standpoint, this interpretation complicates reporting processes, as loans for specific measures, such as solar panels, would need to be divided across different sections and TSC. This segmentation increases administrative burdens and potentially risks double counting in accounting, which is undesirable from both a regulatory and operational perspective. Further investigation into how this interpretation affects the Disclosure Delegated Act and its related templates would also be valuable, as the interplay between compliance and disclosure requirements could introduce additional challenges. Collecting and verifying granular data on product compliance—especially from manufacturers with

no direct relationship to the financial institution—poses additional operational hurdles, particularly given the diversity of equipment and suppliers involved.

5.6 Consequences of ADA Answer 62 for analysis of Section 7.3

The reinterpretation of the Technical Screening Criteria (TSC) for Section 7.3, which pertains to the installation, maintenance, and repair of energy efficiency equipment, now includes alignment with the manufacturing criteria outlined in Section 3.5. This alignment means that activities under Section 7.3 must consider the compliance of the energy efficiency products being installed with the specific standards defined in Section 3.5.

The Substantial Contribution Criteria (SCC) for Section 3.5 require that the economic activity manufactures one or more of the following products and their key components as listed in Table 16.

Table 16: Wording of SCC of Section 3.5

Section	NACE	Substantial contribution to climate change mitigation of Annex I
		The economic activity manufactures one or more of the following products and their key components ([97]): (a) Windows with U-value lower or equal to 1.0 W/m²K; (b) Doors with U-value lower or equal to 1.2 W/m²K; (c) External wall systems with U-value lower or equal to 0.5 W/m²K; (d) Roofing systems with U-value lower or equal to 0.3 W/m²K; (e) Insulating products with a lambda value lower or equal to 0.06 W/mK; (f) Household appliances falling into the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 of the European Parliament and of the Council ([98]) and delegated acts adopted under that Regulation; (g) Light sources rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation; (h) Space heating and domestic hot water systems rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation; (i) Cooling and ventilation systems rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation; (j) Presence and daylight controls for lighting systems; (k) Heat pumps compliant with the technical screening criteria set out in Section 4.16 of this Annex; (l) Façade and roofing elements with a solar shading or solar control function, including those that support the growing of vegetation; (m) Energy-efficient building automation and control systems for residential and non-residential buildings; (n) Zoned thermostats and devices for the smart monitoring of the main electricity loads or heat loads for buildings, and sensoring equipment; (o) Products for heat metering and thermostatic controls for individual homes connected to district heating systems, for individual flats connected to central heating systems serving a whole building, and for central heating systems; (p) District heating exchangers and substations compliant with the district heating/cooling

		distribution activity set out in Section 4.15 of this Annex; (q) Products for smart monitoring and regulating of heating systems, and sensoring equipment. Footnotes: [97] Where relevant, the U-value is calculated according to the applicable standards, e.g. EN ISO 10077-1:2017 (windows and doors), EN ISO 12631:2017 (curtain walls) and EN ISO 6946:2017 (other building components and elements). [98] Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU (OJ L 198, 28.7.2017, p. 1).

Under this reinterpretation, compliance with Section 7.3 now depends on the alignment of the products being installed with the manufacturing criteria of Section 3.5. This means that financial institutions must verify that the equipment or systems being installed—such as windows, doors, or HVAC systems—meet the specific performance thresholds outlined above.

However, while Section 3.5 sets precise quantitative requirements for products, it does not impose additional criteria on the installation activity itself under Section 7.3. Section 3.5 also includes additional DNSH criteria, which ensure that the manufacturing of these products does not significantly harm other environmental objectives. While important, the DNSH criteria are outside the scope of this document and do not directly influence the substantial contribution assessment for Section 7.3.

The *reinterpretation* of the Technical Screening Criteria (TSC) for Section 7.3, which concerns the installation, maintenance, and repair of energy efficiency equipment, introduces significant compliance challenges. Section 7.3 requires adherence to technical standards derived from the national implementation of the Energy Performance of Buildings Directive (EPBD). In the Netherlands, this includes compliance with the *Omgevingswet* and *Besluit Bouwwerken Leefomgeving* (Bbl), which establish performance standards for certain energy efficiency equipment and measures. These national measures play a key role in defining the technical requirements for energy efficiency improvements.

However, Answer 62 of the ADA Q&A adds an additional layer of complexity by requiring alignment with the manufacturing criteria in Section 3.5 (*Manufacture of energy efficiency equipment for buildings*). Section 3.5 sets specific technical thresholds for products, such as U-values for windows and doors or energy efficiency classes for appliances. These EU-level requirements may not always align with the technical standards defined under the BBL or other national EPBD implementation measures.

This raises an important legal and practical question: *Which requirements prevail if there is a conflict between the technical thresholds set out in Section 3.5 and those in the BBL or other national measures?* The Taxonomy Regulation does not explicitly address how to resolve such conflicts, leaving stakeholders to navigate the interplay between EU-level Taxonomy criteria and national building standards.

A specific example highlights this complexity: Section 7.3(b) addresses the *"replacement of existing windows with new energy-efficient windows."* In theory, this requires compliance with the minimum performance requirements for windows as set out in the applicable national measures implementing Directive 2010/31/EU, the *Bbl* in the Netherlands. However, Answer 62 directs stakeholders to refer to the criteria in Section 3.5(a), which prescribes stricter U-values for windows than those generally required under the Bbl.

It seems inconsistent that for SCC 7.3(b), which concerns the replacement of existing windows with new energy-efficient ones, stakeholders are directed to consider the minimum requirements for individual components and systems under

national measures implementing Directive 2010/31/EU, such as the BBL in the Netherlands, but are not required to apply these standards. Instead, Answer 62 of the Commission Notice directs compliance to Section 3.5(a) of the Taxonomy, which specifies U-value thresholds for windows. This approach is particularly puzzling because Bbl, as implemented under NZEB standards in the Netherlands, does not explicitly establish technical criteria for the *installation, maintenance, or repair of* windows as standalone activities, it does have criteria for the window itself.

5.7 Consequences of ADA Answer 62 for analysis of Section 7.6

The reinterpretation of the Technical Screening Criteria (TSC) for Section 7.6, concerning the installation, maintenance, and repair of renewable energy technologies, requires alignment with the manufacturing criteria in Section 3.1. This means that activities under Section 7.6 must also comply with the definition of renewable energy in Article 2(1) of Directive (EU) 2018/2001 (RED II), which defines renewable energy as: *"Energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas."*

The Substantial Contribution Criteria (SCC) for Section 3.1 simply require that "the economic activity manufactures renewable energy technologies." There are no additional measurable or quantitative requirements. As a result, the alignment of Section 7.6 with Section 3.1 has little practical effect on the SCC. While Section 3.1 includes Do No Significant Harm (DNSH) criteria, these do not directly impact the substantial contribution assessment for Section 7.6 and fall outside the scope of this discussion.

Defacto, the remark in Answer 62 of the Commission Notice is of limited practical value, as it introduces no substantive consequences for compliance under Section 7.6. This alignment adds unnecessary complexity without delivering meaningful changes, reducing the practical utility of the clarification.

Further considerations

We note that, according to Answer 62 of the Commission Notice, economic activities under Section 7.6 (*Installation, maintenance, and repair of renewable energy technologies*) are to align with criteria in Section 3.1 (*Manufacture of renewable energy technologies*), while those under Section 7.3 (*Installation, maintenance, and repair of energy efficiency equipment*) reference Section 3.5 (*Manufacture of energy efficiency equipment for buildings*). While this guidance provides some direction, it also reveals inconsistencies and gaps that merit closer examination.

The Substantial Contribution Criteria (SCC) for Section 3.1 impose no additional energy efficiency requirements for activities under Section 7.6, apart from the Do No Significant Harm (DNSH) criteria. In contrast, Section 3.5 outlines detailed technical requirements, such as 3.5(k), which refers to heat pumps that must meet the criteria set out in Section 4.16 (*Installation and operation of electric heat pumps*). Heat pumps, widely recognised as renewable energy technologies, are directly relevant to Section 7.6(c) (*Installation, maintenance, repair, and upgrade of heat pumps*). Yet, answer 62 does not extend the technical requirements of Section 3.5(k) to 7.6(c), creating an apparent omission that undermines the internal logic presented in the answer of the Commission Notice.

This inconsistency could lead to uneven application of the Taxonomy criteria. If the intent is to ensure that manufacturing standards are considered for linked activities, as seen in the alignment of Section 7.3 with Section 3.5, it would be logical to include a reference to Section 3.5(k) for heat pumps under Section 7.6(c), rather than limiting this alignment to Section 3.1. Conversely, one might also argue that Section 3.1 should explicitly reference related elements in Section 3.5 that pertain to renewable energy technologies to ensure consistency.

The current interpretation raises broader questions about the consistent application of these criteria amongst economic activities.

The potential complexity of multilayered Technical Screening Criteria (TSC) becomes evident when considering a hypothetical scenario involving the financing of a residential homeowner for the purchase and installation of a heat pump. If we assume that the homeowner typically hires a contractor for both the purchase and installation of the heat pump, several interlinked activities under the EU Taxonomy could theoretically apply:

1. Installation of the Heat Pump

   The installation activity would fall under Section 7.6(c), described as: *"Installation, maintenance, repair, and upgrade of heat pumps contributing to the targets for renewable energy in heat and cooling in accordance with Directive (EU) 2018/2001 and the ancillary technical equipment."* This activity focuses on the implementation process and its contribution to renewable energy goals.

2. Acquisition of the Heat Pump

   The purchase of the heat pump could, in theory, align with Section 3.1, titled *"Manufacture of renewable energy technologies."* Heat pumps, as renewable energy sources, fall within the scope of this activity.

3. Potential Overlap with Section 3.5(k)

   Alternatively, the acquisition might also align with Section 3.5(k), titled *"Heat pumps compliant with the technical screening criteria set out in Section 4.16 of this Annex."* However, Section 3.5(k) introduces additional complexity as it requires compliance with the TSC for economic activity 4.16 (*Installation and operation of electric heat pumps*).

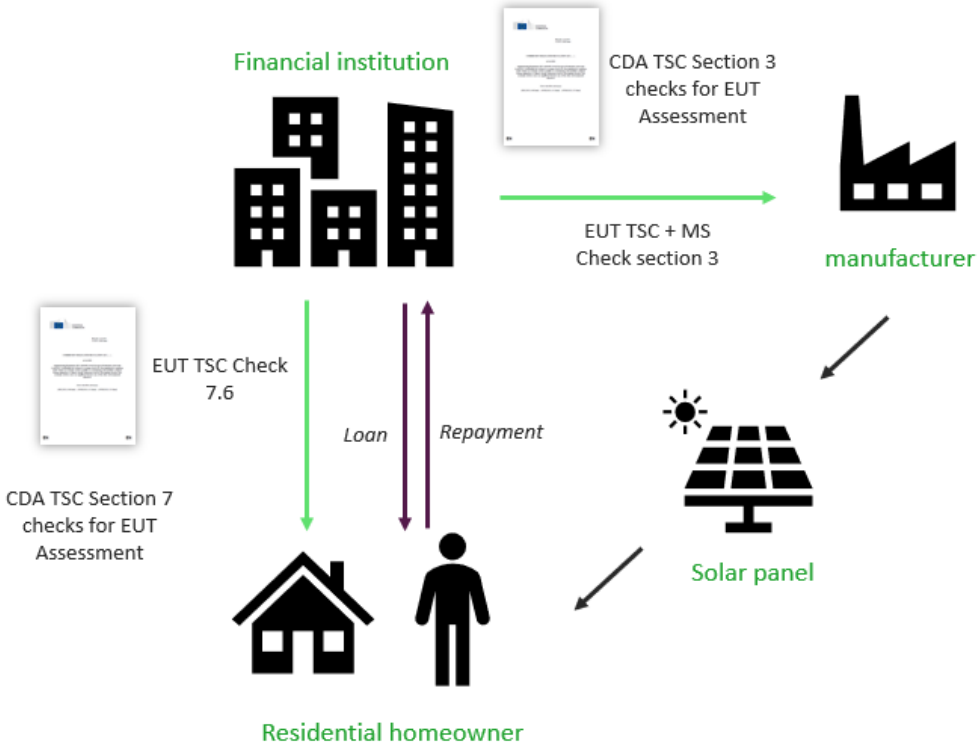
4. Interconnection Between Section 4.16 and Section 7.6

   A key point of interest arises in Section 4.16, which states: *"Where an economic activity is an integral element of 'Installation, maintenance, and repair of renewable energy technologies' as referred to in Section 7.6 of this Annex, the technical screening criteria specified in Section 7.6 apply."* This provision aligns with Answer 61 of the Commission Notice, which reaffirms the interconnected nature of these activities and their TSC.

The explicit reference in Section 4.16 to Section 7.6 highlights the importance of clear links between activities in the Taxonomy. However, it would be helpful to have further clarification on why similar links are not explicitly made for Sections 3.1 or 3.5(k) to ensure consistency and better understanding.

The guidance provided in ADA Q&A 62 seems consistent with answer 37 of the DDA Q&A, which illustrates the example that for the financing of a solar panel for a residential homeowner, the credit institution should check the relevant TSC of the *manufacturer* of the solar panel. We have illustrated the case where a financial institution finances the acquisition and the installation of a solar panel in Figure 5. Note that the credit institution should check the manufacturer of the solar panels even though there is no financial, economic or legal relationship between these entities.

Figure 5: Illustration of multi-layer TSC for a solar panel loan.



6 DEEMF Analysis: Construction of new buildings (Annex I TSC SCC, Section 7.1)

Quick Read

- Section 7.1 outlines the criteria for the economic activity of constructing new buildings. Recent guidance, as clarified in the DDA Q&A (Answer 24), has shifted, no longer categorising residential new constructions as a 7.7 activity per se. Instead, credit institutions must evaluate the contractual relationship underlying the building. In most cases, residential new constructions fall under 7.1 due to the presence of a purchase/construction agreement ("*koop-/aannemingsovereenkomst*"), which inherently includes an element of construction.
- From an SCC perspective, compliance with the NZEB -10% requirement must be verified. For large (residential) buildings, additional checks apply.
- This involves ensuring that the building meets NZEB standards and that its Primary Energy Demand (PED) is at least 10% lower than the applicable threshold value. In the Netherlands, PED is expressed as the BENG-2 indicator, with the threshold ("*BENG-2 eis*") calculated, documented, and publicly available for new constructions with the status permit application ("*vergunningsaanvraag*").
- As of 1 January 2021, NZEB standards in the Netherlands are embedded in the building code, the BENG framework, and the NTA 8800 calculation methodology. The PED and its corresponding threshold value vary depending on the building type ("*grondgebonden*" vs. "*niet-grondgebonden*").
- It is important to note that activity 7.1 is temporary, covering only the period until the building achieves "*oplevering*" (completion status). In this case the applicable economic activity becomes *Acquisition and ownership of buildings*.
- Additionally, only the drawn amounts can be included in the GAR for SCC assessments.

Description of the activity according to the Climate Delegated Act: *Development of building projects for residential and non-residential buildings by bringing together financial, technical and physical means to realise the building projects for later sale as well as the construction of complete residential or non-residential buildings, on own account for sale or on a fee or contract basis.*

In this section we will analyse economic activity 7.1 We will do this by looking at some specifics for the Dutch mortgage market with respect to financing new constructions. In Table 17 we depicted the wording of the SCC text of economic activity 7.1 In addition, we will include in our analysis the latest insights from the (DDA) Q&A.

Table 17: SCC text of economic activity 7.1

Section	NACE	Substantial contribution to climate change mitigation of Annex I	Footnote
7.1 Construction of new Buildings	F41.1 and F41.2, including also	Constructions of new buildings for which: 1. The Primary Energy Demand (PED) ([317]), defining the energy performance of the building resulting from the construction, is at least 10 % lower than the threshold set for the nearly zero-energy building (NZEB)	[317]: The calculated amount of energy needed to meet the energy demand associated with the typical uses of a building expressed by a numeric indicator of total primary energy use in kWh/m 2 per year and based on the relevant national calculation methodology and as displayed on the Energy Performance Certificate (EPC). [318]: Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (OJ L 153, 18.6.2010, p. 13).

	activities under F43	requirements in national measures implementing Directive 2010/31/EU of the European Parliament and of the Council ([318]). The energy performance is certified using an as built Energy Performance Certificate (EPC). 2. For buildings larger than 5 000 m^2 ([319]), upon completion, the building resulting from the construction undergoes testing for air-tightness and thermal integrity ([320]), and any deviation in the levels of performance set at the design stage or defects in the building envelope are disclosed to investors and clients. As an alternative; where robust and traceable quality control processes are in place during the construction process this is acceptable as an alternative to thermal integrity testing. 3. For buildings larger than 5 000 m^2 ([321]), the life-cycle Global Warming Potential (GWP) ([322]) of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand.	[319]: For residential buildings, the testing is made for a representative set of dwelling/apartment types. [320]: The testing is carried out in accordance with EN13187 (Thermal Performance of Buildings - Qualitative Detection of Thermal Irregularities in Building Envelopes - Infrared Method) and EN 13829 (Thermal performance of buildings. Determination of air permeability of buildings. Fan pressurisation method) or equivalent standards accepted by the respective building control body where the building is located. [321]: For residential buildings, the calculation and disclosure are made for a representative set of dwelling/apartment types. [322]: The GWP is communicated as a numeric indicator for each life cycle stage expressed as kgCO 2 e/m 2 (of useful internal floor area) averaged for one year of a reference study period of 50 years. The data selection, scenario definition and calculations are carried out in accordance with EN 15978 (BS EN 15978:2011. Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method). The scope of building elements and technical equipment is as defined in the Level(s) common EU framework for indicator 1.2. Where a national calculation tool exists, or is required for making disclosures or for obtaining building permits, the respective tool may be used to provide the required disclosure. Other calculation tools may be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework (version of 4.6.2021: https://susproc.jrc.ec.europa.eu/ product-bureau/product-groups/412/documents), see indicator 1.2 user manual.

6.1 New Constructions in the Netherlands – Stylised Timeline

When purchasing a property that is yet to be built, the process is divided into distinct phases, each carrying specific legal, economic, fiscal, and financial implications. These stages evolve as construction progresses, impacting the rights and obligations as a buyer.

A critical aspect is the *bouwdepot* (construction deposit) that is often linked to the mortgage for new constructions. The mortgage provider holds part of the mortgage loan in this construction deposit, releasing them in stages as construction milestones are reached. This arrangement not only protects the buyer by ensuring they only pay for completed work but also assures the mortgage lender that the funds are being used correctly, reducing their risk exposure.

Typically, up to 6 months before construction begins, a buyer can obtain a provisional mortgage loan offer based on the purchase or construction agreement and the building plans. It allows the lender to release mortgage funds in phases, aligned with the progress of the construction, which mitigates the financial risk if the project is delayed or halted.

Before construction starts, usually 0 to 6 months before building begins, a buyer can secure a provisional mortgage offer based on the purchase/construction agreement and building plans. At this stage, while no funds are withdrawn from the mortgage, buyers may be required to pay certain upfront costs, such as a reservation fee or a down payment on the land. Once the purchase/construction agreement is signed, the buyer often becomes the legal owner of the land, though the house itself does not yet exist. Economic ownership of the home is deferred until it is built. From a fiscal perspective, the land may already be subject to property taxes ("OZB")[32], but the house is not yet taxable, as it hasn't been constructed yet.

During the construction phase, which typically lasts between 6 and 24 months, the mortgage loan is gradually drawn down through a *bouwdepot*, with funds being released in stages as different parts of the build are completed (e.g., foundation, walls, roofing). During this time, the buyer only pays interest on the amounts that have been withdrawn. The buyer gains legal ownership over both the land[33] and the parts of the home that are completed, but full economic ownership of the house is only realised once the entire project is finished. From a fiscal standpoint, the land continues to be subject to property taxes, but the house itself is only partially considered until construction is complete.

After the home is finished and a final inspection is conducted and an energy efficiency registration must be made and recorded with the status "oplevering", the buyer officially takes possession of the completed property. At this point, the full mortgage loan amount has typically been drawn down, and regular payments of both interest and principal begin. The buyer is now the legal owner of both the land and the fully constructed home. Economically, the buyer holds full ownership of the entire property. The home, together with the land, is now fully considered for property tax (OZB) purposes, and the buyer may also benefit from mortgage interest deductions, provided that the home is used as the primary residence.

