GREEN FINANCE

METHODOLOGY FOR BAWAG GROUP

CLIMATE CHANGE MITIGATION
REAL ESTATE ACTIVITIES –
AUSTRIA, GERMANY & THE NETHERLANDS

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C. Tschätsch, M. Jelencsits, K. Sperka & M. Hüsing

BAWAG GREEN FINANCE

EU Taxonomy eligibility criteria – climate change mitigation – Residential assets in Austria

		Low-carbon buildings	Single-Family	Multi-Family
New construction or **Existing buildings**	**1)**	**Nearly Zero Energy Buildings** built after 31st December 2020	The primary energy demand is at least 10% lower then the "Nearly Zero Energy Building"-Standard (NZEB)'s threshold. Based on „Energy Performance of Buildings Directive (EPBD)", the NZEB is set in "OIB-RL6"-"Nationaler Plan" (OIB-330.6-005/18)	
			New Construction: NZEB-10%: Primary energy $PED_{H,n.ren.} \leq 36.9$ kWh/m²$_{GFA}$a Major Renovation: NZEB-10%: Primary energy $PED_{H,n.ren.} \leq 39.6$ kWh/m²$_{GFA}$a	
Existing buildings	**2)**	**Energy performance certificate (EPC)** built before 2021	Energy performance certificate with energy efficiency rating of A or better, complying with: - heating demand $HWB_{(Ref),SK} \leq 25$ kWh/m²$_{GFA}$a , or - energy efficiency factor $f_{GEE,(SK)} \leq 0.85$	
	3)	**Top 15%** Year of construction (building permit) based on Building Energy Codes (OIB) and Primary Energy Demand (PED), Built before 2021	Salzburg: 2012 All other counties: 2010	Burgenland, Vorarlberg: 2013 Salzburg: 2012 All other counties: 2010
			All counties: OIB-R6-2007 (OIB-300.6-038/07) with stringency of 01.01.2010	Burgenland, Vorarlberg: OIB-R6-2011 (OIB-330.6-094/11) All other counties: OIB-R6-2007 with string. of 01.01.2010
Renovation of **Existing buildings**	**4)**	**Property Upgrade** **Major renovation**	Major renovation meets cost-optimal minimum energy performance requirements in accordance with the Energy Performance of Buildings Directive (EPBD). Requirements for total energy efficiency as referenced in "OIB-RL6:2015" (OIB-330.6-009/15) or newer.	
			Relative improvement in non-renewable primary energy demand ≥ 30% in comparison to the performance of the building before the renovation.	

Drees & Sommer low carbon building criteria are based on EU Taxonomy (Delegated Act – July 2021 – technical criteria for climate change mitigation). Criteria are valid for assets located in Austria. Status: February 2022. Assets do need to comply only with one of the criteria 1) – 4) to proof eligibility, according to the corresponding asset category and usage.

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Reference benchmarks – Residential assets in Austria

	Ø-Reference values: Energy		Ø-Reference values: CO_2-equivalent	
Single-Family	Primary energy factor mean residential (heating, hot water): 1.246	Building-weighted reference benchmark: FED_H = 309.9 kWh/m^2_{GFA}a PED_H = 386.1 kWh/m^2_{GFA}a	CO_2 emission intensity mean residential (heating, hot water): 0.175 $kgCO_2$/kWh	Building-weighted reference benchmark (heating, hot water): 54.2 $kgCO_2/m^2_{GFA}$a
Multi-Family		Building-weighted reference benchmark: FED_H = 195.6 kWh/m^2_{GFA}a PED_H = 243.7 kWh/m^2_{GFA}a		Building-weighted reference benchmark (heating, hot water): 34.2 $kgCO_2/m^2_{GFA}$a

FED_H = final energy demand for heating and hot water
FED_H = final energy demand for heating and cooling
GFA = heated gross floor area

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EU Taxonomy eligibility criteria – climate change mitigation – Residential assets in the Netherlands

		Low-carbon buildings	Single-Family	Multi-Family
New or existing buildings	**1)**	**Nearly Zero Energy Building** Built 2021 or newer	At least 10 % lower than the requirements for the primary energy demand of the "Nearly Zero Energy Building" standard (NZEB). Based on the "Energy Performance of Buildings Directive (EBPD)", the NZEB standard is implemented in the BENG requirements. NZEB-10%: Primary energy PE ≤ 45 kWh/m²a (residential building).	
Building Acquisition & Ownership	**2)**	**Nearly Zero Energy Building** Built before 31/12/2020	„Bouwbesluit 2012“ amendment from the 13th December 2019 *(“Besluit van 13 december 2019, houdende wijziging van het Bouwbesluit 2012 en van enkele andere besluiten inzake bijna energie-neutrale nieuwbouw”)* with primary energy PE ≤ 50 kWh/m²a (residential building) | PE ≤ 30 kWh/m²a (other residential function)	
	3)	**Energy performance certificate** Built before 31/12/2020	Final EPCe with energy label A or BENG EPCe with energy label A+ or better	Final EPCe with energy label A or BENG EPCe with energy label A+ in combination with an EPCo (or comparable) ≤ 0.6 or in combination with year of construction newer than 2010
	4)	**Top15% Building Energy code** primary energy requirement Built before 31/12/2020	Building code 2003 incl. amendments from 22/10/2010 with energy requirement EPCo ≤ 0.6 or better	
Renovation	**5)**	**Property Upgrade**	Major renovation meets cost-optimal minimum energy performance requirements according to the Energy Performance of Buildings Directive (EBPD).	
			Relative improvement in non-renewable primary energy demand ≥ 30% in comparison to the performance of the building before the renovation.	

