



## EU TAXONOMY: ACQUISITION AND OWNER- SHIP OF BUILDINGS

Derivation of top 15% of existing  
building stock for international real estate

VERSION JANUARY 2024



CANADA | FRANCE | NETHERLANDS | POLAND | UK-ENGLAND | USA

RESIDENTIAL | OFFICE | HOTEL | LOGISTICS | RETAIL

# INTENT

The vdpResearch assigned Drees & Sommer to set up a methodological approach to design a standardized methodology of implementing the EU Taxonomy's<sup>1</sup> eligibility criteria for the environmental objective climate change mitigation<sup>2</sup> for non-residential and residential properties in Canada, France, the Netherlands, Poland, UK-England and the United States. According to the EU Taxonomy, the proof should be provided 'by adequate evidence, which at least compares the performance of the relevant asset to the performance of the national or regional stock built before December 31, 2020 and at

least distinguishes between residential and non-residential buildings.'

On behalf of the vdpResearch, Drees & Sommer has now proposed such a derivation method and derived benchmarks for selected building asset classes (residential, office, retail, logistics, and hotels), with which the fulfillment of the screening criterion and EU Taxonomy eligibility could be proven accordingly.

This methodology is a recommendation and aligned with the process of the previously published methodology for real estate in Germany for the vdp<sup>3</sup>.

# SUMMARY

For the building sector and real estate financing, the focus within this study is on the following three economic activities stated in the EU Taxonomy:

- 7.1 Construction of new buildings
- 7.7 Acquisition and ownership of buildings

## Construction of new buildings

For 'construction of new buildings', the property must comply with at least 10% lower than the requirements for the national primary energy demand of the 'Nearly Zero-Energy Building'<sup>3</sup> (NZEB). Based on the 'Energy Performance of Buildings Directive'<sup>4</sup> (EPBD), the NZEB is implemented in the building energy codes' requirements:

- "Réglementation thermique RT2012<sup>5</sup>" in France,
- "Bijna Energieneutrale Gebouwen<sup>6</sup>" in Netherlands,
- "Technical Condition TC 2021<sup>7</sup>" in Poland,
- "Regulation 25B – Part L<sup>8</sup>" in UK-England.

For the selected countries outside the EU (without an official NZEB definition), a matching equivalent is recommended within this study (depending on the national and local state implementation) as:

- "IECC 2018<sup>9</sup> and ASHRAE 90.1-2019<sup>10</sup>" in US,
- "National Energy Code of Canada 2020<sup>11</sup>" in Canada.

The 10% improvement is expressed in the national implemented key performance indicator as operational primary energy demand, or local national equivalent e. g. such as asset ratings, or energy performance indices.

## Acquisition and ownership of buildings

For buildings within the scope of 'acquisition and ownership of buildings', buildings are required to provide an energy performance certificate with EPC class label A or better:

### Residential Building (Single-Family & Multi-Family)

- FRANCE: Energy performance class A with a calculated primary energy demand or consumption of  $A \leq 70$  kWh per m<sup>2</sup> and year or CO<sub>2</sub>-Emissions  $\leq 6$  kgCO<sub>2</sub> per m<sup>2</sup> and year.
- NETHERLANDS: Energy performance class A with a calculated primary energy demand of A++++, A+++, A++, A+ or  $A \leq 160$  kWh per m<sup>2</sup> and year.
- UK-England: Energy performance class A with an asset rating AR  $\geq 92$ .

### Non-residential building

- FRANCE: Energy performance class A with a calculated primary energy demand or consumption of A as office:  $\leq 50$ , retail:  $\leq 80$ , logistics:  $\leq 30$  & hotels:  $\leq 100$  kWh per m<sup>2</sup> and year or CO<sub>2</sub>-emissions of A as office:  $\leq 6$ , retail:  $\leq 10$ , logistics:  $\leq 3$  & hotels:  $\leq 12$  kgCO<sub>2</sub> per m<sup>2</sup> and year.
- NETHERLANDS: Energy performance class A with a calculated primary energy demand of office:  $\leq 180$ , retail:  $\leq 285$ , logistics:  $\leq 155$  & hotels:  $\leq 230$  kWh per m<sup>2</sup> and year.
- UK-ENGLAND: Energy performance class A with an asset rating AR  $\leq 25$  for office, retail, logistics, and hotel buildings.

As a reference, the DIN ISO 52003-1:2018-03<sup>12</sup> sets the threshold for the EPC label A  $\leq$  35% of the reference value from the EPC for non-residential buildings. This proposal has not been adopted yet by the legislation in the EU for its current building energy codes.

#### Proposed methodology for the top 15%

As an alternative to the EPC class A, buildings are eligible, when they are within the top 15% of the national or regional building stock expressed as operational primary energy demand (or metered energy consumption) with proof of adequate evidence<sup>13</sup>.

Additionally, the third Commission Notice of the EU Taxonomy<sup>14</sup> confirms that furthermore 'there are no specific rules for defining the top 15% or 30% of the building stock'[..], and that 'the relevant threshold for the top 15% of the national or regional building stock can be estimated' in the absence of a relevant EPC. As of 2024, there are no European-wide, official public reference top 15% thresholds set by public governmental bodies for all investigated countries within this study.