6.2 New constructions – Economic activity designation

In the working group we have analysed both the CDA and DDA Q&A documents. In both documents references are provided w.r.t. to the designation of financing new construction. The question to be answered is: *when financing a new residential construction for homeowners is this a 7.7(.2) or a 7.1 activity?*

In the previous version of DEEMF we have addressed this question, and we concluded that this was a 7.7 activity because of answers 107, 144 and 147 of the CDA Q&A. With the publication of the DDA Q&A an additional nuance should be taken into consideration. According to answer 24 of the DDA Q&A we need to assess the client's contractual relationship underlying the building.

Figure 6 summarises the four Q&A answers pertaining to this matter. As indicated in the figure some answers lean towards an application of economic activity 7.7 and some lean towards 7.1. It is, however, a balancing act, as both commission notices are equally valid and should be assessed in conjunction with each other.

In the Netherlands, when purchasing a new-build property, it is common to use a purchase/construction agreement (*koop-/aannemingsovereenkomst*). This is a contract between the buyer and the developer or builder, in which the buyer agrees to purchase the land and the house that will be built on it. It specifies the terms of the sale, the construction process, and the obligations of both parties.

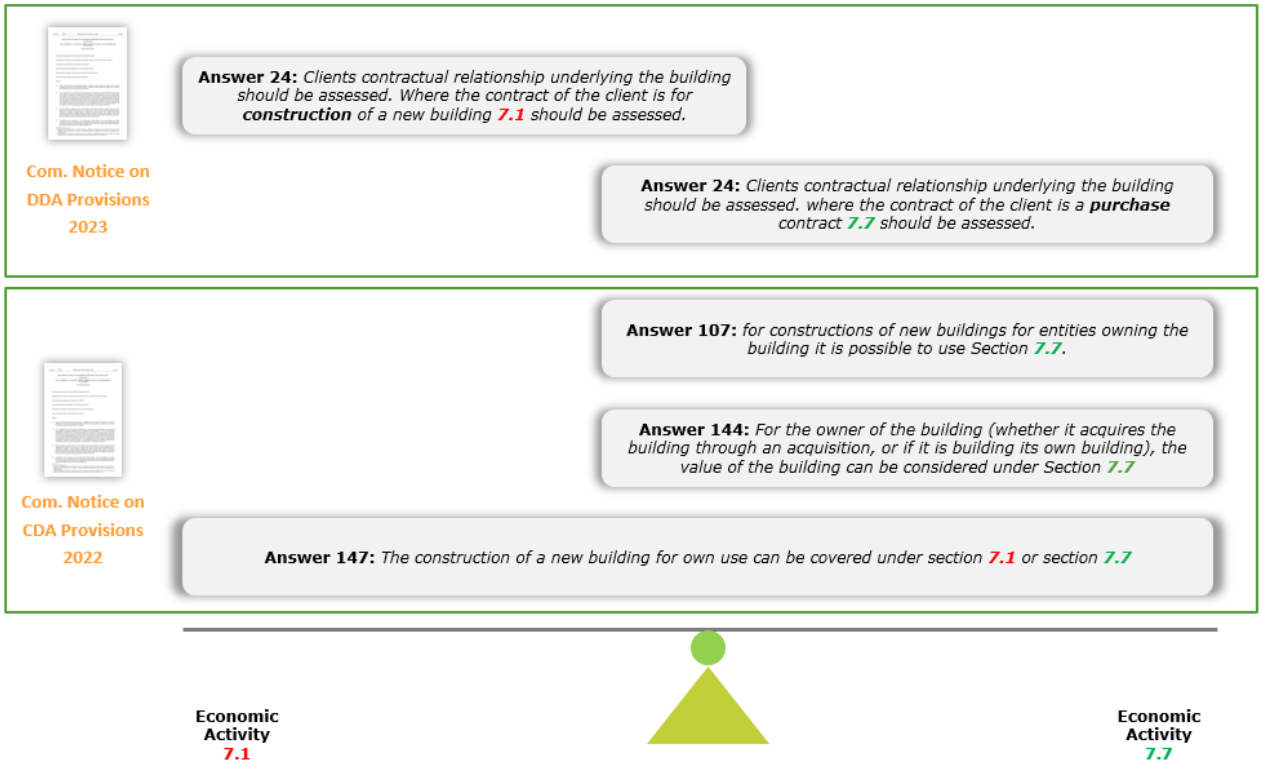
In addition to the basic structure of the purchase/construction agreement, it is important to note that standardised template contracts are frequently used in the Netherlands for new-build projects. These standardised template contracts are often provided by organisations such as the *Bouwend Nederland* or *Woningborg*, which specialise in construction and home warranties. Using a template contract ensures that it follows established legal guidelines, protecting both the buyer and the developer by minimising ambiguities and disputes.

[32] OZB is Onroerende Zaak Belasting (property tax).
[33] In most cases. In some cases, there is a leasehold ("*erfpacht*") for the land.

Additionally, the warranty and guarantee schemes associated with the agreement are crucial for both the buyer and lender. These warranties provide coverage against construction defects or incomplete work, which gives the lender further confidence in the project's viability and protects the buyer's investment.

Although the answers of the 2022 CDA document lean heavily towards the application of economic activity 7.7, answer 24 of the DDA Q&A introduces an additional nuance, by referencing the underlying contracts which should be assessed. We interpret the client's contractual relationship underlying the building as typically a purchase /construction contract. Therefore, in part, the underlying contract is for construction and in part it is for the purchase of the building (unit) and typically also the land on which it is constructed. The contract underlying the building, can be assessed as having both construction and purchase *elements* in the contract.

Figure 6: CDA and DDA Q&A on the designation of new constructions. Note that the figure depicts summarised answers from the Q&A documents.



6.3 Perspective 1: Interpretation and application

Answers 109, 114 and 115 of the CDA Q&A are in particular relevant in the interpretation and application of this criterium. Also Table 7 and Table 12 on the BENG threshold per status, per building type of the NTA methodology are highly relevant in this context. The SCC of economic activity 7.1 lists 3 checks. We mainly focus on the first (substantial contribution) check as checks 2 and 3 are only relevant for buildings larger than 5 000m^2. In this context it should be noted that for residential apartments the mortgage loan is granted based on the collateral. The collateral is the building unit, not the building in the case of apartments. in Figure 7 we depict the different checks and have included the underlying contract consideration as indicated in answer 24 of the DDA Q&A.

Table 18: Linguistic Decomposition of key phrases of SCC 7.1

Term or key phrase	Source in Dutch regulation and relevant references	Analysis	DEEMF definition
Primary Energy Demand (PED)	*Article 4.149 of the Bbl, omgevingswet lists the energy performance indicators.*	Primary Energy Demand (PED) is interpreted as BENG 2 indicator as mentioned in Article 4.149 of the Bbl, omgevingswet as *"Primair fossiel energiegebruik"*.	Primary energy demand expressed in kWh/m^2/year on building unit level. EP-Online definition: Pand_primaire_fossiele_energie
building		Any building unit meeting the categorisation of buildings as used in EP-Online combined with the metrics Bbl Article 4.148 and a categorisation in building type ("*grondgebonden en niet-grondgebonden*").	Any building unit meeting the categorisation of buildings as used in EP-Online combined with the metrics Bbl Article 4.148 and a categorisation in building type ("*grondgebonden en niet-grondgebonden*"). See section Table 7 and Table 12.
Resulting from the construction		The assumption is that a building unit will be constructed in accordance with the permit application.	Up and until the construction is completed (so both before and during actual construction) we refer to the PED in the permit application as recorded in EP-Online as Pand_primaire_fossiele_energie (status is ("*vergunningsaanvraag*")).
Is at *least 10 % lower* than *the threshold set for the nearly zero-energy building (NZEB)* requirements in national measures implementing Directive 2010/31/EU of the European Parliament and of the Council	The threshold value is set in the Article 4.148 of the Bbl, *omgevingswet* and differs per building type.	*Primary Energy Demand (PED)* is interpreted as the BENG 2 indicator as mentioned in the Bbl. As a result, in the vast majority of cases, the maximum values to meet the 10% lower than the threshold value criterion are 27 kWh/m^2/year per year and 45 kWh/m^2/year per year respectively. There are however, deviations possible for the threshold value. Possible deviations to the threshold value are incorporated per registration in the data field Pand_eis_primaire_fossiele_energie. **Note**: any property with an EPC Class A++++ automatically meets the requirement of '10% better than the threshold value' as the maximum	For houses ("*grondgebonden*" building units): The threshold value is defined as threshold value fossil energy (*Pand_eis_primaire_fossiele_energie*) Which corresponds to 30 kWh/m^2 per year on building unit level in most, but not all, cases[34]. For apartments ("*niet-grondgebonden*" building units): The threshold value is defined as (*Pand_eis_primaire_fossiele_energie*) Which corresponds to 50 kWh/m^2/year per year on building level, in most, not all cases. There are, deviations possible for the threshold value. Possible deviations to the threshold value are incorporated per registration in the data field

[34] Deviations to the NZEB threshold value are applicable in some cases as explained in the previous section.

		BENG 2 value for A++++ is 0 kWh/m2 per year.	*Pand_eis_primaire_fossiele_energie*. So these do not have to be calculated when analysing EU Taxonomy alignment. The 10 % lower threshold can be checked by calculating if *Pand_primaire_fossiele_energie* ≤ 0.9 x *Pand_eis_primaire_fossiele_energie* per building unit.
The energy performance is certified using an as built Energy Performance Certificate (EPC)		Once a building unit receives an EPC with status 'completion' (*"oplevering"*) this means it has been completed and the on-site inspection has taken place. In the Netherlands, the certification of the energy performance of a property is required to include an on-site inspection of the property. This on-site inspection can only take place once the construction of a property is completed. Before and during the construction phase, the EPC of a building(unit) is based on the technical information provided by the applicant in the construction permit application and therefore envisages the building as to be built. At the moment the final EPC is issued, the status of the property in EP-Online will convert from status 'planning permission' ("*vergunnings-aanvraag*") to 'completed' ("*oplevering*").	Before and during the construction phase, the *'as built'* phrasing is interpreted as: how it will be built, according to the information available up and until the moment of completion (*"oplevering"*) of the building unit. This is also explicitly confirmed by CDA Q&A answer 115[35].

The EEM NL Hub does not have a formal analysis or guidance on SCC 7.1.2 and 7.1.3. In Table 19 we have used and cited the interpretation as established by the Dutch Green Building Council (DGBC).

[35] CDA Q&A answer 115: *For new buildings, either an EPC (valid for 10 years) or an EPC as-built are valid. It is understood that often for construction projects the loan is provided before the works start and funds are made available as the works progress. Since it is not possible to obtain the EPC as-built until the very end of the project, it should be possible as a provisional measure to obtain and use an EPC as-designed. This would allow the building process to start. However, upon completion of the works, there needs to be an EPC as-built to certify that indeed the building complied with the criterion 10 % better than NZEB.*
This depends also on the availability of the EPCs and the scope of the project as such. When the project concerns a whole building, there is no need to check the EPC for each individual apartment. When the project is about construction or acquisition/ownership of an apartment, the EPC for the respective apartment can be used.

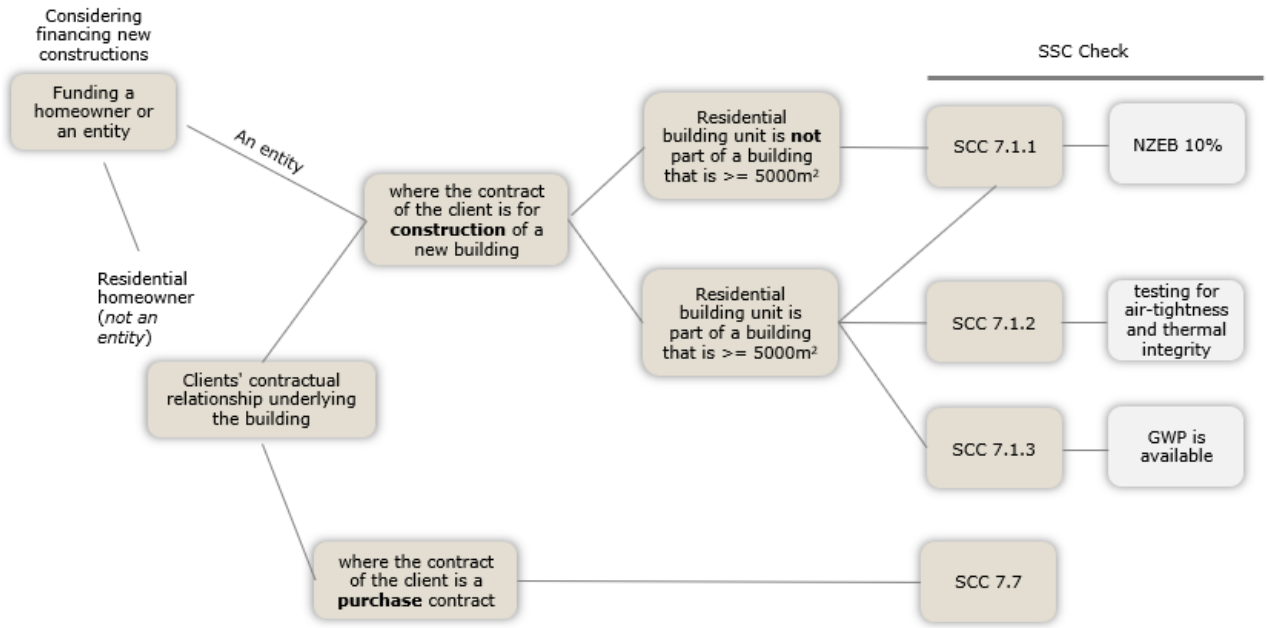
Table 19: SCC 7.1.2 and 7.1.3

Term or key phrase	Analysis	DEEMF definition
For buildings larger than 5000m² ([319]), upon completion, the building resulting from the construction undergoes testing for air-tightness and thermal integrity ([320]), and any deviation in the levels of performance set at the design stage or defects in the building envelope are disclosed to investors and clients. As an alternative; where robust and traceable quality control processes are in place during the construction process this is acceptable as an alternative to thermal integrity testing.	This 2nd check is only applicable for buildings larger than 5000m². Note that for residential apartments the mortgage is granted based on the collateral. The collateral is the building unit, not building in the case of apartments. As listed in answer 109 *For the specific TSC for buildings larger than 5 000m², the compliance with the requirements that 'the building resulting from the construction undergoes testing for air-tightness and thermal integrity' and 'the life-cycle Global Warming Potential (GWP) of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand'* ***should be proven for the building (not for apartments), for both residential and non-residential buildings.*** This is only applicable for large buildings (in excess of 5000m²). Also note answer 110 of the CDA Q&A in this context.	We cite and refer to the interpretation of the DGBC *Handreiking EU Taxonomy*[36]. *Air permeability (infiltration) has been tested in accordance with NEN-EN ISO 9972, with NEN 2686 and NEN 2687 being applicable in the Netherlands. The mandatory infiltration measurements conducted under the NTA 8800 (and the associated recording protocols ISSO 75.1 and 82.1) for non-default values can be used for this purpose.* *Note: This criterion requires measurements for air permeability in accordance with the aforementioned NEN standards, even if default infiltration values are chosen in the NTA 8800 calculations.* For demonstrating *thermal integrity, the evidence requirements in the final energy label according to the NTA 8800 can be used, provided that this energy label has been issued by a BRL 9500-certified advisor.* *As an alternative for demonstrating thermal integrity, measurements can be taken, provided they comply with NEN-EN 13187*
For buildings larger than 5000m² ([321]), the life-cycle Global Warming Potential (GWP) ([322]) of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand.	This check 3rd check is only applicable for buildings larger than 5 000m². Note that for residential apartments the mortgage is granted based on the collateral. The collateral is the building unit, not building in the case of apartments.	We cite and refer to the interpretation of the DGBC *Handreiking EU Taxonomy*[37]. *Projects can demonstrate the Global Warming Potential (GWP) if it is included in the MPG calculation. The MPG calculation applies as stated in the application for the environmental permit. See also footnote 322, which states that a national calculation tool can be used.* *For ground-based houses and residential buildings, the calculation(s) used must be those on which the environmental permit was granted. For previously granted environmental permits, where only one GWP value is available that covers all lifecycle phases, this value can be maintained. The calculation may be conducted at the building level; the GWP does not need to be calculated separately for each apartment.*

36 https://dgbc.foleon.com/eu-taxonomie/handreiking-eu-taxonomie/toelichting-71

37 https://dgbc.foleon.com/eu-taxonomie/handreiking-eu-taxonomie/toelichting-71

Figure 7: SCC of 7.1



6.4 Perspective 2: Data availability

The information on the presence of a purchase/construction agreement (*koop-/aannemingsovereenkomst*) is often not explicitly covered in mortgage servicing data but has to be induced from mortgage application documents. However, in almost all cases when financing a property that is to be built or in the process of building, such a purchase/construction agreement should be present. If there is only a purchase agreement, we infer this to be a 7.7 activity. Note that buildings that are to be build or in the construction phase can be identified in EP-Online with the status "*vergunningsaanvraag*", this data is available.

Data considerations:

- The fossil energy threshold value ("*Pand_eis_primaire_fossiele_energie*") also known as the "BENG2 Eis" is listed in EP-Online. Any deviations, that can sometimes be applicable are incorporated in this value.
- There are some data quality issues or concerns, especially with respect to EP-Online where for apartments ("*niet-grondgebonden woningen*") the final on-site inspection has not yet taken place, (*Pand_status* is "*vergunningsaanvraag*") the PED value is not always available or clearly distinguishable on building unit level. In this case we propose to use the only feasible alternative, check PED on building level, as warranted by answer 105 of the CDA Q&A[38].
- It is often the case that during the construction phase a property is not yet allocated a formal address and postal code. As a result, 'mapping' the property (under construction) that serves as collateral for a mortgage loan to a property in EP-Online can be challenging. Sometimes manual verification of the information as documented in the mortgage servicing data should carefully be assessed against the information in EP-Online.

[38] For new buildings, either an EPC (valid for 10 years) or an EPC as-built are valid. It is understood that often for construction projects the loan is provided before the works start and funds are made available as the works progress. Since it is not possible to obtain the EPC as built until the very end of the project, it should be possible as a provisional measure to obtain and use an EPC as-designed. This would allow the building process to start. However, upon completion of the works, there needs to be an EPC as-built to certify that indeed the building complied with the criterion 10% better than NZEB. This depends also on the availability of the EPCs and the scope of the project as such. When the project concerns a whole building, there is no need to check the EPC for each individual apartment. When the project is about construction or acquisition/ownership of an apartment, the EPC for the respective apartment can be used.

- Note that the classification ("*grondgebonden vs niet-grondgebonden*") for the different building (sub) types is not explicitly mentioned (with)in EP-Online. It can however be implicitly derived using the references in the *Wet Bouwbesluit*.
- For correct analysis and reporting one should frequently monitor if the *Pand_status* has changed, for instance from permit application ("*vergunningsaanvraag*") to completion ("*oplevering*") to determine if a building unit (still) adheres to the 10% criterium. There is a possibility that the PED as included in the construction permit application (with Pand_status 'permit application ("*vergunningsaanvraag*")) differs from the PED when the building moves to *Pand_status* completion ("*oplevering*"). Be aware of cases, specifically for apartments and flats where the initial 10% has been performed on a building level, where information on building unit is not available, with a status "vergunningsaanvraag". As energy performance of individual building units might differ greatly and it to be seen if the 10% criterium Is met.
- There is no guarantee that if the '10% better than threshold value' criterion was met during the construction phase (i.e. based on the information in the construction permit application), it will also be met once the building is completed and measured on-site and the final EPC is awarded. Given the recent implementation of NTA 8800, as of yet there is no clear statistical data to analyse in how many cases the PED during the construction (*Pand_status* is "*vergunningsaanvraag*") phase differs from the PED at completion (*Pand_status* is "*oplevering*") in both absolute and relative terms.

6.5 Perspective 3: Allocation to loan(part(s)).

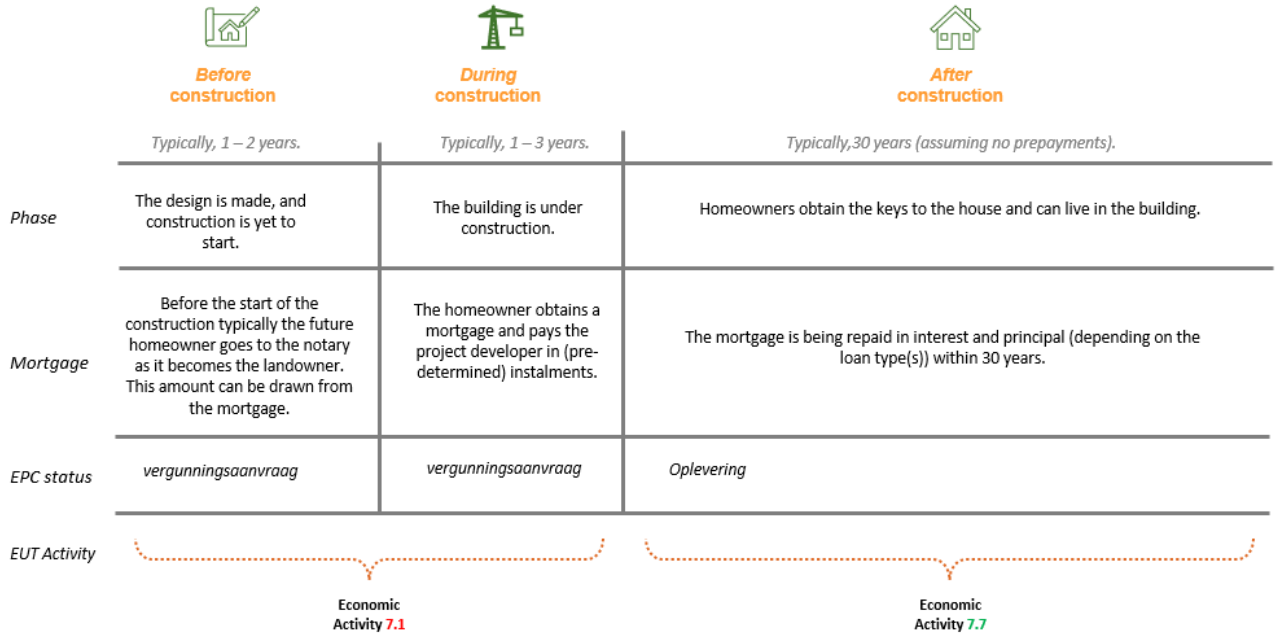
We infer that only the monetary amount that is drawn in the construction deposit can be attributed towards the GAR at the assessment moment.

Temporary nature of activity 7.1

The working group only deems the economic activity of 7.1 applicable before or during the construction phase. Upon delivery (completion of the construction work) the building is no longer considered to be *under* construction, thus a financial institution would be financing an 'acquisition and ownership' activity from that point onwards.

In the latter case we deem this to be an 7.7.2 economic activity, and the corresponding (SCC and DNSH) criteria are applicable. In EP-Online this can be identified by checking when the NTA 8800 status switches to completed ('*oplevering*', indicating the construction building is finished and the building (unit) is ready for habitation). Note that this interpretation is not made so explicitly in the CDA, but we deduct this interpretation by logical reasoning and in part from the description of the activity in the CDA. Moreover, as answer 34 of the DDA Q&A states: the EU Taxonomy assessment should be reviewed annually. In Figure 8 we depict an example timeline from start to finish of the construction process.

Figure 8: Stylised timeline of new constructions in the Netherlands.



6.6 In conclusion

The DNSH and MS perspective

Designating the appropriate economic activity for new constructions has changed with the introduction of answer 24 of the DDA Q&A. As described, all commission notice documents will need to be taken into account. In this light, next to answers 107, 144 and 147 of the CDA Q&A, we must also assess answer 24 of the DDA Q&A and thus the underlying contract. For new constructions we therefore typically have to assess the purchase/construction agreement which is a hybrid as it has elements of both purchase and construction. Before and during the building process, emphasis is laid on the construction (*aanneming*). Therefore, it is difficult to ignore the construction element, hinting towards 7.1, in the agreement.

Note that activity 7.1 is of temporary nature (up until the building converts to the status "*oplevering*") and only the drawn amounts can be used in the GAR for SCC assessment. There are other challenges related to applying activity 7.1. Note that DNSH checks for all environmental objectives should be assessed for activity 7.1. Without starting a comprehensive DNSH analysis, which falls outside the scope of this document, we have identified that compliance with many of these DNSH criteria is challenging to demonstrate.

The *Omgevingswet* does incorporate some of the topics of the DNSCH criteria. The Omgevingswet however does not set criteria for instance for the 7.1 DNSH criterium on *Sustainable use and protection of water and marine resources*. Also note that for instance DNSH Appendix D per building an assessment must take place. We can therefore not ex-ante rely on or leverage what is in the *Omgevingswet* to automatically adhere to these DNSH criteria. In order to meet the DNSH criteria case by case assessments will need to be made.

Additionally, answer 37 of the DDA Q&A on the MS check might have (severe) consequences for new constructions. As in the Netherlands at least 50% of the energy must be renewable for new constructions, this is often realised by incorporating solar panels. However, if the solar panels must meet is the requirements that are stated in answer 37 of the DDA Q&A, this can result in many practical challenges.

7 DEEMF Analysis: Renovation of existing buildings (Annex I TSC SCC, Section 7.2)

Quick Read

Section 7.2 contains two alternatives to determine if a renovation meets the SCC:

- Renovation with (net) PED improvement condition: when it can be demonstrated that a 30% reduction of PED is achieved (without considering the improvement realised through renewable energy sources). An EPC (based on the NTA 8800 method) both before and after the renovation, is needed to assess the improvement in net PED.
- Major Renovation: the building renovation complies with the applicable requirements for major renovations as implemented in the Dutch building code.

  At this point in time there is no central national database where major renovations (and if the underlying conditions are being met) are recorded. Major renovations are not centrally registered (*"geen afmeldplicht"*). It is thus currently not possible to determine if the applicable requirements for a major renovation ("*ingrijpende renovatie*") have been met, based on publicly available data.

DEEMF SCC 2024 Update Summary

No update in the analysis. Only some references are updated with respect to 1) the Omgevingswet and 2) the latest version of the CDA Official Text (impacting footnote numbering).

DEEMF SCC 2023 Update Summary

For major renovations:

- With this updated version of DEEMF we have not updated the interpretation of the theoretical application guidance of SCC 7.2(1) (major renovations).
- Commentary: We still deem the application of this criterium troublesome and theoretical in practice as major renovations are not (centrally) registered or identified in EP-Online.

For the alternative, a 30% reduction of the PED:

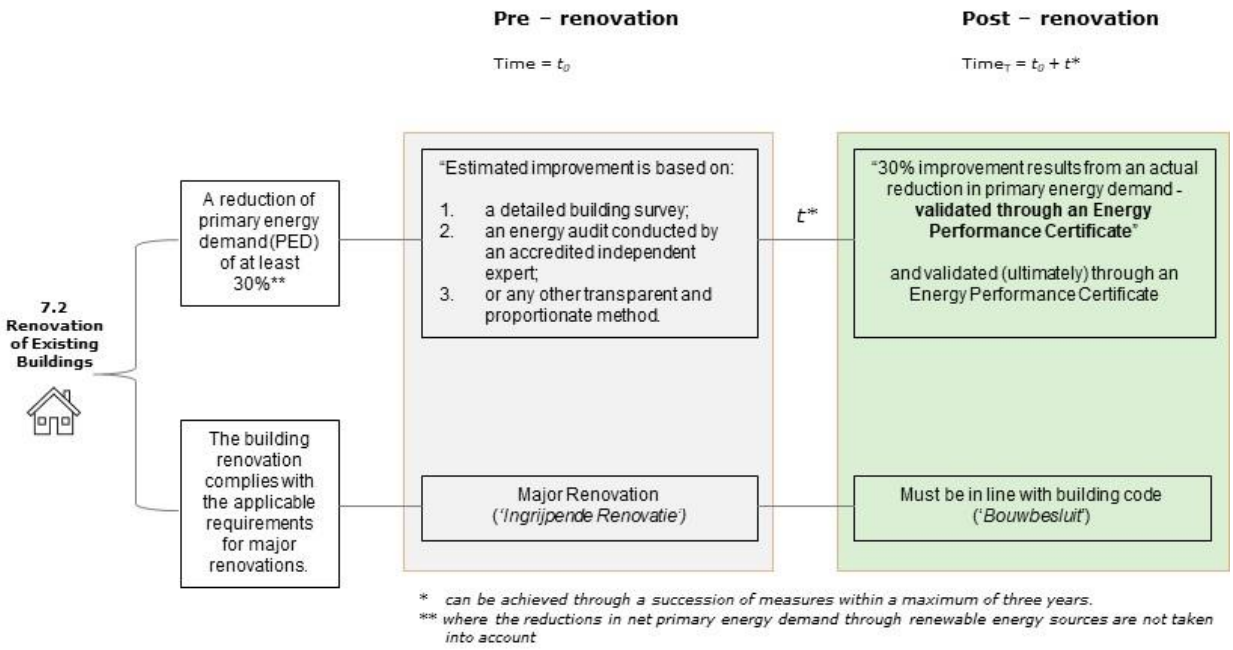
- We were correct in the previous DEEMF document in assuming that the measures that are listed in the criterium for activity 7.6 can be regarded as renewables, as explained in answer 130 of the CDA Q&A.
- Answer 134 of the CDA Q&A states that all renovation measures taken during a three-year period be counted to determine the 30% reduction. We have highlighted this point.

In this section the ways to identify and apply the SCC of Section 7.2: renovation of existing buildings, are explored. Although the wording and technical description of Section 7.2 is relatively brief at first sight, relevant and technical explanations are provided in the footnotes. Following careful review of the SCC, the schematic overview as presented in Figure 9 we present the different routes that can be taken in the application of Section 7.2.

We distinguish the following alternatives presented in the SCC of Section 7.2:

- Option I: An estimate of net PED reduction must be performed (pre-renovation) and validated through an energy performance certificate (post-renovation). Within option I, an improvement in energy efficiency must be realised and the footnotes provide three different options of estimating this (ex-ante) improvement.
- Option II: The building renovation complies with the applicable requirements for major renovations as implemented.

Figure 9: Overview possible options for 7.2 renovations under EU Taxonomy.



7.1 Perspective 1: Interpretation and application

Table 20: Wording of Activity 7.2 in the Climate Delegated Act.

Section	NACE	Substantial contribution to climate change mitigation of Annex I	Footnote
7.2 Renovation of Existing Buildings	F41, F43	The building renovation complies with the applicable requirements for major renovations.[334] Alternatively, it leads to a reduction of primary energy demand (PED) of at least 30 %.[335]	[334]: As set in the applicable national and regional building regulations for 'major renovation' implementing Directive 2010/31/EU. The energy performance of the building or the renovated part that is upgraded meets cost-optimal minimum energy performance requirements in accordance with the respective directive. [335]: The initial primary energy demand and the estimated improvement is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method and validated through an Energy Performance Certificate. The 30 % improvement results from an actual reduction in primary energy demand (where the reductions in net primary energy demand through renewable energy sources are not taken into account) and can be achieved through a succession of measures within a maximum of three years.

Linguistic decomposition and interpretation of key words & phrases of Section 7.2 (1) - 'Major renovation'

Table 21: Linguistic decomposition and interpretation of key words & phrases of Section 7.2(1) - 'Major Renovation'.

Term or key phrase	Source in Dutch regulation and relevant references	Analysis	DEEMF definition
building	Bbl	We use the distinct categorisation of buildings as can be found in EP-Online combined with the metrics of Bbl Article 4.148 and a categorisation in building type (*"grondgebonden en niet-grondgebonden"*). A building is a building unit as the energy performance is ultimately calculated and registered in the Netherlands on building unit level. In addition, residiential mortgage loans are granted on building unit level in the Netherlands.	Any building unit meeting the categorisation of buildings as used in EP-Online combined with the metrics of Bbl Article 4.148 and a categorisation in building type (*"grondgebonden en niet-grondgebonden"*).
Renovation		In the context of a 'major renovation' the word 'renovation' should be read in reference to the phrase, '*the renovated part that is upgraded meets cost-optimal minimum energy performance requirements in accordance with the respective directive*' in the footnote. Hence should be interpreted in part of fully as having an effect on energy efficiency. Note that A134 states that all renovation measures taken during a three-year period be counted to determine if the 30% reduction have been realised. In addition, the renovation should apply to the applicable requirements (i.e. as implemented in the Netherlands) corresponding to a Major Renovation definition as implemented in national regulation. Hence in this context the phrase renovation must be interpreted and applied as a 'Major Renovation'.	Where not referring to a 'major renovation', a renovation constitutes: Any (general) work carried out in the renovation irrespective if it (in)directly contributes to the energy performance, as long as some form of energy improvement is intended as a subset of the overall work carried out in the renovation process.
Major renovation reference in Directive 2010/31/EU.		Recital 16 of Directive 2010/31/EU notes: '*Major renovations of existing buildings, regardless of their size, provide an opportunity to take cost-effective measures to enhance energy performance. For reasons of cost-effectiveness, it should be possible to limit the minimum energy performance requirements to the renovated parts that are most relevant*	Article 2 section 10 notes of the directive, states: 'major renovation' means the renovation of a building where: (a) the total cost of the renovation relating to the building envelope or the technical

		for the energy performance of the building. Member States should be able to choose to define a 'major renovation' either in terms of a percentage of the surface of the building envelope or in terms of the value of the building. If a Member State decides to define a major renovation in terms of the value of the building, values such as the actuarial value, or the current value based on the cost of reconstruction, excluding the value of the land upon which the building is situated, could be used.'	building systems is higher than 25 % of the value of the building, excluding the value of the land upon which the building is situated; or (b) more than 25 % of the surface of the building envelope undergoes renovation; Member States may choose to apply option (a) or (b). Answer 129 of the CDA Q&A confirms that we should apply the definition as implemented in Member States.
As set in the applicable national and regional building regulations for 'major renovation' implementing	Dutch Building code Article 3.2	As set in the Articles 5.20, paragraph 5, and 5.21c, paragraph 3 of the Bbl).	The conclusion is that in the Netherlands option (b) of Article 2 of Directive 2010/31/EU is implemented: 'a major renovation constitutes a renovation of a building where more than 25 % of the surface of the building envelope undergoes renovation.' Answer 129 of the CDA Q&A confirms that we should apply the definition as implemented in Member States.
The energy performance of the building or the renovated part that is upgraded meets cost-optimal minimum energy performance requirements in accordance with the respective directive.	Renewable Energy Directive (RED II), Directive (EU) 2018/2001	We assume this phrase refers to the Renewable Energy Directive (RED II), Directive (EU) 2018/2001. The Renewable Energy Directive is the legal framework for the development of renewable energy across all sectors of the EU economy. It has been adopted in December 2020 and states among other things that renewable energy is to be implemented for both the construction of new buildings and when major renovations are performed. Article 15 section 4 states: '*Member States shall introduce appropriate measures in their building regulations and codes in order to increase the share of all kinds*	The rules for renewable energy for new constructions have been implemented in the BENG framework in Bbl Article 4.148. Where a minimum share of renewable energy is expressed as the BENG 3 indicator. The rules for renewable energy for major renovations have been implemented in the Besluit Bouwwerken Leefomgeving: *"In het Bbl is een eis opgenomen voor een minimumwaarde hernieuwbare energie bij ingrijpende renovaties van gebouwen. De eis treedt per 1 februari 2022 in werking en vloeit voort uit de herziening van de richtlijn hernieuwbare energie (REDII) van 11 december 2018."* [39]

[39] https://www.rijksoverheid.nl/documenten/richtlijnen/2021/12/02/leidraad-eis-hernieuwbare-energie-bij-ingrijpende-renovatie

		of energy from renewable sources in the building sector. *In establishing such measures or in their support schemes, Member States may take into account, where applicable, national measures relating to substantial increases in renewables self-consumption, in local energy storage and in energy efficiency, relating to cogeneration and relating to passive, low-energy or zero-energy buildings.* *Member States shall, in their building regulations and codes or by other means with equivalent effect, require the use of minimum levels of energy from renewable sources in new buildings and in existing buildings that are subject to major renovation in so far as technically, functionally and economically feasible, and reflecting the results of the cost-optimal calculation carried out pursuant to Article 5(2) of Directive 2010/31/EU, and in so far as this does not negatively affect indoor air quality. Member States shall permit those minimum levels to be fulfilled, inter alia, through efficient district heating and cooling using a significant share of renewable energy and waste heat and cold.'*	
complies with the applicable requirements for major renovations	See section major renovations in Dutch regulation	See section major renovations guidance according to RVO.	See section Incorporation of Renewable Energy Directive in the Building Code[40].

Linguistic decomposition and interpretation of key words & phrases of Section 7.2 (2) - 'reduction in net PED'

Table 22: Linguistic decomposition and interpretation of key words & phrases of Section 7.2 (2) - 'Reduction in net PED'.

Term or key phrase	Analysis	DEEMF definition
alternatively		Meaning instead of the other option, literally the *alternative* (in this context referring to the alternative Substantial Contribution Criteria for major renovations).
It leads to		The economic activity, that is financed (in this case 'renovation') ultimately, will result in.
a reduction of primary energy demand (PED) of at least 30 %	Answer 130 clarifies that: *'primary energy' means energy from renewable and non-renewable sources which has not*	The BENG 2 indicator, expressed as kWh/m^2/year on building unit level is reduced by at least 30% as a result of the renovation.

[40] In DEEMF Part I (2022)

	undergone any conversion or transformation process.	
The initial primary energy demand		The prime energy demand before the (economic) activity of renovation is carried out (pre-renovation).
Renewable energy sources	In section 7.2 of the CDA or in the corresponding footnotes, no definition is given of renewable energy sources. Answer 130 states that *improving the energy source to use renewable energy can qualify under Section 7.6. – "Installation, maintenance and repair of renewable energy technologies"* – confirming our intitial assumptions.	Renewable energy sources are items that are eligible in section 7.6 'Installation, maintenance and repair of renewable energy technologies' of the Climate Delegated Act – Annex I. These items include (as taken from Section 7.6 of the CDA): • photovoltaic systems • solar hot water panels • heat pumps contributing to the targets for renewable energy in heat & cool[41] • solar transpired collectors • thermal or electric energy storage units • high efficiency micro-CHP (combined heat and power) plant • heat exchanger/recovery systems
The 30 % improvement results from an actual reduction in primary energy demand (where the reductions in net primary energy demand through renewable energy sources are not taken into account).	The BENG 2 indicator is a measure of the use of primary fossil energy. It encompasses, for residential buildings, the primary energy demand for heating, cooling, ventilation and warm tap water. The primary energy demand in the Netherlands is a measure of fossil prime energy demand, 'net' from renewable energy sources. If renewable energy sources are used (such as solar panels or other renewable energy sources), these will need to be deducted from the primary energy demand definition of BENG 2[42]. However, bringing down the PED can 'normally' be realised by increasing the share of renewable energy. As there is a direct inverse relation between the BENG 2 and BENG 3 indicators. If the prime energy demand must be reduced in a way where reductions through renewable energy demand **are not taken into account**, this limits the	The energy efficiency improvement of 30% expressed as a reduction in net PED must be the result of measures that are not regarded as improvements to the building unit, resulting from renewable energy sources. Broadly two cases can be distinguished when no prior renewable energy measures have been implemented yet: • **Renovation where energy efficiency improvements are made without any 'renewables energy sources'**: the BENG 2 score (post-renovation) must be lower than 0.7 x BENG 2 score (pre-renovation). • **Renovation where energy efficiency improvements are made that include 'renewables energy sources'**: in this case it is not possible to ascertain that the PED (BENG 2 score) reduction is based on '*reductions in net primary energy demand through renewable energy sources are not taken into account*'. The post-renovation EPC report lists the 'overall' share of renewables (BENG 3) and the total BENG 2 score of the property. No (net) difference in PED compared to pre-renovation energy performance

[41] In accordance with Directive (EU) 2018/2001.
[42] Source: https://www.rvo.nl/onderwerpen/wetten-en-regels-gebouwen/beng/primair-fossiel-energiegebruik

	options to bring BENG 2 down. In general, BENG 2 can be reduced via: • Increasing BENG 3 (the share of renewables) • Decreasing the energy demand. In this case we have a restriction where the BENG 2 is to improve due to measures that are not the result of increased use of renewable energy. This could for instance be established by carrying out 7.3 activities[43]. For the avoidance of doubt, our interpretation of 'actual' is that it does not refer to energy usage by the inhabitant(s) of the property but that it refers to the PED score of the property post-renovation.	calculation is included in the post-renovation Energy Performance Certificate. Moreover, it is not possible, based on the actual EPC document or the information in EP-Online to attribute the changes to the BENG 2 or BENG 3 scores to individual measures. Answer 130 of the CDA Q&A clarifies that: *'primary energy' means energy from renewable and non-renewable sources which has not undergone any conversion or transformation process.*
Estimated improvement is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method	Three options are presented on which the estimated improvement (in net PED) can be based. Furthermore, no additional requirements or specifications are given towards these possible estimation procedures. We have broken down these estimation procedures below and in Figure 10. Taking the government EP-Online database and NTA 8800 methodology as the starting point of our analysis, we conclude that the options: 'transparent method' and 'detailed building survey' have not been developed or sponsored by the NEARVO or government as of yet.	An independent energy audit (both pre- and post-renovation), carried out by an accredited EPC advisor is, at this stage, the only NEARVO backed methodology (based on NTA 8800 methodology) to calculate the (net) PED of a property.