Indicating the national area-specific operational primary energy demand, this study proposes the derivation of the top 15% thresholds based on public sources, representative data and quality sets to approach the relative stringency of energy labels and rating tools of the national building stock to be eligible as either:







The proposed top 15% key performance indicators are area-specific and set as annual operational primary energy demand in kWh per square meter and year, based on the national legislation. For countries outside of the EU, official site-to-source conversion factors are applied.

The full methodology<sup>16</sup> behind this insight covers all real-estate economic activities within the EU Taxonomy and provides besides the operational primary energy demand also additional indicators e. g. final energy demand or consumption, energy performance certificate labels and country-specific thresholds to indicate eligibility for the top 15%.

With the proposed top 15% eligibility criteria, the vdp member institutions who purchased this transparent, and EU Taxonomy compliant methodology approach and thresholds are empowered to report their economic activities and provide a substantial contribution towards climate change mitigation for real estate.

#### Outlook and further development

Transparent data availability within most of European countries and understanding the existing building stock remains a challenge to overcome. However, the robustness of this study has been proven to be applicable not only in Europe but also in Canada and the US and is a step toward the decarbonization transformation of the global climate change mitigation.

Country   Usage	Residential (SFH   MFH)	Office	Retail	Logistics	Hotel
France 	130   90	110	180	90	210
Netherlands 	72   61	90	105	33	132
Poland 	130   115	155	160	118	165
UK-England 	154   123	AR54	AR40	AR24	AR43
United States 	95   158	235	235	158	240
Canada 	Not in scope	296	275	Not in scope	Not in scope

Annual operational primary energy demand in kWh per square meter and year, based on the national legislation. Results are indicative KPIs of study for vdpResearch.  
Netherlands: Retail (food), UK: non-residential asset rating (AR), United States: Logistics (refrigerated) Canada: Source Energy Intensity. National definitions of carbon emissions equivalents, site-to-source conversion factors, primary energy demand, metered consumptions, site energy or source energy as well as non-food, food, refrigerated and non-refrigerated conditions apply on a national level. Thresholds are a recommendation and subject to change. Status January 2024.

The methodology, process, and sources for these thresholds including end energy, primary energy, and carbon emission covering heating and electricity independently are set in the annexed methodology for the vdpResearch. The annexed methodology includes furthermore specific threshold values and recommendation reference values for singlepoint of asset class top 15% criteria as well as detailed in-depth

analyses and sources and is under annual revision. Once there will be a national representative building database publicly and representatively available (and covering the existing building stock accordingly), the proposed thresholds of this methodology may undergo a revision to meet the future requirements for the top 15% eligibility criteria.

## References

- 1) Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021
- 2) Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020
- 3) Report on the calculation of 'cost-optimal levels of minimum energy performance requirements' of 1 August 2018
- 4) Directive 2010/31/EU of 19 May 2010 with (EU) 2018/1999 and 2018/844
- 5) Réglementation thermique – RT2012
- 6) Bijna Energieneutrale Gebouwen – BENG
- 7) Technical Condition TC 2021 – Dz.U. 2021 poz. 497
- 8) Regulation 25B – Part L – The Buildings Regulations 2010 No. 2214 "
- 9) IECC 2018 – International Energy Conservation Code
- 10) ANSI/ASHRAE/IES Standard 90.1-2019 - Energy Efficiency Standard for Buildings Except Low-Rise Residential Buildings. American Society of Heating, Refrigerating and Air-Conditioning Engineers"
- 11) NECB 2020 – National Energy Code of Canada for Buildings 2020 – National Research Council of Canada"
- 12) DIN ISO 52003-1:2018-03 Energieeffizienz von Gebäuden - Indikatoren, Anforderungen, Kennwerte und Ausweise. Teil 1: Allgemeine Aspekte und Anwendung auf die Gesamtenergieeffizienz (2018).
- 13) Draft 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. 19 December 2022.
- 14) Draft 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 (third Commission Notice). 21 December 2023.
- 15) EU Taxonomy: Acquisition and Ownership of Buildings – Derivation of the top 15% of existing building stock in Germany. Version August 2023. Publication for the Association of German Pfandbrief Banks (vdp) – Drees & Sommer – [vdp-Drees&Sommer\\_top15%-study-Germany-2023](#) available via [esg@dreso.com](mailto:esg@dreso.com) - <https://www.dreso.com/de/>
- 16) EU Taxonomy: Acquisition and Ownership of Buildings – Derivation of the top 15% of existing building stock in Canada, France, Netherlands, Poland, UK-England and United States. Version January 2024. Publication for vdpResearch – Drees & Sommer – available via [esg@dreso.com](mailto:esg@dreso.com) - <https://www.dreso.com/de/>

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## ABOUT THE AUTHOR

Drees & Sommer is your innovative partner for consulting, planning, construction and operation. The leading European consulting, planning and project management enterprise, Drees & Sommer has supported private and public clients and investors for 50 years in all aspects of real estate and infrastructure – both analog and digital. Through future-oriented consulting, the enterprise can offer solutions for successful buildings, profitable real estate portfolios, people-oriented working environments, and visionary mobility concepts. The company's 5100 employees in 59 locations around the world work in interdisciplinary teams to provide support for clients from a wide variety of sectors.



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## ABOUT THE CLIENT

vdpResearch is the real estate market research company of the Association of German Pfandbrief Banks (vdp). From a credit industry perspective, it deals intensively with the recording, analysis, valuation and forecasting of real estate prices.

**vdpResearch**