[43] 'Installation, maintenance and repair of energy efficiency equipment' of the Climate Delegated Act.
- insulation to existing envelope components, such as walls, roofs, lofts, basements and ground floors.
- replacement of existing windows with new energy efficient windows.
- replacement of existing external doors with new energy efficient doors.
- installation of heating, ventilation and air conditioning (HVAC) and water heating systems.
- installation of low water and energy using kitchen and sanitary water fittings.

	Please note, that a (pre-renovation) EPC based on NTA 8800 does not include an estimation or guarantee of the PED impact based on any or a combination of proposed measures.	
And validated through an Energy Performance Certificate		Based on the wording 'validated' and the need for a 'Certificate', the conclusion is that post-renovation, an energy performance must be carried out according to the NTA 8800 methodology to determine the PED of the property after the renovation. The CDA Q&A answer 135 confirms this by stating: "*It follows that the reductions in the primary energy demand are to be validated by an EPC*".
And can be achieved through a succession of measures within a maximum of three years		The economic activity that is being financed should be achieved within three years of commencing the economic activity. Not all the work has to be carried out all at once, it can be achieved via a succession of (multiple) measures, within the given time span of three years.

Footnote 335 in Section 7.2(2) presents several options, on how to 'estimate' the potential PED improvement. In Figure 10 and Table 23 the different options are presented, and the table below contains an assessment of their current readiness for practical use.

Figure 10: Footnote 335 options for estimating PED improvement, depicting different options allowed under Section 7.2 of the EU Taxonomy mapped against complexity and costs.

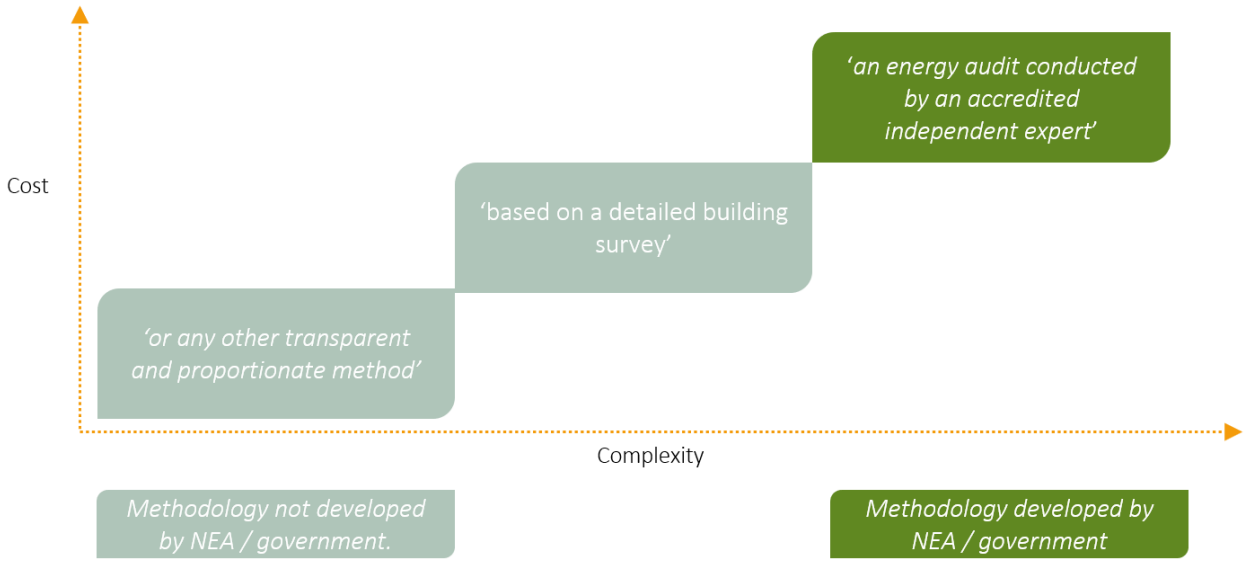


Table 23: A deeper look into footnote 335 of the Climate Delegated Act.

Footnote [335] of 7.2	Considerations	Pro / Con
and validated through an Energy Performance Certificate.	The wording is unambiguous w.r.t. the need to have the post-renovation PED confirmed through an EPC. The CDA Q&A answer 135 confirms this by stating: "It follows that the reductions in the primary energy demand are to be validated by an EPC".	Under the NTA 8800 methodology, an EPC can only be issued following an assessment caried out by an EPC auditor (*"vakbekwaam EnergiePrestatie-adviseur"*) made in accordance with the (*"Beoordelingsrichtlijn 9500"*) which includes an on-site measurement of the property. A.o. due to the fact that an on-site visit, for an EPC is relatively costly.
However, to determine the estimated improvement and thus the pre-renovation PED, the TSC wording offers three options:		
an energy audit conducted by an accredited independent expert.	This option requires an EPC to be issued pre-renovation similar to an EPC under the post-renovation determination as described above.	Relatively costly as this option requires an official EPC both before and after the renovation work(s). Particularly for smaller renovations, the fact that twice the costs for an EPC would be incurred, would be prohibitively expensive[44]. Also, the fact that when requesting the initial EPC (and thus the costs being incurred), it is still uncertain if the 30% reduction can be achieved and thus if the TSC will be met through the renovation, make this an undesirable option particularly for the smaller (less costly) renovations.
Based on a detailed building survey	No additional definitions or requirements are given with respect to the content of what a detailed building survey entails. The EEM NL Hub working group members have not checked what building survey methodologies are in existence as of current in the Netherlands and how they relate to the EU Taxonomy for economic activity 7.2.	The interpretation of the EEM NL Hub working group is that still an analysis for each individual building (unit) would be required but that under this option a physical (on-site) inspection of the building (unit) would not be required a priori. This option appears to sit between the two other options in terms of complexity and thus costs. The EEM NL Hub working group looks to explore the feasibility of this option in the future.

[44] Further improvements to the EPC issuing process for smaller renovations where a second on-site visit is no longer required are being discussed.

Or any other transparent and proportionate method	This option appears to allow for the implementation of a more general method where the PED of multiple building (units) is determined without an official EPC being issued and thus an on-site measurement taking place, or a detailed analysis being performed on an individual building (unit) or property level. The requirement for the method to be transparent would imply that it is relatively simple, can be verified by other stakeholders and can be applied consistently over multiple types of properties. The reference to proportionate appears to imply that particularly for the smaller renovations, a relatively simple method to determine the PED of a building(unit) or property before the renovation taking place, can be developed and applied. There are however (commercial) parties that provide PED estimation (of the building and or of the renovation work that is to be carried out)[45].	The EEM NL Hub working group intends to work closely together with the RVO to develop a method that would meet the requirements of being transparent and proportionate and at the same time be consistent and easy to apply to many different types of properties. The aim of such method would be to enable the different stakeholders to determine in a simple way if the 30% reduction in PED can be achieved. Particularly from this perspective, the requirement under the TSC to exclude 'renewables' appears to be counterintuitive and not be in line with most common customer behaviour (e.g. when renovating a property, customers tend to install solar panels as well).

Table 24: Related EU regulation references.

Related EU regulation reference(s)	Alias	Directive implemented in NL (if applicable)
Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings	The Energy Performance of Buildings Directive version III	Omgevingswet Bbl
Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (Text with EEA relevance.)		

Table 25: Related Dutch regulation references

Related regulation reference(s) in Dutch Law or best practice framework(s)	Section(s)
Omgevingswet Bbl	*Chapters 3 through 6 of het Bbl distinguish between regulations for existing buildings (Chapter 3), new builds (Chapter 4), renovations, relocations of structures, and changes to building functions (Chapter 5). In addition to construction requirements, the Bbl sets standards for building use (Chapter 6) and construction and demolition work (Chapter 7).*

[45] These methodologies have not been analysed in this version of DEEMF.

	Chapters 3 to 5 cover technical construction regulations based on safety, health, sustainability, and usability. *Each chapter ends with installation regulations*
Tijdelijke regeling hypothecair krediet & Besluit Gedragstoezicht financiële ondernemingen Wft	*Tijdelijke regeling hypothecair krediet* Artikel 1, 2, 3, 4, 5 en 6 (and corresponding annexes).
Nationaal instituut voor budgetvoorlichting	*Advies Financieringslastnormen 2022*
Praktijkboek besluit bouwwerken leefomgeving, Ministerie van Binnenlandse Zaken en koninkrijksrelaties	
NEA Guidance on Home Improvement	*Energieprestatie-eisen bij verbouw en renovatie*
Onderzoek innovatieve opties BENG(Bijna EnergieNeutrale Gebouwen) In opdracht van het ministerie van Binnenlandse Zaken en Koninkrijksrelaties	

7.2 Perspective 2: Data availability

When analysing the data availability in respect of the SCC for Section 7.2 the EEM NL Hub considered the data available in EP-Online and the data generally available in the source systems of mortgage loan servicers.

Major renovations

It is a requirement under the Dutch building code that major renovations (*"ingrijpende renovaties"*), comply with the building code. However, there is no legal requirement to obtain and (re-)register an EPC following a major renovation and as a result, the energy performance of a property post-renovation is not necessarily recorded in EP-Online (*"geen afmeldplicht in EP-Online bij ingrijpende renovatie*") unless/until an EPC is required for other reasons such as letting or sale of the property.

No central register exists where major renovations are recorded and as a result (confirmed by own research of the EEM NL hub members), major renovations can currently i) not be directly identified in EP-Online or any other central registry or database, and ii) are virtually impossible to correctly identify in traditional mortgage servicing data (without changes to the processes being implemented) and thus, it is currently impossible to devise a general definition or guidance on how to identify and check, on a case-by-case, basis if the conditions for a major renovation have been met upon completion of the renovation.

Research carried out in 2020 confirms these observations, see section 9.3. Therefore, the EEM NL Hub working group has concluded that (although the definition of a major renovation in the Netherlands is relatively clear), for the moment insufficient data is available to further consider the major renovation option to meet the SCC of a renovation, in this version of the DEEMF.

Reduction in net-PED

As of November 2024, 2,068,764 of the valid EPCs for residential properties in the Netherlands are based on the NTA 8800 methodology (which was introduced on 1 January 2021) out of 5,573,256 valid EPCs for residential properties in total[46].

[46] Only the EPCs with a "*woonfunctie*" have been taken into account.

This means that 86% of all the residential properties in the Netherlands with a valid EPC do not have a PED value as this was not provided in EPCs under the legacy methodologies. In addition, approximately 3.67 million building units in the Netherlands do not have a valid EPC[47].

Currently only 37.12% of the EPCs are based on the NTA 8800 methodology[48]. Determining if the 30% reduction in net PED will be achieved, using the available 'pre-renovation' PED values is thus not feasible for the vast majority of properties in the Netherlands without a new EPC being issued or the PED being measured in another way. Over time the availability of PED values as included in EPCs that are based on the NTA 8800 methodology will increase.

EPC classes are directly related to the BENG 2 metric within the NTA 8800 methodology. Therefore, an argument can be made that reverse inference could be possible. For example: an EPC of class C should have a PED of between 190 and 250 kWh/m^2/year. This is true for EPCs that have been determined under the NTA 8800 methodology, but not per se for EPCs based on legacy energy performance methodologies. At the time of introduction of the NTA 8800 methodology, calibration studies ("*inijkstudies*"') have been performed to determine if EPC class migrations would occur as a result of the introduction of the new energy performance methodology. It has not yet been analysed if the outcomes of these calibration studies could be used to inferred estimated EPC classes under the NTA 8800 methodology from the energy label class under previous methodologies.

Availability of PED data in EP-Online

Of the increasing number of EPCs based on the NTA 8800 methodology as recorded in EP-Online, a very significant part is for newly built properties or properties currently under construction. As of November 2023, 1,085,410 EPCs have been issued for existing (status = "*bestaand*") properties based on the NTA 8800 methodology (and thus have a PED score). This means that for the existing property stock, 73% have PED data available. Also, EP-Online currently does not record if a renovation has been carried out on a building (unit) and what reduction in PED has been realised over what time period.

An additional challenge is the requirement to determine the reduction in PED without taking into account *the reduction in net primary energy demand through renewable energy sources*. A potential way of doing this is to check if the post-renovation BENG 2 score is 30% lower than the pre-renovation BENG 2 score while the BENG 3 score has not decreased, subject to the boundary condition that the timing between the two moments after issuing the financing is equal or less than three years. Another complexity of this methodology is that it can only be assessed *after the fact*. In practice one wants to know upfront if the renovation is potentially aligned with the Substantial Contribution Criteria of Section 7.2 in order to determine if the loan qualifies as a 'green' loan. This is particularly relevant for mortgage customers seeking finance and advice on funding options for energy efficiency improvements.

Availability of PED data in mortgage servicing data

Ideally a financial institution is able to determine before providing the financing for a renovation if the renovation will meet the requirements of the SCC. In practice, in the Netherlands renovation financing is provided in the form of a construction deposit: a short-term (typically one to two year) draw-down facility that can be used to settle the invoices of the renovation.

The mortgage servicer verifies the invoices submitted by the borrower and if correctly submitted, the invoice is paid, the construction deposit is drawn, and the mortgage loan amount is increased by the same amount. In most cases, these are 'included' in the overall mortgage loan in the form of a separate loan part. At this point in time, it is not yet customary that within a construction deposit a distinction is made for the type of renovation work: general reconstruction works (that do not enhance the energy efficiency of the property, per se) and sustainability measures ("*verduurzamings-maatregelen*") are often combined into one single construction deposit and thus ultimately included in the general mortgage loan.

[47] There are 8,083,982 residential building units in the Netherlands as of July 2022, according to CBS.
[48] These include construction permits ("vergunningsaanvraag").

The use case provided in Box 3 below is typical for many mortgage loans with a construction deposit: both the general renovation value-increasing (but not energy efficiency improving) measures are financed together with energy efficiency measures from a single construction deposit.

Several mortgage lenders have started promoting the implementation of energy efficient improvement measures by offering specific 'renovation loans', in most cases with beneficial loan conditions. To qualify for these types of loans, the improvements to the property are required to meet specific conditions and general (re)construction works or installations are not eligible. In SCC 7.2 there is no specific reference to the type of renovation and the interpretation of the EEM NL Hub working group is therefore that *any* renovation that meets the SCC qualifies and as a result, the loan related to the whole renovation part would qualify. Note that 'renewable energy sources' can be part of the SCC where a 30% reduction in (net) PED must be established, as long as the condition of net reduction is met in the renovation activity. This assumption has been addressed and confirmed by the CDA Q&A in answer 134, stating that all renovation measures taken during a three-year period can be counted to determine the 30% reduction.

Box 3: Use case renovation construction deposit.

Use case: Example of a mixed renovation financed through a construction deposit *"bouwdepot.*

Situation: A customer requests a mortgage loan for the purchase of a new (*"grondgebonden"*) property for a price of € 550,000. The property has an EPC of Class E (recorded in EP-Online) and a pre-renovation PED of 300 kWh/m^2/year.

Renovation: The customer also wants to renovate the property by purchasing and installing a new kitchen, a new bathroom and a new wooden floor (estimated cost € 75,000) and insulate the property (at a cost of € 50,000).

Documentation: The consumer has a valuation report ("*taxatierapport*"') including the reconstruction / renovation work, with a total property value of € 675,000. The customer requests a mortgage loan of € 675,000 euro (i.e. a Loan-to-Value of 100%).

Mortgage loan structure: On day one, the customer is granted a mortgage loan totalling € 675,000 of which € 125,000 is placed in a construction deposit. The full mortgage loan of € 675,000 can either be structured as one loan for the full amount, or it can be composed of several loanparts, e.g. one loanpart of € 550,000 and a separate loanpart of € 125,000. During the renovation, the customer submits invoices to the mortgage lender, and these are paid out.

New EPC: Once the renovation is completed, a new EPC is obtained demonstrating that the energy performance of the property has improved to EPC Class B (PED of 180 kWh/m^2/year) excluding renewables[49].

EU Taxonomy alignment: as the net PED of the property has improved by 40% (180 / 300 kWh/m^2/year = 60%), the SCC for a renovation are met and demonstrated in the form of an EPC and the whole renovation (and thus the € 125,000 loan part) would be deemed to be in line with the SCC. Note that in this case it assumed that the PED reduction was achieved by energy improvements that are not based on renewable energy.

Observations in respect of data quality & availability

1. EP-Online is not a usable data source to determine if a renovation qualifies as a major renovation. Given the lack of a central registry, this data can currently only be obtained from the customer.

2. Under the Dutch building code, it is a requirement for a major renovation that it includes the installation of renewable energy sources (where possible) (*"hernieuwbare energie-eis*").

3. For the calculation of the net PED reduction, the reduction from renewable energy sources cannot be included (i.e. must be excluded from the calculation). The SCC of Section 7.3 provide some insights as most of the measures

[49] Note that in this example we "know" that no renewable measures are implemented: only insulation measures. Otherwise (when also one or more renewable measures are taken) it is difficult to ascertain that the PED improvement was excluding renewables.

described in Section 7.3 "*Installation, maintenance and repair of energy efficiency equipment*" do improve the energy efficiency but are not considered as *renewables*. CDA Q&A answer 130 confirms that the activities described in economic activity 7.6 can be regarded as *renewables*.

4. Given the current lack of a government approved "transparent and proportionate method" to determine the PED of a property (pre-renovation), our conclusion is that the only workable option for now is to obtain an EPC (with a PED value) under the NTA 8800 methodology pre-renovation. This EPC will automatically be recorded in EP-Online and accessible for mortgage lenders.

5. An EPC issued under the NTA 8800 methodology includes recommendations for energy efficiency improvements. However, it does not provide an estimation or calculation of the potential impact of the proposed measures, individually or in combination, on the BENG 2 or BENG 3 scores. Furthermore, it does not offer any form of assurance to the building owner regarding the extent to which these measures will result in specific energy performance improvements.

6. It is not possible to identify, post-renovation, from an EPC document, based on the NTA 8800 methodology, to what extent the individual types of measures that were implemented since the pre-renovation EPC, have attributed to changing BENG 2 and BENG 3 values (when multiple measures energy efficiency measures have been carried out). In order for Section 7.2(2) to work effectively, the NTA 8800 / BENG protocol would need to be amended in line with EU Regulation (The EU Taxonomy Climate Delegated Act).

7. In applying the EU Taxonomy Technical Screening Criteria in practice, it is needed to accurately identify, track and account for individual energy efficiency measures. Specifically for situations where multiple clauses of the substantial contribution criteria could be (potentially) aligned. For instance, if certain measures are potentially in line with SCC of sections 7.3 or 7.6 one wants to track and distinguish these accurately and detailed.

8. In context of SCC 7.2 it is important for financial institutions to have an adequate view of the energy efficiency measures that are to be carried out. Specifically, to make an assessment of 'how reductions in net primary energy demand through renewable energy sources are not taken into account'. Therefore, a granular and detailed overview of the proposed sustainability measures that an institution is financing, should be available. In addition, an assessment should be made per measure what the impact of the individual measure is on the BENG 2 score and/or the BENG 3 score.

9. An EPC based on the NTA 8800 methodology notes, on the second page of the certificate: '*Renewable energy is derived from the sun, biomass, outside air or ground. Solar panels, solar water heaters, heat pumps and a biomass boiler or heating system increase the share of renewable energy*'[50]. This is roughly, however not exactly, in line with the wording of the Section 7.6.

10. At this point in time, the EEM NL Hub working group has not extensively analysed the measures as approved under the so-called EBB ("Energiebespaarbudget") / EBV ("Energie besparende voorzieningen") scheme, the measures for which subsidies are available known as the ISDE ("Investeringssubsidie duurzame energie en energiebesparing") and the eligibility of these measures in relation to the EU Taxonomy. In Box 4 below we explore what further investigation into EBB / EBV can offer insights.

[50] "Hernieuwbare energie is afkomstig uit zon, biomassa, buitenlucht en bodem. Zonnepanelen, zonneboilers, warmtepompen en biomassaketels vergroten het aandeel hernieuwbare energie."

Box 4: Further analysis required on EBB / EBV vs EU Taxonomy definitions

Several mortgage lenders currently offer renovation loans, in most cases with favourable loan-conditions such as reduced interest rates, to stimulate the improvement of the energy efficiency of properties. Often these products are based upon Dutch norms of granting loans for energy efficiency, such as included in the *"Tijdelijke regeling hypothecair krediet & Besluit Gedragstoezicht financiële ondernemingen"*.

Under this norm a common set of Dutch energy efficiency measures has been established, known as the EBV and EBB. Further investigation is recommended into how the EBB and EBV measures relate to:

- Other regulation: such as the EU Taxonomy (sections 7.3 and or 7.6), the Energy Performance and Building Directive, the Renewable Energy Directive and the Energy Labelling Directive (Regulation (EU) 2017/1369);
- How different measures Influence the BENG 1, 2 and 3 metrics;
- How these relate to different national or municipal subsidy programmes;
- How combinations of EBB and EBV measures impact the above;
- Potential overlap between EBB and EBV eligible measures & ISD eligible measures.

7.3 Perspective 3: Allocation to loan(part(s)).

Static application

Irrespective of which option under Section 7.2(1) (major renovation or 30% reduction in net PED) is selected, only the fraction of the (mortgage) loan that is used for the (major) renovation can be designated as aligned with the substantial contribution criteria if the SCC are met. No distinction is made between elements that have no effect on energy efficiency and the elements that increase the energy efficiency of the property being renovated. Therefore, at most, a fraction of the loan(part) equal to the loan amount used to finance the renovation can be designated in accordance with the SCC of 7.2 unless if, upon completion of the renovation work an EPC Class A is issued in which case (if the property was built before 31 December 2020), the whole mortgage loan can be designated as aligned with the SCC of Section 7.7(1).

Dynamic application

Table 26: Dynamic application of renovation to mortgage loan(parts).

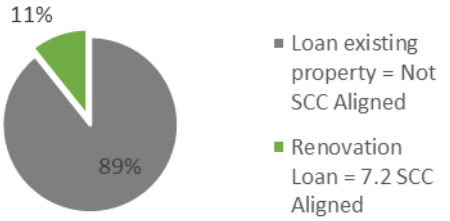
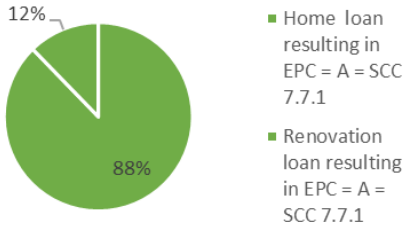
		Economic Activity
		Renovation of Existing Buildings
Financing relative to the Economic Activity	*Before*	Financing can be approved and granted before the renovation work commences. If an *estimate** is present that a reduction of 30% in net PED is going to be met, the financing of the renovation can be attributed to be in line with the SCC, based upon the knowledge (the estimate) as of the assessment time. *Irrespective of the estimation procedure.
	During	Idem above, however the renovation work needs to be carried out within a period of three years.
	After	When the renovation work is completed, a validation through an Energy Performance Certificate needs to be performed. Multiple 'end-states' are possible here: • The 30% reduction in net PED (excluding renewables) is confirmed and the EPC Class of the property is < A. In this case the renovation loan is aligned with the SCC for the remainder of the duration of the mortgage loan(part). • A 30% reduction in net PED (excluding renewables) is confirmed and the EPC Class of the property is ≥ A. In this case, based upon the SCC of Section 7.7 the full mortgage loan can be classified as aligned if the building was built before 31 December 2020.

		We assume a rational actor (homo economicus) would apply SCC 7.7 instead of 7.2 as the former would result in a greater Taxonomy alignment amount[51]. • The 30% reduction in net PED (excluding renewables) is not achieved: the loan is no longer aligned based on the SCC of Section 7.2. In this case, alternatives can potentially be feasible, for instance: upon close(r) specification of the energy efficiency measures it might be feasible to designate some of the economic activities to be in line with the SCC of Sections 7.3, and or 7.6[52] and the specific amounts can be classified as aligned.

7.4 Potentially undesired policy consequences

Table 27 contains an illustration of different SCC alignment outcomes for possible renovation use cases. It demonstrates that the current SCC for renovation could have the undesired side-effect that renovations to properties that are already relatively energy efficient are preferred over energy efficiency renovations to properties with a poor energy label and that are unlikely to result in a final EPC of class A.

Table 27: Energy Efficient Renovations and Taxonomy Alignment in terms of SCC.

#	Example renovation use case	Outcome	Outcome visualised
1	**Example 1: (EPC from D to B)** Current mortgage loan = € 500K Renovation loan = € 60K In addition to the mortgage loan for the property purchase, the resident takes out a renovation loan to insulate his home (€ 40K) and install a new kitchen (€ 20K). The insulation improves the PED with 31% and after the renovation works the property obtains an EPC of Class '**B**'.	'Only' € 60k (11% of total loan amount) is considered aligned with activity 7.2.	
2	**Example 2: (EPC from D to A)** Current mortgage loan = € 500K Renovation loan = € 70K Same as scenario 1 but solar panels are included (€10K) in the renovation loan. The PED improvement is 41% and after the renovation works the property obtains an EPC of Class '**A**'.[53]	Full loan amount is considered EUT aligned since EPC = A, from a SCC perspective.	

[51] Not taking into account the DNSH and MS criteria.

[52] This demonstrates the need for detailed and granular tracking of the *"actual"* individual measures that are financed by the lender.

[53] *Under the NTA 8800 energy labelling methodology, installing solar panels has a positive effect on the BENG 2 score. So, despite the fact that under the SCC renewable energy sources cannot be considered to determine if a 30% improvement has been realised, solar panels could 'make' the whole property SCC 7.7 aligned.*

7.5 In conclusion

Major renovation

It is our assessment that, in practice, the SCC of Section 7.2 are very challenging to meet or demonstrate. As described, major renovations are not recorded in EP-Online (or any other central database in the Netherlands) as there is no requirement to obtain a new EPC after a major renovation even though the renovation needs to comply with the Dutch building code. Therefore, we do not elaborate on this alternative in this version of DEEMF as there is (at this point in time) simply no way to determine, based on officially recorded information, if a renovation is a major renovation and if the conditions of a major renovation have been met.

In the short term, using the SCC 7.2 for major renovations, we only see as feasible if this is based on proprietary information that the consumer would provide to the mortgage lender as there is no central registration system for major renovations[54]. If a mortgage originator 'knows' that a customer is to undertake a renovation, it might be worth checking if the consumer plans to change more than 25% of the surface of the building envelope. If this is the case, the consumer is required to abide by the rules of a major renovation and consequentially the regulations for renewable energy need to be followed (*"hernieuwbare energie-eis"*).

Reduction of (net) PED

The SCC of Section 7.2 present several options to 'estimate' the reduction in (net) PED resulting from a renovation, each with different pro's and con's. In the Netherlands, currently no transparent and proportionate method to estimate the PED impact of a renovation exists, let alone that it is widely accepted and applied. The building-survey option appears not to be easily applicable to residential properties and would in any case need to be further developed.

An energy audit both before and after a renovation is relatively expensive, particularly for the smaller renovations and does not provide a guarantee that the reduction in net PED will be achieved. An EPC based on NTA 8800 does include a basic summary and suggestions for energy efficiency improvements that can be done to the property but does not 'guarantee' that these measures will actually result in a (net) PED reduction of 30% [55]. Another important challenge is the requirement for the reduction in PED not to take into account the reduction through renewable energy sources. The required information is currently not readily available on an EPC and would need detailed interpretation.

The EEM NL Hub supports the development of simplified estimation methods for determining a property's pre-renovation PED score without on-site measurements. One option to explore is using proxy estimations, such as treating an improvement of two or three EPC classes as indicative of an energy-efficient renovation. However, it has not been confirmed whether such improvements consistently lead to a 30% reduction in net PED, as required by the EU Taxonomy. While this approach could enhance transparency for consumers and align with Taxonomy goals, the exclusion of renewable energy sources, such as solar panels, from PED improvement calculations poses a significant challenge, given their common inclusion in renovations.

[54] At the moment of writing, we are not aware of any developments in this area in the Netherlands. The introduction of a central registry for major renovations could significantly improve the applicability of the SCC over time. Potentially with the implementation of a future EPBD recast in national regulations and policies this is feasible.

[55] Several (commercial) parties are introducing estimation tooling & expertise and offer complementary 'guarantees' that the energy performance will improve to an estimated point.

8 DEEMF Analysis SCC 7.3 and SCC 7.6

8.1 The other renovation criteria, SCC 7.3 and 7.6

In previous versions of DEEMF and in Section 6, we have presented the analysis of the CDA criteria for renovations from the perspective of economic activity 7.2. *renovation of existing buildings.* We have described in detail the interpretation and potential application of the SCC 7.2 and have established that it is, still, as of the end of 2024, virtually impossible to apply these in practice, as the TSC are too detailed in relation to the data available and used methodologies in the Netherlands[56], needed to *prove* adherence to these criteria.

This is unfortunate as many renovation propositions exist for residential homeowners in the Netherlands and are actively applied. Although we should note that in practice renovations or energy efficiency improvements are often financed by own financial means and not per se via a (mortgage) loan.

Activity 7.2 differs from 7.3 and 7.6 in that it allows for a mix of energy-efficient and non-energy-efficient measures. Unlike 7.3 and 7.6, the scope of 7.2 is not limited to strictly energy-efficient work. While this broader scope can make detailed identification challenging, it also allows for potentially higher financial values to be attributed to the activity, provided it meets the definition of a major renovation or achieves a 30% reduction in primary energy demand, as outlined in footnote 335 of the CDA. Essentially, activity 7.2 involves either compliance with national regulations for major renovations or adherence to a technical insulation standard.

As we conclude that it is difficult to apply the SCC of economic activity 7.2, in this section we analyse the two other economic activities of section 7 of the CDA that relate to renovations, the economic activities 7.3 and 7.6. Section 7.3 describes the economic activity of *Installation, maintenance and repair of energy efficiency equipment* and mostly describes requirements for individual insulation measures and energy efficiency building components (such as doors, windows and lights). Section 7.6 is titled *Installation, maintenance and repair of renewable energy technologies* and describes requirements for individual renewable energy measures.

In this section we focus on perspective 1 'interpretation (analysis and interpretation)' and application of these criteria. This first assessment is done with the input of the EEM NL Hub working group and collaboration with the Dutch Green Building Council (DGBC).

This section focusses on the SCC 7.3 and 7.6, however considering the publication of the ADA Q&A, answer 62, we have incorporated references towards the environmental objectives 3.5 and 3.1 respectively[57]. Also see section 5 of this document for more information on the linkage between these sections. **The EEM NL Hub working group had, until 29 November 2024, assumed that renovation measures for residential loans were exclusively addressed under Sections 7.2, 7.3, and 7.6 of the Climate Delegated Act (CDA). However, we have since learned that Sections 3.1 and 3.5 must also be assessed for renovation loans.**

The analysis of economic activities under Sections 7.3 and 7.6 is ongoing and remains a work in progress. A sub-working group is currently examining data availability for these criteria, which continues to pose practical challenges. Moving forward, this analysis will also integrate the requirements of Sections 3.1 and 3.5 of the CDA.

[56] Such as the current EPC methodology and '*Omgevingsbesluit*'

[57] DRAFT COMMISSION NOTICE on the interpretation and implementation of certain legal provisions of the EU Taxonomy Environmental Delegated Act, the EU Taxonomy Climate Delegated Act and the EU Taxonomy Disclosures Delegated Act

8.2 DEEMF Analysis: Installation, maintenance and repair of energy efficiency equipment

Quick Read

Section 7.3 contains a list with different economic activities and corresponding criteria for energy efficiency equipment. Firstly, one must assess how these activities comply with minimum requirements set for individual components and systems in the national (Dutch) implementation of EPBD III and if the measures are listed in the Omgevingswet. For the measures that are referenced in the Omgevingswet we need to assess if there are minimum requirements to the measure (for instance in terms of energy performance).

In addition, where applicable, the components or systems should have an energy efficiency classification in one of the two highest two populated classes.

- **EPBD III & Omgevingswet**: some measures listed in 7.3 have minimum requirements described in the Bbl.
- **Energy Efficiency classification of components or systems**: some measures listed in 7.3 have label classifications as can be found in the EPREL database.

The different sub activities have many sub requirements and thus differing data challenges and requirements. In most cases this is information that is not commonly digitalized in for instance most (mortgage) loan servicing systems or retail front-end data systems. More data granularity on the (individual) measures must be incorporated to use these definitions in practice.

In this section the ways to identify and apply the SCC of Section 7.3: Installation, maintenance and repair of energy efficiency equipment, are explored. Section 7.3 lists a lot of different criteria for differing subcategories. We must take into account several relevant resources in our analysis such as Directive 2010/31/EU, Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation and Directive (EU) 2018/2001. In Table 28 we have provided an overview of these regulations and directives.

Table 28: relevant regulations and directives for 7.3 and 7.6

Regulation/Directive	Formal Name and Relevant Articles	Summary	Incorporation in the Netherlands	Relevant Dutch Articles
EPBD III Directive 2010/31/EU	Energy Performance of Buildings Directive (Articles 1-27; Annex I & II)	Establishes standards for building energy performance, with goals for improving building energy efficiency.	Implemented through the *Besluit bouwwerken leefomgeving (Bbl)*, which now consolidates previous energy efficiency regulations, including elements from the *Bouwbesluit 2012*.	*Omgevingswet*, Bbl Articles 5.1-5.4
Omgevingswet (Bbl)	Environmental Planning Act (*Omgevingswet*; Articles 2.2-2.18, with Bbl)	Simplifies spatial and environmental planning through the *Besluit bouwwerken leefomgeving (Bbl)*, integrating energy, environmental, and safety standards for buildings.	Fully integrated with the *Omgevingswet*, expected to be effective in 2024. Updates prior building regulations under *Bouwbesluit 2012*.	*Omgevingswet*, Art. 2.2-2.18; Bbl full scope

Directive (EU) 2018/2001	Renewable Energy Directive (RED II) (Articles 1-36; Annex IX)	Sets binding targets for renewable energy, impacting the use of renewables in buildings and other sectors.	Incorporated through the *Wet Voortgang Energietransitie* and implemented via *Energieakkoord*, enhancing renewable standards for buildings.	*Wet Voortgang Energietransitie*, Art. 1.3, 4.2-4.3
Regulation (EU) 2017/1369 and Delegated Acts	Energy Labelling Regulation (Articles 1-16; various delegated acts).	Establishes a framework for energy labeling on products, influencing product choices for building efficiency upgrades.	EU regulation is directly applicable in Member states. The European Product Registry for Energy Labelling (EPREL) database[58], available at eprel.ec.europa.eu, is directly linked to Regulation (EU) 2017/1369.	For an up-to-date overview we refer to The European Product Registry for Energy Labelling (EPREL) database certain measures where this is applicable.

The sub-activities, in some cases have nested activities. An example is activity 7.3.(a) which lists multiple elements such as insulation of walls and roofs. In the Netherlands different criteria exist for these elements. Where relevant we have mapped the measures of activity 7.3 and 7. 6 to:

- EBB / EBV measures, as these are widely applied in the Netherlands and familiar for consumers and homeowners.
- ISDE eligibility criteria.

Even though EBB/ EBV and ISDE[59] are different categories, their classification is a common standard in the Netherlands so this can serve as a helpful guidance in 1) classification and 2) data analysis. It is however important to note that the ISDE requirements are subject to regular revisions, so we advise readers to always check the latest version of the ISDE criteria on the RVO website[60]. Economic activity 7.6 also lists some measures that are eligible for EBB / EBV and the ISDE eligibility criteria.

8.3 Perspective 1: Interpretation and application

In this section we detail our analysis. We have mainly focused on the mapping the measures towards relevant references in the Omgevingswet and list the corresponding relevant requirements. In addition, we list for which measures energy classes exist in the Netherlands.

The CDA lists in the description of the activity: *Individual renovation measures consisting in installation, maintenance or repair of energy efficiency equipment.* The noteworthy thing to mention here is the emphasis on individual measures, in (stark) contracts to activity 7.2

Table 29 below contains the CDA wording of economic activity 7.3. We start with Table 30 where we will focus on the linguistic analysis of the key phrases to create the right context in terms of references towards relevant regulations and directives. in Table 31 we analyse the sub sections in relation to the Bbl and Section 3.5 and create, where possible a fitting definition or reference that is applicable in the Netherlands. This definition in the last column is primarily based on the 7.3 analysis and less on the 3.5 analysis.

[58] The database was designed under the mandate of Regulation 2017/1369, which established a framework for energy labelling. It allows EU authorities to monitor compliance, track energy efficiency trends, and facilitate enforcement by providing detailed product data.

[59] Also see box 4.

[60] Over time, the measures eligible for subsidy can also be subject to change. For instance, as of 1-1-2024 there is no (more) subsidy for solar panels for residential buildings. Whereas in the past this was eligible for a subsidy. Likewise in the future new categories of measures could become eligible for subsidies.

Table 29: Wording of SCC 7.3

Annex 1: Section Reference	NACE	Technical Screen Criteria for Substantial Contribution	
7.3 Installation, maintenance and repair of energy efficiency equipment	F42, F43, M71, C16, C17, C22, C23, C25, C27, C28, S95.21, S95.22, C33.12	The activity consists in one of the following individual measures (provided that they comply with minimum requirements set for individual components and systems in the applicable national measures implementing Directive 2010/31/EU and, where applicable, are rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation):	(a) addition of insulation to existing envelope components, such walls, roofs, lofts, basements and ground floors and products for the application of the insulation to the building envelope (including mechanical fixings and adhesive);
			(b) replacement of existing windows with new energy efficient windows;
			(c) replacement of existing external doors with new energy efficient doors;
			(d) installation and replacement of energy efficient light sources;
			(e) installation, replacement, maintenance and repair of heating, ventilation and air-conditioning (HVAC) and water heating systems, including equipment related to district heating services, with highly efficient technologies;
			(f) installation of low water and energy using kitchen and sanitary water fittings which comply with technical specifications set out in Appendix E to this Annex and, in case of shower solutions, mixer showers, shower outlets and taps, have a max water flow of 6 L/min or less attested by an existing label in the Union market.

Table 30: Linguistic decomposition of SCC 7.3

Term or key phrase	Source in Dutch regulation and relevant references	Analysis	DEEMF definition
The activity consists in one of the following individual measures			The activity, more specifically, the individual measures as listed in the sub definitions of (a) – (f) consists in…
provided that they comply with minimum requirements set for individual components and systems in the applicable national measures	The Energy Performance of Buildings Directive is incorporated in Environmental Planning Act (*Omgevingswet; Bbl*)	The measures are referred (mentioned) in the national implementation of Directive 2010/31/EU. In other words, the (individual) measures are listed in the Environmental Planning Act (*Omgevingswet*)	The measures are listed in the Environmental Planning Act (*Omgevingswet*) and meet the minimum requirements listed therein.

implementing Directive 2010/31/EU		and the measures should meet the minimum requirements listed therein.	
and, where applicable, are rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation	Regulation (EU) 2017/1369 Energy Labelling Regulation		For an up-to-date overview we refer to The European Product Registry for Energy Labelling ("EPREL") database certain measures where this is applicable.

Table 31: SCC 7.3 Analysis towards Bbl and section 3.5.

Substantial Contribution Criteria 7.3	EBB / EBV	ISDE (2024)	Omgevingswet Bbl	Secondary Substantial Contribution Criteria reference of section 3.5	DEEMF Analyses
(a) addition of insulation to existing envelope components, such walls, roofs, lofts, basements and ground floors and products for the application of the insulation to the building envelope (including mechanical fixings and adhesive);	*Gevelisolatie*	*Gevelisolatie*	*Minstens 1,4 m2·K/W zijn (isolatie gevel)*	(c) external wall systems with U-value lower or equal to 0,5 W/m 2 K	Bbl defines minimum requirements for wall insulation.
	Dakisolatie	*Dakisolatie of zolder- of vlieringvloerisolatie*	*Minstens 2,1 m2·K/W zijn (isolatie dak)*	(d) roofing systems with U-value lower or equal to 0,3 W/m 2 K;	Bbl defines minimum requirements for roof insulation.
		Spouwmuurisolatie	*For cavity walls, specific requirements apply to the thermal resistance (Rc value) of external partition constructions, as established in Article 4.152 of the BBL. For cavity walls, the minimum Rc value is 4.7 m²K/W, though this is described within the context of external partition constructions.*	(e) insulating products with a lambda value lower or equal to 0,06 W/mK;	Bbl defines minimum requirements *Spouwmuurisolatie*
	Vloerisolatie	*Bodem- of vloerisolatie*	*Minstens 2,6 m2·K/W zijn (isolatie vloer)*		Bbl defines minimum requirements for floor insulation.
	Leidingisolatie				No minimum requirements are found in the Omgevingswet nor is Directive 2017/1369 applicable.

(b) replacement of existing windows with new energy efficient windows;	*Kozijnen en daarmee gelijk te stellen constructie-onderdelen indien deze voorzieningen worden getroffen in combinatie met hoog rendement beglazing (ten minste HR ++)*	*Isolerend paneel in kozijn (glasisolatie)*	*Ramen, deuren en kozijnen in een in artikel 4.152 bedoelde scheidingsconstructie hebben een volgens NTA 8800 bepaalde warmtedoorgangscoëfficiënt van ten hoogste 2,2 W/m2•K.*		Bbl defines minimum requirements for windows and window frames.
	Hoog rendement beglazing (ten minste HR ++)	*HR++ glasisolatie*	*Voor nieuwbouw Bbl Artikel 4.152 en 4.153 en voor bestaande bouw zie Artikel 5.20*	(a) windows with U-value lower or equal to 1,0 W/m 2 K	
		Triple glasisolatie			
(c) replacement of existing external doors with new energy efficient doors;	*Energiezuinige deuren*	*isolerende deur (glasisolatie)*	*De gemiddelde warmtedoorgangscoëfficiënt van de ramen, deuren en kozijnen in de in artikel 4.152 bedoelde scheidingsconstructies van een bouwwerk is, bepaald volgens de in het derde lid gegeven methode, ten hoogste 1,65 W/m2•K.*	(b) doors with U-value lower or equal to 1,2 W/m 2 K;	Bbl defines minimum requirements for for energy efficient doors and glass (insulation).
(d) installation and replacement of energy efficient light sources;				(g) light sources rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation;	No requirements for energy efficient light sources are found in the Bbl but there are energy classes in the ERPEL database for this measure in line with Directive 2017/1369.

(e) installation, replacement, maintenance and repair of heating, ventilation and air-conditioning (HVAC) and water heating systems, including equipment related to district heating services, with highly efficient technologies;	*Energiezuinig ventilatiesysteem indien deze voorziening wordt getroffen in combinatie met andere energiebesparende voorzieningen,*	*ISDE aanvragen: Aansluiting op een warmtenet woningeigenaren*	*Artikel 4.248. (systeemeisen)* *- Ruimteverwarming (≤1,31)* *- Ruimtekoeling (≤1,33)* *- Warm tapwater (≤3,45)*	(i) cooling and ventilation systems rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation; (p) district heating exchangers and substations compliant with the district heating/cooling distribution activity set out in Section 4.15 of this Annex;	Bbl lists minimum requirement for HVAC and water heating systems. In addition, the ERPEL database lists energy classes for systems. In the Netherlands, district heating operators are also legally responsible for providing the delivery set to each connected building, as mandated by the Dutch Heat Act. This delivery set forms part of the infrastructure used to distribute heating and cooling. Both the installation or renovation of district heating and cooling systems, as well as the delivery set itself, are covered under section 4.15 of the EU Taxonomy.
(f) installation of low water and energy using kitchen and sanitary water fittings	*Douche-warmteterugwinning-systeem*	*ISDE aanvragen: elektrische kookvoorziening*	*Artikel 4.248. (systeemeisen)* *- Warm tapwater (≤3,45)*	(h) space heating and domestic hot water systems rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation;	The Omgevingswet does not include specific rules on water flow volumes for taps or showerheads. In the Netherlands, various NEN standards are used to ensure the safety, sustainability, and efficiency of taps and sanitary water installations.

In Table 32 we have indicated which activities of 7.3 are rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation).

Table 32: SCC 7.3 and related energy classes for products

Substantial Contribution Criteria 7.3	Verordening 2017/1369 Kader voor energie-etikettering
(d) installation and replacement of energy efficient light sources;	Energielabel A en B
(e) installation, replacement, maintenance and repair of heating, ventilation and air-conditioning (HVAC) and water heating systems, including equipment related to district heating services, with highly efficient technologies;	Energielabels voor kleinere toestellen: • Verwarmingssysteem: Energielabel A+++ en A++ • Mechanisch ventilatiesysteem: B & C • Balans ventilatiesysteem: A+ & A • Split Airconditioning-systeem: A++ & A+ • Mono Airconditioning-systeem: A+ & A • Waterverwarmingssysteem: A+ & A

8.4 Perspective 2: Data availability

This section is not included in the current version of DEEMF. The EEM NL Hub working group is currently analysing this topic, focusing on identifying potential data sources and exploring ways to enhance data granularity for renovation measures.

8.5 Perspective 3: Allocation to loan(part(s)).

We infer that only the monetary amount that is in line with the measure (including its acquisition) and installation, maintenance and repair can be used for EU Taxonomy alignment calculations.

8.6 Conclusion

No formal conclusion or guidance has been made yet. Data availability, specifically with regards to the granularity and detail needed is imperative for practical use. Additional analysis on the linkage between sections 7.3 and 3.5 is warranted. In a subsequent update of DEEMF an elaborate *standalone* analysis of section 3.5 of the CDA should be considered.

8.7 DEEMF Analysis: Installation, maintenance and repair of renewable energy technologies

Quick Read

Section 7.6 contains a list with different economic activities and corresponding criteria for renewable energy technologies. An important element is that the measures should be installed on-site of the building. Not all measures are commonly applicable or used in residential buildings in the Netherlands. The activities listed in 7.6 in most cases do not have any additional (energy performance) requirements in either the CDA or in the Omgevingswet. In these cases we deem all products under that category as eligible.

The different sub activities have sub requirements and thus differing data challenges and requirements. In most cases this is information that is not commonly digitalized in for instance most (mortgage) loan servicing systems or retail front-end data systems. More data granularity on the (individual) measures must be incorporated to use these definitions well in practice.

Description of the activity according to the Climate Delegated Act: *Installation, maintenance and repair of renewable energy technologies, on- site.*

In this section the ways to identify and apply the SCC of Section 7.6: Installation, maintenance and repair of renewable energy technologies, are explored. Section 7.6 lists a lot of different criteria for differing subcategories. We must also consider, the national implementation of Directive (EU) 2018/2001. In Table 33 and Table 34 we provide an overview of this analysis.

Table 33: Wording of SCC 7.6

Annex 1: Section Reference	NACE	Technical Screen Criteria for Substantial Contribution	
7.6 Installation, maintenance and repair of renewable energy technologies	F42, F43, M71, C16, C17, C22, C23, C25, C27, C28	The activity consists in one of the following individual measures, if installed on-site as technical building systems:	(a) installation, maintenance and repair of solar photovoltaic systems and the ancillary technical equipment;
			(b) installation, maintenance and repair of solar hot water panels and the ancillary technical equipment;
			(c) installation, maintenance, repair and upgrade of heat pumps contributing to the targets for renewable energy in heat and cool in accordance with Directive (EU) 2018/2001 and the ancillary technical equipment;
			(d) installation, maintenance and repair of wind turbines and the ancillary technical equipment;
			(e) installation, maintenance and repair of solar transpired collectors and the ancillary technical equipment;
			(f) installation, maintenance and repair of thermal or electric energy storage units and the ancillary technical equipment;
			(g) installation, maintenance and repair of high efficiency micro CHP (combined heat and power) plant;
			(h) installation, maintenance and repair of heat exchanger/recovery systems.

Contrary to activity 7.3 we do not have to assess these measures against the national implementation of EPBD III. Thereby, from a SCC perspective there are less additional requirements on the energy performance on these individual measures. When we have not found additional requirements in the CDA or in the Omgevingswet we indicate this. If there are no further requirements found in the Omgevingswet or the CDA we assume that all available products in that category are eligible.

As noted in answer 62 of the DA Q&A, we have to assess also the criteria of economic activity 3.1 *manufacture of renewable energy technologies.* In the TSC of this activity 3.5 only DNSH criteria are imposed on the manufacturing of renewable energy, not SCC. Therefore, this does not alter the 7.6 SCC analysis. We have noted however that in economic activity 3.5 there are some references to products and measures that can be regarded as renewable energy.

Table 34: Analysis of SCC 7.6

Technical Screen Criteria for Substantial Contribution	TRHK EBB / EBV	ISDE (2024)	DEEMF Analysis
(a) Solar photovoltaic systems and the ancillary technical equipment;	*zonnecellen*		Solar panels and ancillary equipment are covered under this criterium. No energy performance requirements are further specified. We therefore deem all solar panels and ancillary equipment eligible for this criterium.
(b) Solar hot water panels and the ancillary technical equipment;		ISDE - Meldcodelijst zonneboilers 14-08-2024	Solar hot water panels and the ancillary technical equipment. No energy performance requirements are further specified. We therefore deem all solar hot water panels and ancillary equipment eligible for this criterium.
(c) Heat pumps contributing to the targets for renewable energy in heat and cool in accordance with Directive (EU) 2018/2001 and the ancillary technical equipment;	*Warmtepompen*	ISDE – Meldcodelijst warmtepompen 14-08-2024	No energy performance requirements are further specified. We therefore deem all Heat pumps equipment eligible for this criterium.
(d) Wind turbines and the ancillary technical equipment;			Not analysed in the working group as this is not a typical measure implemented or financed for energy efficiency improvements for renovations in the Netherlands.
(e) Solar transpired collectors and the ancillary technical equipment;			Not analysed in the working group.
(f) Electric energy storage units and the ancillary technical equipment;			Not analysed in the working group. Although this could become a measure that will become commonly applied in the (near) future.
(g) High efficiency micro CHP (combined heat and power) plant;			Not analysed in the working group as this is not a typical measure implemented or financed for energy efficiency improvements for renovations in the Netherlands.
(h) Heat exchanger/recovery systems.	*douche warmteterug-winningsysteem*		We refer to the assessment of 7.3.e

8.8 Perspective 2: Data availability

This section is not included in the current version of DEEMF. The EEM NL Hub working group is currently analysing this topic, focusing on identifying potential data sources and exploring ways to enhance data granularity for renovation measures.

8.9 Perspective 3: Allocation to loan(part(s)).

We assume that only the monetary amount that is in line with the measure (including its acquisition) and installation, maintenance and repairs can be used for EU Taxonomy alignment calculations.

8.10 Conclusion

No formal conclusion or guidance has been made yet. Data availability, specifically with regards to the granularity and detail needed is imperative for practical use. Additional analysis on the linkage between sections 7.6 and 3.1 and potentially 3.5 is warranted. In a subsequent update of DEEMF an elaborate *standalone* analysis of section 3.1 of the CDA should be considered.

9 DEEMF Analysis: Acquisition & ownership of buildings (Annex I TSC SCC, Section 7.7)

Quick Read

- For buildings built before 31 December 2020 (or with a construction permit application dated before the NZEB norm (in the Netherlands applicable as of 1 January 2021) was introduced): a valid Energy Performance Certificate (EPC) of class A should be available to be considered aligned.
- In this document we describe several top 15 % methods that are available and can be applied in the Netherlands.
- For buildings built after 31 December 2020 that are not under construction: SCC of Section 7.7.1 applies and the '10% better than threshold value' criterion must be met to be considered SCC aligned.

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- For the top 15 % criterion we have included a summary of relevant insights on this topic from the DDA Q&A.
- We have shortened the analysis for SCC 7.7.2, the financing of new buildings, built after 2021. When there is no construction active, SCC 7.7.2 is applicable and thus the NZEB – 10% check as described in SCC 7.1.1. When there is an active construction agreement, and the building is to be or being built it is a SCC 7.1 activity.
  In addition, we have removed the sections discussing the data availability challenges for the information on the year of construction permit. As this has been made available (upon our request) by RVO.

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- The CDA Q&A confirms that the date of application for a construction permit is the date that is to be used to assess if for a building (unit) the criteria of section 7.7(1A/B) or 7.7(2) should be applied. Also that the SCC applicable at the time of the construction permit should be used (i.e. the date of the complete application for receiving the construction permit).
- The CDA Q&A confirms that we do not have to take into account the DNSH criteria for SCC 7.1 only the SCC (of Section 7.1) when applying SCC 7.7(2).
- We have incorporated an analysis of the (linguistic) wording of 7.7(1.B) (i.e. the top 15%) criterium. In the appendix we have incorporated a description of some parties that offer such a study for the Netherlands.
- We can use the PED on building level when it is not available on building unit level (often the case for apartments (in the Netherlands)). Unfortunate use of the word Provisional in this answer. We understand it to mean that the PED as noted in the construction permit status = "vergunningsaanvraag" might be used before / during construction.

In this section we explore ways to identify if a building(unit) complies with the SCC of Section 7.7 (Acquisition and Ownership of Buildings). The SCC contains different criteria depending on when the building was built (before or after 31 December 2020). We are interpreting the economic activity of exercising ownership or buying real estate as described in the CDA, see Figure 11: Description of the activity below.

Figure 11: Description of the activity

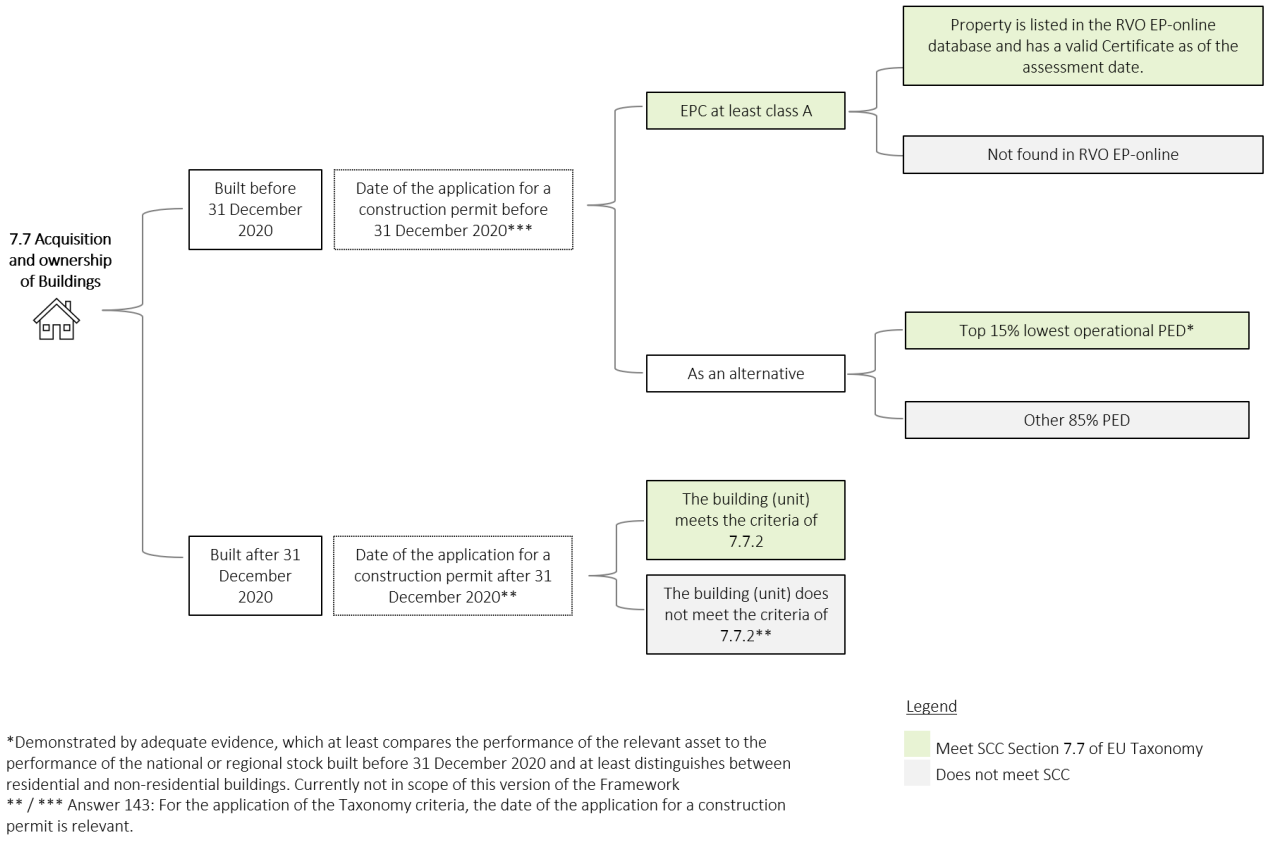
7.7. Acquisition and ownership of buildings

Description of the activity

Buying real estate and exercising ownership of that real estate.

For buildings built before 31 December 2020 two options are provided to determine if the SCC are met. As an alternative to the EPC Class A criterion, it is also allowed to provide evidence that the building is within the top 15% of operational Primary Energy Demand of buildings built before 31 December 2020. This is depicted in Figure 12.

Figure 12: Overview SCC of Section 7.7.

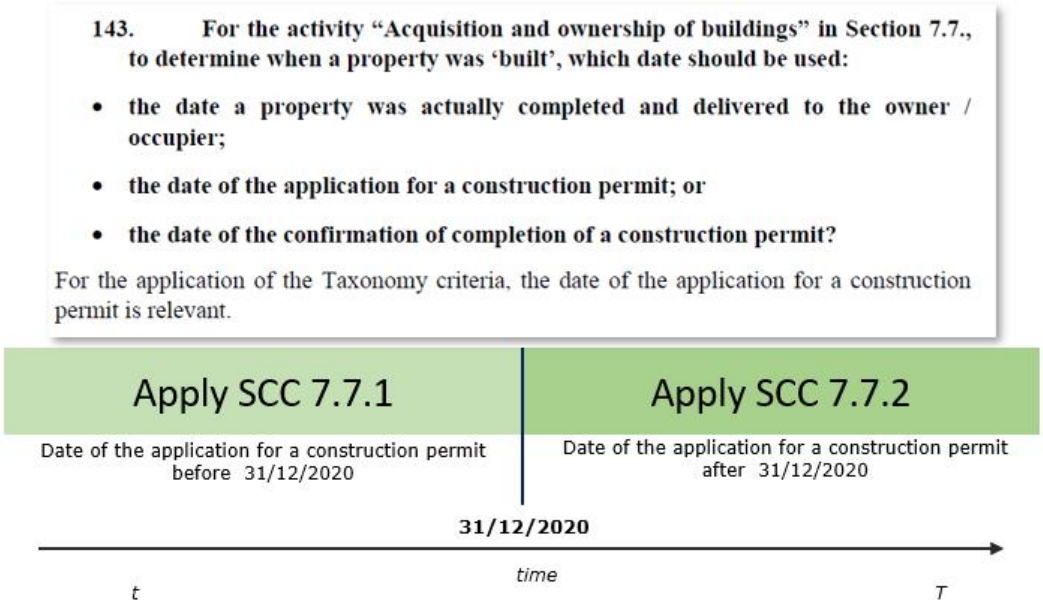


*Demonstrated by adequate evidence, which at least compares the performance of the relevant asset to the performance of the national or regional stock built before 31 December 2020 and at least distinguishes between residential and non-residential buildings. Currently not in scope of this version of the Framework
** / *** Answer 143: For the application of the Taxonomy criteria, the date of the application for a construction permit is relevant.

To assess if the criteria of SCC 7.7(1A/B) or 7.7(2) are to be applied, the European Commission has noted that the date of the application for a construction permit is relevant in assessing the year a building was built[61]. This is depicted in Figure 13.

[61] See answer 143 of the CDQ Q&A.

Figure 13: Determining the criteria based on definition of built.



9.1 Perspective 1: Interpretation and application

Section 7.7(1) wording in the EU Taxonomy

Table 35: Section 7.7(1) wording in the EU Taxonomy.

Section	NACE	Substantial contribution to climate change mitigation of Annex I	Footnote
7.7 Acquisition and ownership of buildings	L68	1. For buildings built before 31 December 2020, the building has at least an Energy Performance Certificate (EPC) class A. As an alternative, the building is within the top 15% of the national or regional building stock expressed as operational Primary Energy Demand (PED) and demonstrated by adequate evidence, which at least compares the performance of the relevant asset to the performance of the national or regional stock built before 31 December 2020 and at least distinguishes between residential and non-residential buildings. 2. For buildings built after 31 December 2020, the building meets the criteria specified in Section 7.1 of this Annex that are relevant at the time of the acquisition.	

Linguistic decomposition and interpretation of key words & phrases of Section 7.7(1A)

Table 36: Wording of CDA 7.7(1A)

Substantial contribution to climate change mitigation of Annex I
For buildings built before 31 December 2020, the building has at least an Energy Performance Certificate (EPC) class A.

Table 37: Linguistic decomposition and interpretation of key words & phrases of Section 7.7(1A)

Term or key phrase	Source in Dutch regulation and relevant references	Analysis	DEEMF definition
building		Any building unit meeting the categorisation of buildings as used in EP-Online combined with the metrics Bbl Article 4.148 and a categorisation in building type ("*grondgebonden en niet-grondgebonden*").	Any building unit meeting the categorisation of buildings as used in EP-Online combined with the metrics Bbl Article 4.148 and a categorisation in building type ("*grondgebonden en niet-grondgebonden*"). See Table 7 and Table 12.
Built before 31 December 2020		Only as of 1 January 2021 is it a requirement for a building to be constructed according to the NZEB regulations. All construction permit applications ('*vergunningsaanvraag*') before that date did not have to meet the NZEB requirements. As noted in the CDA Q&A (A143): For the application of the Taxonomy criteria, the date of the application for a construction permit is relevant. In (many) cases it is clear that the building has been built (long) before 31 December 2020.	The application date of the construction permit is on or before 31 December 2020.
Energy Performance Certificate		We want to emphasise the importance of the abbreviation Energy Performance Certificate (EPC) which is not to be confused with an "*Energie Prestatie Coefficient*", a term that has been used often on Dutch energy performance certificates based on older calculation methodologies.	**Energy Performance Certificate (EPC)**: a document or digital record describing the energy performance of the building(unit). A **certificate** should be available with a valid validity date, as of the assessment date, irrespective of the methodology.
Energy Performance Certificate (EPC) class A		See for a Table 12 for a diagram with EPC classes of the NTA 8800 methodology that depicts the ordinal scale of energy performance classes in the Netherlands.	Irrespective of the EPC methodology all valid Energy Performance Certificates with any of the following values (A, A+, A++, A+++, A++++). Note that all EPCs Class A with a valid certificate or registration in EP-Online are deemed eligible, thus including those based on older (legacy) EPC methodologies.

Linguistic decomposition and interpretation of key words & phrases of 7.7(1B) (top 15%)

Table 38: Taxonomy Wording on top 15%.

Section	NACE	Substantial contribution to climate change mitigation of Annex I	Footnote
7.7 Acquisition and ownership of buildings	L68	As an alternative, the building is within the top 15% of the national or regional building stock expressed as operational Primary Energy Demand (PED) and demonstrated by adequate evidence, which at least compares the performance of the relevant asset to the performance of the national or regional stock built before 31 December 2020 and at least distinguishes between residential and non-residential buildings.	

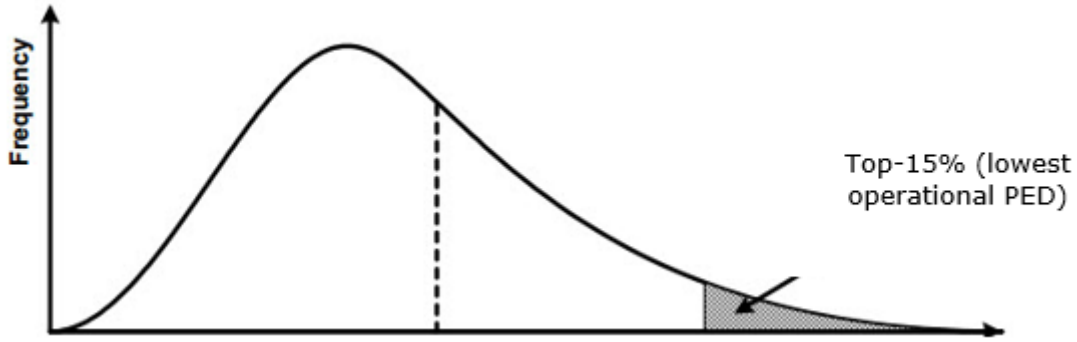
Table 39: Linguistic decomposition and interpretation of key words & phrases of 7.7(1B) (top 15%).

Term or key phrase	Source in Dutch regulation and relevant references	Analysis	DEEMF definition
As an alternative		As an alternative to using the EPCs of Class A. Per building unit (reference asset) an alternative assessment of the Substantial Contribution Criteria can be applied. This could be an interesting alternative when no EPC is available. The working assumption of the EEM NL Hub is that it is to be applied as per relative asset (per building (unit)).	As an alternative to using the EPCs of Class A. Per building unit (reference asset) an alternative assessment of the Substantial Contribution Criteria can be applied.
Building		Idem Table 37	Idem Table 37
Within the top 15 %		Within the top 15% of most energy efficient building stock of residential building units in the Netherlands built before 31 December 2020. See the paragraph below and also CDA Q&A (A150). Also note CDA Q&A (A152): if a building unit is within the top 15% at a certain date, it does not automatically mean that it is considered to meet the SCC during its full lifetime: when the top 15% is recalculated, it could be that an individual building unit is no longer within the top 15% (e.g. if the composition of the building stock (and thus the top 15% threshold value) has changed. Also note CDA Q&A (A157).	Within the top 15% of most energy efficient building stock of residential building units in the Netherlands built before 31 December 2020.
of the national or regional building stock		In the Netherlands no differentiation is made in the EPC methodologies and building code according to geographic areas.	Of the Dutch residential building stock

operational Primary Energy Demand (PED)	Hoofdstuk 5. Technische bouwvoorschriften uit het oogpunt van energiezuinigheid en milieu Afdeling 5.1. Energiezuinigheid, nieuwbouw	Primary Energy Demand (PED) is interpreted as BENG 2 indicator as mentioned in Article 5.1 as *"Primair fossiel energiegebruik"*. Considering the answer to Q153 of the CDA Q&A, our interpretation is that the BENG 2 value is to be used and there is no particular reason the word *operational* has been included here.	Primary energy demand expressed in kWh/m^2/year on building unit level. EP-Online definition: Pand_primaire_fossiele_energie
adequate evidence		Other than CDA Q&A (A150) where the words '(e.g. a recent study)' have been inserted after the words 'adequate evidence', there is no concrete wording on what 'adequate evidence' means. CDA Q&A (A151) provides some further guidance on methodologies acceptable to compare the performance of the relevant asset to the performance of the national or regional stock. In addition, the study should be public.	A public study that contains a description of the methodology applied and the data used to determine the distribution of operation Primary Energy Demand over the national building stock and the value determined for a specific building unit.
The performance of the relevant asset		See also CDA Q&A (A150 and 151).	The operational Primary Energy Demand of the relevant building unit as determined in the analysis applied vis-à-vis the reference population.
To the performance of the national or regional stock		See also CDA Q&A (A150 and 151).	The operational Primary Energy Demand of the national building stock as determined in the analysis applied.
Built before 31 December 2020		idem definition in Table 37	idem definition in Table 37
Distinguishes between residential and non-residential buildings.	EP-Online	EP-Online contains a classification for different types of building units. A building unit classified as *"met woonfunctie"* is considered residential for the purpose of Section 7.7.	The building unit is classified as a type of property that is listed as "*met woonfunctie*" in EP-Online.

In an ideal (theoretical) world, all building units in the Netherlands built before 31 December 2020 have an official PED-value and we would *just* have to rank them from low to high and select the top 15% of the frequency distribution, this idea has been reflected in Figure 14.

Figure 14: Theoretical frequency distribution of PED.



The SCC on the top 15% does not provide any actual detail on the possible estimation or assessment techniques. It only prescribes certain differentiations that need to be applied (built before 31 December 2020 and residential versus commercial buildings) and it requires the outcome to be 'demonstrated by adequate evidence'. As there is no country in the European Union with 100% coverage of EPCs at the moment of writing, all parties that wish to apply the top 15% criterium will need to apply a form of estimation technique.

Of the buildings with an EPC only a subset has an EPC with a PED-value and therefore an estimation or assessment technique would need to be used to determine the (estimated) operational PED of all the residential building(unit)s in the Netherlands built before 31 December 2020. All building units with an operational PED that is lower than the determined threshold value can then be considered to meet the SCC of 7.7(1B).

The CDA Q&A highlights several elements to be applied in the assessment. Firstly, the requirement that a study describing the top 15% should be public and transparent ("*adequate evidence should be provided (e.g. a recent study*"). Secondly, the answer to Question 151 states that "*it is not possible to use proxies, such as the year of the construction of the building*"[62].

In the Netherlands different studies are available and are used by financial institutions to determine the top 15% of most energy efficient building units. Originally, the use of these studies has been mainly for green (bond) frameworks and not for demonstrating EU Taxonomy alignment. As a result, the specifics of these studies deviate from the requirements of the SCC as included in Section 7.7 (and can thus not be 1:1 applied for EU Taxonomy purposes). In addition, these *non*-EU Taxonomy based top 15% methods, often do not (need to) distinguish between residential and non-residential and or built before 31 December 2020.

The EEM NL Hub does not perform a calculation or estimation of the top 15% and relevant threshold values. We aim to analyse the SCC wording in the context of the Netherlands while taking into account the most recent EC guidance. In below we highlight the relevant insights from the DDA Q&A on the application of the top 15% criterion. In DEEMF SCC 2023 we have provided an overview of various top 15% assessment studies by 3 vendors. These descriptions and studies are still relevant and can be used by market participants.

[62] Answer to the question in the CDA Q&A: Is it permissible to use a weighted requirement value based on the valid new building regulations of the last 15 years for the definition of the necessary requirement value for "the best 15 % of the stock" as referred to in substantial contribution criteria of the activity. "Acquisition and ownership of buildings" in Section 7.7(1B)

Box 5: Applying the top 15% criterion form the DDA Q&A.

When assessing alignment with the top 15% criterion under Section 7.7 of the Climate Delegated Act, financial undertakings must avoid double-counting exposures in KPI calculations (DDA Q&A 20). For buildings that meet both the EPC Class A label and the top 15% criterion, only one criterion may be applied to ensure accuracy and consistency in reporting. Additionally, reliance on proxies such as the construction year of a building (DDA Q&A 21) is insufficient to meet the Technical Screening Criteria (TSC). Compliance must be substantiated with adequate evidence comparing the building's operational Primary Energy Demand (PED) to that of the national or regional building stock built before 31 December 2020, distinguishing between residential and non-residential properties.

Similarly, national EPC statistics alone (DDA Q&A 22) cannot confirm Taxonomy-alignment. While such proxies or extrapolations may provide general estimates, they are permissible only for voluntary reporting and must be accompanied by clear and transparent methodologies. Furthermore, buildings with expired EPC Class A labels (DDA Q&A 23) cannot automatically be deemed compliant with the top 15% criterion. Demonstrating alignment requires further substantiation beyond the expired certification. These principles underscore the importance of rigorous evidence and methodological integrity when determining Taxonomy-alignment under Section 7.7.

Linguistic decomposition and interpretation of key words & phrases of 7.7(2)

Table 40: Activity 7.7(2) of the Climate Delegated Act.

Substantial contribution to climate change mitigation of Annex I
For buildings built after 31 December 2020, the building meets the criteria specified in Section 7.1 of this Annex that are relevant at the time of the acquisition.

In this section the ways to identify if a building has been constructed according to the SCC of Section 7.1 are explored. To determine if the SCC have been met (i.e. the requirement of the PED to be 10% less than the locally applicable threshold value), the estimated or measured PED must be compared to the threshold value as required under the Dutch Bbl. Alternatively, for those buildings with an EPC of A++++, it can be concluded that the '*10% better than threshold value*' criterion has been met automatically as the EPC Class A++++ is tied to a PED of ≤ 0 kWh/m^2 per year. Note that this criterion is applicable if the building construction is finalized and one is financing the activity of acquisition and ownership for building (units) built after 2021[63]. In these cases, the NZEB -10% check as described in SCC 7.1 is applicable. Note that for buildings built after 2021, where the construction is finalised, SCC 7.7.2 is applicable and thus also the DNSH criteria of activity 7.7.2.

Quick Read

The EU Taxonomy requires building (units) with a construction permit application date after 31 December 2020 to be built according to the NZEB criteria and the Primary Energy Demand (PED) should be 10% less than the locally applicable threshold value.

In the Netherlands PED is expressed as the BENG-2 indicator and for new constructions a threshold value is calculated (*"BENG-2 eis"*), recorded and published.

In the Netherlands, NZEB is incorporated into the building code, the BENG framework and the NTA 8800 calculation methodology as of 1 January 2021. EPC records based on NTA 8800 (with status = 'completion' ("*opgelevering*") or 'permit application' ("*vergunningsaanvraag*")) list the PED and the applicable PED threshold value. The PED and applicable threshold value can differ per building type ("*grondgebonden vs. niet-grondgebonden*").

[63] See DDA Q&A Answer 24.

9.2 Perspective 2: Data availability

For the application of SCC of Section 7.7 it is important to have collateral identifiers, loan or mortgage balance(s) and the date of application of the construction permit. With the 2024 update of the RVO data this date is now available in the field bouwjaar.

Data availability considerations for Section 7.7(1A)

Checking the construction permit application date is only relevant for building units that have been constructed or have been under construction since 31 December 2020. The construction year of a building unit[64] can serve as a first proxy to assess whether it is needed to look closely at the construction permit application date. In Box 6 we highlighted some background information on provisional EPCs that have been issued by the RVO in the past but have been discarded.

Box 6: Provisional EPC issued and retracted by the Dutch Government.

In 2015 all building(unit) owners 'received' a temporary or *"voorlopig"* energy label from NEA. This was based on an assessment of the energy performance of the building(unit) based on the NEN 7120 methodology and readily available data[65]. As of 1 January 2021, NTA 8800 replaced the former (legacy) methodologies (NEN 7120) and as a result the validity of all preliminary or *"voorlopige"* energy labels that were issued in 2015 have been discontinued by NEA ("RVO") and its validity has been ended[66].

These aforementioned provisional labels have been issued and widely applied in both many internal and external reporting applications. At this point in time, there is no alternative energy performance indicator provided by the government other than for those building(unit)s that have an officially registered EPC.

Against this background the EEM NL Hub working group members have expressed a desire to broaden, in the future, the strict interpretation as it is currently applied in this version of the DEEMF[67].

Data availability considerations for Section 7.7(1B) (top 15%)

As highlighted in Section 7.2 in the Netherlands not all residential properties built before 31 December 2020 have an EPC and therefore a PED is not available for all building units. To perform the top 15% analysis, an estimation approach is required and depending on the estimation approach used, different data quality and availability considerations can be relevant.

There are however some common denominators with respect to data considerations: all methods would need to distil the number of residential building units built before 31 December 2020. Note that this, in practice, is not a static number. As mutations due to market dynamics affect this number of building units built before 31 December 2020, for example:

Box 7: Potential housing market dynamics affecting the number of houses built before 31 December 2020.

- **Buildings that are demolished:** buildings are demolished by municipalities, social housing corporations and homeowners. This is often done to rebuild on the same location.
- **Buildings that are converted**: in recent years commercial buildings have been converted into residential building units with a *woonfunctie* due to a structural shortage of residential housing in the Netherlands.

[64] Construction year can have multiple definitions (start of building process, completion of building process, etc.). The construction year is not contained in EP-Online but can be found in mortgage loan (application) documentation or in the land registry ("Kadaster").
[65] For instance, year of construction and property type. It did not involve a physical assessment of the building unit.
[66] As of this date these preliminary or "*voorlopige*" labels are also not available anymore in EP-Online.
[67] The EEM NL Hub is awaiting a response on this issue from NEA (at the moment of writing).

- **Buildings that are split**: Existing buildings can be split (to make multiple sub-units) often into smaller apartments or studios. Splitting can increase the number of building units built before 31 December 2020 depending on the interpretation of construction year.
- **Buildings that are merged**: The opposite of splitting building units is merging buildings units, this can de facto decreases the number of building units.

To demonstrate compliance with the top 15% test, an analysis needs to be performed to determine what building units the calculated top 15% is composed of and if the individual building unit belongs to the properties in the top 15%. It is dependent on the methodology which data is used to determine the 'operational Primary Energy Demand' of an individual building unit. Within each methodology different parameters and assumptions could be used and therefore the data availability can differ per methodology.

9.3 Perspective 3: Allocation to loan(part(s))

Allocation to loan(part(s) for Section 7.7(1A) & 7.7(1B) (top 15%)

Static application

The outstanding mortgage loan amount ("*schuldrest*") in respect of a property with a valid EPC of Class A as of assessment time *t** is attributed to the substantial contribution of the economic activity of Section 7.7.

Dynamic application

Section 7.7 covers 'existing' buildings that meet certain SCC. As the mortgage loan amortises the outstanding loan amount in line with SCC 7.7 decreases.

9.4 Conclusion

In general, it is possible to directly apply the SCC of Section 7.7 in the Netherlands.

10 Conclusion

In the previous sections we have analysed the SCC of the Climate Delegated Act for real estate activities. Below we summarise this process.

- Section 7.1: Construction of new buildings:
  - Section 7.1 outlines criteria for constructing new buildings. Recent DDA Q&A (Answer 24) guidance no longer classifies residential new constructions as 7.7 but under 7.1 if a purchase/construction agreement ("koop-/aannemingsovereenkomst") is in place.
  - SCC compliance requires verifying NZEB -10% standards, with additional checks for large (residential) buildings. In the Netherlands, Primary Energy Demand (PED), expressed as the BENG-2 indicator, must be at least 10% below the threshold, calculated and published for permit applications ("vergunningsaanvraag")
  - Since 1 January 2021, NZEB standards are integrated into the Dutch building code, BENG framework, and NTA 8800, with PED thresholds varying by building type ("grondgebonden" vs. "niet-grondgebonden").
  - Activity 7.1 applies only until the building reaches "oplevering" (completion), after which it falls under Acquisition and ownership of buildings. Only drawn amounts are included in the GAR for SCC assessments.
- Section 7.2: Renovation of existing buildings:
  - While we can reference existing regulations and energy performance methodologies, there is currently no practical way to identify major renovations in general terms. Major renovations are not registered in the Netherlands. Without a clear system of identifying these, we cannot provide guidance on identifying major renovations or using them to assess alignment with the specific TSC.
  - For the alternative approach under 7.2, which involves a reduction in (net) PED (excluding renewable energy sources), several challenges remain. These include the absence of approved methods to estimate PED reduction ex-ante and the difficulty in determining whether the reduction is unrelated to renewable energy installations.
  - Applying 7.2 in practice would require updates to both the Omgevingswet and the NTA 8800 methodology to establish the necessary frameworks for tracking and assessing renovations reliably.
  - As a practical recommendation, 7.2 should only be used when two EPCs (ex-ante and ex-post) are available, based on the NTA 8800 methodology, and where the PED reduction is demonstrably unrelated to renewable energy sources. However, such cases are rare and largely theoretical under current conditions.
  - Only the fraction of the loan explicitly allocated to building renovations can be reported as SCC-aligned.
- Section 7.3: Installation, maintenance and repair of energy efficiency equipment
  - In this document we have analysed the wording of this economic activity (and all its sub-activities). Where possible we have indicated where 1) there are references and (national) requirements in the Omgevingswet. And 2) we have referred to sub-activities for which energy classes exist.
  - The working group has found that no common granular data sources are generally available to identify and track these measures. Further investigation and data resources are needed for future analysis. Parties could potentially identify this in proprietary data sources.
  - Only the monetary amount that is in line with the measure (including its acquisition) and installation, maintenance and repairs can be used for EU Taxonomy alignment calculations. Analysis incomplete and not guidance, taking all 3 perspectives into account, can be established.
- Section 7.3: Installation, maintenance and repair of renewable energy technologies
  - In this document we have analysed the wording of this economic activity (and all its sub-activities). Where possible national requirements for the measures are referred.

- The working group has found that no common granular data sources are generally available to identify and track these measures. Further investigation and data resources are needed for future analysis. Parties could potentially identify this in proprietary data sources.
- Only the monetary amount that is in line with the measure (including its acquisition) and installation, maintenance and repairs can be used for EU Taxonomy alignment calculations.
- Analysis incomplete and no guidance, taking all three perspectives into account, can be established.

- Section 7.7(1A) (built before 31 December 2020) Acquisition and ownership of buildings:
  - We understand the wording and we can find adequate references in existing regulation and energy performance methodology.
  - In general, the data is available, and we can provide guidance on which data fields from EP-Online can be used to check the alignment with these SCC. The application to mortgage loan level from a monetary or reporting perspective is clear.
  - The construction permit application date can be challenging to obtain but is present as of 2024 in EP-Online.
  - Irrespective of the EPC methodology all valid Energy Performance Certificates with any of the following values (A, A+, A++, A+++, A++++).
  - Note that all EPCs Class A with a valid certificate or registration in EP-Online are deemed eligible, thus including those based on older (legacy) EPC methodologies.
  - A certificate should be available with a valid validity date, as of the assessment date, irrespective of the methodology.
  - The relevant amount is the outstanding balance of the loan(s) pertaining to the building(unit).
- Section 7.7(1B) (built before 31 December 2020) Acquisition and ownership of buildings:
  - To determine if a building is within the Top 15% of energy-efficient residential properties built before 31 December 2020 in a jurisdiction, the Top 15% must first be calculated.
  - Only buildings with a construction permit application date before 2021 can be included.
  - The building's energy efficiency, measured in terms of PED, must then be calculated or estimated. This document outlines (external) methods for conducting a Top 15% study, which should be publicly available.
  - The relevant amount is the outstanding balance of the loan(s) pertaining to the building unit.
- Section 7.7(2) (built after 31 December 2020) Acquisition and ownership of buildings:
  - We understand the requirements and can effectively reference relevant regulations and energy performance methodologies.
  - The construction permit application date must be after 31 December 2020.
  - Generally, the necessary data is expected to be available, and we can provide guidance on which EP-Online data fields can be used to assess alignment with this SCC.
  - For buildings with an NTA status of *oplevering* or *bestaand* and built after 31 December 2020, compliance should be assessed based on the BENG2 indicator, which must be 10% below the applicable threshold (depending on the building type).
  - The relevant amount is the outstanding balance of the loan(s) pertaining to the building unit.

11 Annexes

11.1 Energy Performance Methods and data in the Netherlands

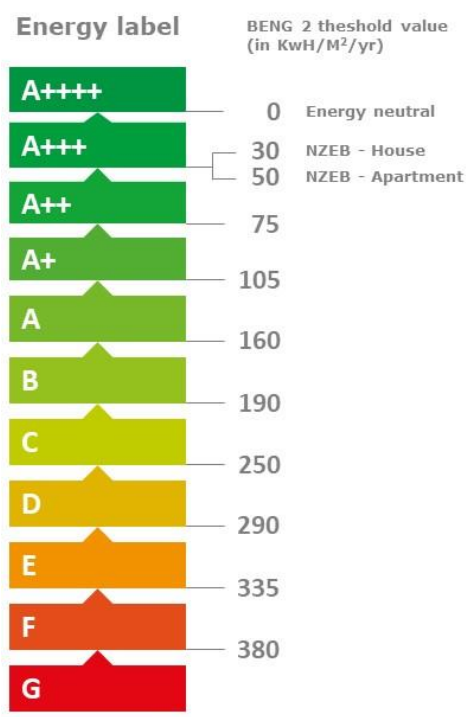
This section originally appeared in the previous version of DEEMF (2022 Part I).

NTA 8800

Since 1 January 2021, the energy performance of buildings in the Netherlands is determined based on a national calculation method called "NTA 8800". NTA 8800 is applicable to both existing and new buildings and it is the BENG norm that sets a threshold for new constructions in the Netherlands in terms of primary energy demand ("PED"). The PED, with the introduction of BENG / NTA 8800 corresponds directly to the Energy Performance Classes. In the Netherlands, anyone can look up the energy label of a building (if available) online through a publicly available government website[68] and online database called EP-Online[69].

The EPC of a property includes at least a numeric energy performance indicator of the primary fossil energy use in kWh/m² per annum and a letter or combination of letters to express the energy performance of the building. Energy performance certificates remain valid for 10 years, including those issued before 1 January 2021 (and thus under the previous energy labelling methodology, see below). At the time of writing the average cost of obtaining an EPC is €200 – 300.

Figure 15: EPC Class and BENG2 value in the NTA 8800 methodologies.



By law, a seller is obliged to deliver to the buyer a "definite" (verified) energy label when a transfer of ownership of a property takes place.

Error! Reference source not found.15 depicts the different EPC classes w ithin the NTA 8800 methodology. As one can see, the BENG 2 norm is directly related to Prime Energy Demand. For new constructions, depending on the building type the threshold for residential buildings is 30 or 50 kWh/m²/yr, subject to certain exceptions.

Note that an A++++ energy label is also known as a zero-energy-building ("ZEB") or "*energieneutraal gebouw*", sometimes the expression "*nul-op-de-meter*" is also used. A building with an EPC of class A++++ has a BENG 2 value of ≤ 0 and a BENG 3 value of 100%, see Figure 14

[68] Source: Zoek je energielabel
[69] Source: EP-Online

Legacy method: NEN 7120

Before the current energy labelling methodology was implemented, energy labels were granted based on previous methodologies such as the '*NEN 7120*' methodology. Given that energy labels are valid for a period of ten years, many EPCs exist (and are still valid) that were calculated based on this methodology. Legacy methods such as the NEN 7120 methodology do not list the BENG indicators or a primary energy demand metric (expressed in kWh/m^2 per annum).

"Vereenvoudigd Energielabel"

Between January 2015 and July 2020, in the Netherlands it was also possible to obtain a so-called simplified energy label ("*Vereenvoudigd Energielabel*" or "*VEL*"): A property owner could obtain a simplified energy label by submitting proof to an external party on approximately ten features of the property. The VEL was then issued and could be used for the sale (or rental) of a property. As these simplified energy labels had an official status and are also valid for a period of ten years, they are registered in EP-Online and are considered and counted as official EPCs. The simplified energy label does not list a primary energy demand metric (expressed in kWh/m^2 per annum).

"Voorlopig Energielabel"

To promote the awareness of the energy efficiency of properties with consumers, in 2015 the Dutch government introduced the concept of 'preliminary energy labels' ("*voorlopig energie label*"). For nearly all properties in the Netherlands an indicative energy label was calculated based on publicly available information of the property (e.g. property type, year of construction). Every property owner could find the preliminary energy label of his/her property in EP-Online, and it provided an indication of the energy efficiency of the property. As of 1 January 2020, these preliminary energy labels are no longer published by the NEA in EP-Online.

11.2 Major renovations

The EPBD is incorporated in the Dutch Building Code and the NZEB system. An important aspect in the context of the EU Taxonomy is the concept of '*major renovations*' ("*Ingrijpende renovaties*"). The EPBD leaves room to members states to implement one of two definitions of a major renovation, see text Box 8 below.

Box 8: EPBD definition of a 'major renovation'.

Recital 16 of Directive 2010/31/EU notes:
'*Major renovations of existing buildings, regardless of their size, provide an opportunity to take cost-effective measures to enhance energy performance. For reasons of cost-effectiveness, it should be possible to limit the minimum energy performance requirements to the renovated parts that are most relevant for the energy performance of the building. Member States should be able to choose to define a 'major renovation' either in terms of a percentage of the surface of the building envelope or in terms of the value of the building. If a Member State decides to define a major renovation in terms of the value of the building, values such as the actuarial value, or the current value based on the cost of reconstruction, excluding the value of the land upon which the building is situated, could be used.*'
In addition, Article 2 section 10 of the directive, states:
"*major renovation' means the renovation of a building where:*

a. *the total cost of the renovation relating to the building envelope or the technical building systems is higher than 25 % of the value of the building, excluding the value of the land upon which the building is situated; or*
b. *more than 25 % of the surface of the building envelope undergoes renovation;"*

Member States may choose to apply option (a) or (b).

The Dutch government has implemented the second option, as can be seen in Box 9 where the relevant article of the Dutch building code is quoted:

Box 9: Major renovation in Dutch building law.

Dutch building code, Article 3.2:

'Met artikel 3.2, ingevoegd via Stcrt. 2013, 16919, is een uitwerking gegeven aan artikel 5.6, vierde lid, van het Bouwbesluit 2012. In artikel 3.2 is bepaald dat van ingrijpende renovatie als bedoeld in artikel 2 van de herziene richtlijn energie prestatie gebouwen sprake is wanneer meer dan 25% van de oppervlakte van de gebouwschil wordt vernieuwd, veranderd of vergroot én deze vernieuwing, verandering of vergroting de integrale gebouwschil betreft. Hiermee wordt bedoeld dat de uitwendige scheidingsconstructie volledig, dat wil zeggen met inbegrip van alle constructieonderdelen (binnenblad, spouwvulling, buitenblad) wordt gerenoveerd. Het voorschrift geldt alleen voor het deel van de gebouwschil dat wordt gerenoveerd en niet voor de gehele gebouwschil van het gebouw. Met deze keuze voor de oppervlakte van de gebouwschil als criterium voor de beoordeling van de vraag of sprake is van ingrijpende renovatie is uitvoering gegeven aan de keuzemogelijkheid zoals deze in artikel 2 onderdeel 10 van de herziene richtlijn is gegeven.'

11.3 EP-Online Legend

Table 41: EP-legend (as made by RVO)

Term	Beschrijving	English Translation
Registratiedatum	De datum waarop het energielabel, de energieprestatie berekening of het maatwerkadvies is geregistreerd.	The date on which the energy label, energy performance calculation, or tailored advice is registered.
Opnamedatum	De datum waarop het energielabel, de energieprestatieberekening of het maatwerkadvies is opgenomen.	The date on which the energy label, energy performance calculation, or tailored advice is recorded.
Geldig_tot	De uiterste datum tot wanneer het energielabel of de energieprestatieberekening geldig is.	The expiry date until which the energy label or energy performance calculation is valid.
Certificaathouder	De naam van de certificaathouder die het energielabel, de energieprestatieberekening of het maatwerkadvies heeft geregistreerd.	The name of the certificate holder who registered the energy label, energy performance calculation, or tailored advice.
Soort_opname	Indicator of het een basis- of detailopname betreft.	Indicator showing whether it is a basic or detailed recording.
Status	De status van het bouwproject of gebouw.	The status of the building project or structure.
Berekeningstype	De bepalingsmethode die gebruikt is bij de opname en berekening.	The calculation method used in the recording and calculation.
IsVereenvoudigdLabel	Indicator of de registratie een Vereenvoudigd Energielabel (VEL) betreft.	Indicator if the registration concerns a Simplified Energy Label (VEL).
IsOpBasisVanReferentiegebouw	Indicator of het energielabel of de energieprestatieberekening op basis van representativiteit is geregistreerd.	Indicator if the energy label or energy performance calculation is based on representativeness.
Gebouwklasse	Het soort gebouw: een woning of een utiliteitsgebouw.	The type of building: a residence or a utility building.
Gebouwtype	Woningtype.	Type of residence.
Gebouwsubtype	Woningsubtype: de ligging van het appartement in het woongebouw.	Subtype of residence: the position of the apartment within the residential building.

SBIcode	Standaard Bedrijfsindeling (SBI) code.	Standard Industrial Classification (SBI) code.
Huisnummer	Huisnummer van het gebouw.	Building house number.
Huisletter	Huisletter van het gebouw.	House letter of the building.
Huisnummertoevoeging	Huisnummertoevoeging van het gebouw.	House number suffix of the building.
Detailaanduiding	Gebouwaanduiding indien het gebouw(deel) geen eigen adres heeft.	Building identification if the building (part) has no separate address.
BAGverblijfsobjectid	De BAG identificatie van het verblijfsobject.	The BAG (Basic Address Registration) ID of the residence.
BAGligplaatsid	De BAG identificatie van de ligplaats.	The BAG ID of the mooring.
BAGstandplaatsid	De BAG identificatie van de standplaats.	The BAG ID of the stand.
BAGpandids	De BAG identificatie van het pand waar het verblijfsobject toe behoort.	The BAG ID of the building to which the residence belongs.
Bouwjaar	Bouwjaar van het gebouw.	The year of construction of the building.
Gebruiksoppervlakte_ thermische_zone	Gebruiksoppervlakte van de thermische zone.	Usable floor area of the thermal zone.
Compactheid	Compactheid: verhouding tussen verliesoppervlakte en gebruiksoppervlakte.	Compactness: ratio between loss area and usable floor area.
Energieklasse	De letter van het energielabel (labelklasse).	The letter of the energy label (label class).
EnergieIndex	De energie-index.	The energy index.
EnergieIndex_EMG_forfaitair	De energie-index met forfaitaire waarden voor gebiedsgebonden maatregelen.	The energy index with standard values for area-based measures.
Energiebehoefte	De energiebehoefte in kilowattuur per vierkante meter per jaar (kWh/m².jaar).	The energy demand in kilowatt-hours per square metre per year (kWh/m².year).
PrimaireFossieleEnergie	Het primair fossiel energiegebruik in kilowattuur per vierkante meter per jaar (kWh/m².jaar).	Primary fossil energy use in kilowatt-hours per square metre per year (kWh/m².year).
Primaire_fossiele_energie_ EMG_forfaitair	Het primair fossiel energiegebruik met forfaitaire waarden voor gebiedsgebonden maatregelen per vierkante meter per jaar (kWh/m².jaar).	Primary fossil energy use with standard values for area-based measures per square metre per year (kWh/m².year).
Aandeel_hernieuwbare_energie	Het aandeel hernieuwbare energie in %.	The share of renewable energy in %.
Aandeel_hernieuwbare_energie_ EMG_forfaitair	Het aandeel hernieuwbare energie met forfaitaire waarden voor gebiedsgebonden maatregelen in %.	The share of renewable energy with standard values for area-based measures in %.
Temperatuuroverschrijding	Waarde voor het risico van te hoge temperaturen in de maand juli (TOjuli of GTO).	Value for the risk of high temperatures in July (TOjuli or GTO).

Warmtebehoefte	Netto warmtevraag t.b.v. de energieprestatievergoeding (EPV) in kilowattuur per vierkante meter per jaar (kWh/m².jaar).	Net heat demand for energy performance allowance (EPV) in kilowatt-hours per square metre per year (kWh/m².year).
Eis_energiebehoefte	De maximaal toegestane energiebehoefte in kilowattuur per vierkante meter per jaar (kWh/m².jaar).	The maximum allowed energy demand in kilowatt-hours per square metre per year (kWh/m².year).
Eis_primaire_fossiele_energie	Het maximaal toegestaan primair fossiel energiegebruik in kilowattuur per vierkante meter per jaar (kWh/m².jaar).	The maximum permitted primary fossil energy use in kilowatt-hours per square metre per year (kWh/m².year).
Eis_aandeel_hernieuwbare_energie	Het minimaal vereiste aandeel hernieuwbare energie in %.	The minimum required share of renewable energy in %.
Eis_temperatuuroverschrijding	De maximaal toegestane waarde voor de temperatuuroverschrijding.	The maximum allowed value for temperature exceedance.
BerekendeCO2Emissie	De berekende CO2-emissie in kilo per vierkante meter per jaar (kg/m².jaar).	The calculated CO2 emissions in kilograms per square metre per year (kg/m².year).
BerekendeEnergieverbruik	Het berekende totale energieverbruik in kilowattuur per vierkante meter per jaar (kWh/m².jaar).	The calculated total energy consumption in kilowatt-hours per square metre per year (kWh/m².year).

11.4 Abbreviations and Legislative References

Table 42: Relevant abbreviations

Abbreviation	Meaning
BENG	Dutch framework wherein NZEB is established: Bijna Energie Neutraal Gebouw
BENG 1	Bijna Energie Neutraal Gebouw (BENG) indicator of total energy demand
BENG 2	Bijna Energie Neutraal Gebouw (BENG) indicator of the primary (fossil) energy demand
BENG 3	Bijna Energie Neutraal Gebouw (BENG) indicator of share of energy demand obtained from renewable sources
BTAR	Banking book Taxonomy Aligned Ratio
CDA	Climate Delegated Act – As part of the EU Taxonomy Regulation
CMPR	Capital Markets Recovery Package
CO_2 emissions	Carbon Dioxide emissions
CSV	Comma-separated values
DDA	Disclosure Delegated Act – As part of the EU Taxonomy Regulation
DEEMF	Dutch Energy Efficient Mortgage Framework
DNSH	Do No Significant Harm
EBA	European Banking Authority
EBB	Energiebespaarbudget
EBV	Energiebesparende voorzieningen
EC	European Commission
EEA	European Economic Area
EIOPA	European Insurance and Occupational Pensions Authority
EEM NL Hub	The Energy Efficient Mortgage Netherlands Hub

EPBD III	Directive amending the Energy Performance of Buildings Directive (2018/844/EU)
EPBD IV	Proposed revision of the EPBD III (COM(2021) 802 final)
EP-Online	A public database with EPCs and other sustainability data per property, maintained by the NEA
ESA	European Supervisory Authorities
ESMA	European Securities and Markets Authority
EU	European Union
EUT	EU Taxonomy Regulation
GAR	Green Asset Ratio
GHG emissions	Green House Gas emissions
GWh	Gigawatt Hours
ID	Identifier
JC	Joint Committee of the European Supervisory Authorities
KPI	Key Performance Indicator
LtV	Loan to Value – A common risk metric for mortgage Loans
NACE	Nomenclature statistique des Activités économiques dans la Communauté Européenne – A widely used statistical classification of economic activities in the European Community
NEA	Netherlands Enterprise Agency – Also known in the Netherlands as *"Rijksdienst voor Ondernemend Nederland"* (RVO)
NECP	National energy and climate plans. EU countries' 10-year national energy and climate plans for 2021-2030.
NEN 7120	Energy Performance of Buildings measurement standard in the Netherlands. Effective until 31 December 2020 (and replaced by NTA 8800) as at that date.
NFRD	Non-financial Reporting Directive
NTA 8800	*"Nederlands Technische Afspraak"* (NTA 8800) is the most recent Dutch legal method to determine the energy performance of a building (unit).
NZEB	Nearly Zero Energy Building - A term mentioned in the EPBD III. Means BENG in Dutch regulation (see above).
OECD	Organisation for Economic Co-operation and Development
PAI indicators	Principal Adverse Impact indicators
PED	Primary Energy Demand
RTS	Regulatory Technical Standards
SCC	Substantial Contribution Criteria
SFAP	Sustainable Finance Action Plan
SFDR	Sustainable Finance Disclosure Regulation
SMEs	Small and Medium-sized Enterprises
STS securitisations	Simple, Transparent and Standardised Securitisations
TSC	Technical Screening Criteria
UNGC	United Nations Global Compact
XML	Extensible Markup Language
ZEB	Zero Energy Building - A term mentioned in the EPBD IV recast

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