Drees & Sommer low carbon building criteria are based on EU Taxonomy (Delegated Act – July 2021 – technical criteria for climate change mitigation). Criteria are valid for assets located in the Netherlands. Status: February 2022. Assets do need to comply only with one of the criteria 1) – 4) to proof eligibility, according to the corresponding asset category and usage.

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Reference benchmarks – Residential assets in the Netherlands

Ø-Reference values: Energy		Ø-Reference values: CO_2-equivalent	
Building stock weighted reference benchmarks: **End energy:** Ø115.3 kWh/m²a **Primary energy factor:** Ø1.037 **Primary energy:** Ø119.5 kWh/m²a		Building stock weighted reference benchmark: CO_2-Intensity: Ø0.274 kgCO_2/kWh	Building stock weighted reference benchmark: 31.6 kgCO_2/m²a

Label	Energy-Index 01/01/2015 … 31/12/2020	Primary energy demand 01/01/2021 …
A++++		≤ 0
A+++		> 0 & ≤ 50
A++		> 50 & ≤ 80
A+		> 80 & ≤ 110
A	≤ 1.20	> 110 & ≤ 165
B	1.21 – 1.40	> 165 & ≤ 195
C	1.41 – 1.80	> 195 & ≤ 255
D	1.81 – 2.10	> 255 & ≤ 300
E	2.11 – 2.40	> 300 & ≤ 345
F	2.41 – 2.70	> 345 & ≤ 390
G	> 2.70	> 390

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EU Taxonomy eligibility criteria – climate change mitigation — Residential assets in Germany

		Low-carbon buildings	Single-Family	Multi-Family
New or existing buildings	**1)**	**Nearly Zero Energy Building** Built 2021 or newer	At least 10% lower than the requirements for the primary energy demand of the "Nearly Zero Energy Building" standard (NZEB). Based on the "Energy Performance of Buildings Directive (EBPD)", the NZEB standard is implemented in the GEG requirements. NZEB-10% via PED-requirements of KfW-55 or better	
			Indicative reference values: Primary energy demand	
			Small SFH: PED <= 63.9 kWh/(m²a) Large SFH: PED <= 37.8 kWh/(m²a)	Small MFH: PED <= 45.9 kWh/(m²a) Large MFH: PED <= 39.6 kWh/(m²a)
Existing buildings	**2)**	**Energy Performance Certificate (EPC)** Built before 31/12/2020	EPC label A or better Energy performance label A+, A acoording to GEG 2020 Site energy demand: A+ ≤ 30 | A ≤ 50 kWh/(m²a)	
	3)	**Top15% Energy performance certificate** Built before 31/12/2020	Energy performance label A+, A or B according to GEG 2020 Site energy demand: A+ ≤ 30 | A ≤ 50 kWh/(m²a) |B ≤ 75 kWh/(m²a)	Energy performance label A+ or A according to GEG 2020 Site energy demand: A+ ≤ 30 | A ≤ 50 kWh/(m²a)
	4)	**Top15% Energy consumption** Built before 31/12/2020	Final energy consumption < 70 kWh/(m²a) leading to Primary energy consumption < 74 kWh/(m²a) and CO_2-emissions < 17 kgCO_2/(m²a) based on building-stock weighted reference intensities:	
	5)	**Top15% Building Energy code** Built before 31/12/2020	Primary energy demand requriements of building energy code EnEV 2009 or better	
Renovation	**6)**	**Property Upgrade** **Major Rennovation**	The building renovation complies with the applicable requirements for major renovations as defined in the Energy Performance of Buildings Directive (EBPD)“, based on the cost optimal efficiency level as defined in EnEV 2016 (EnEV 2014 with amendments from 01.01.2016)	
			Relative improvement in primary energy demand ≥ 30 % in comparison to the performance of the building before the renovation.	

SFH: Single-Family-House: Small/Lage: 149 m² / 296 m² MFH: Multi-Family-House: Small/Lage: 474 m² / 3811 m²
EPC: Energy Performance Certificate (Energieausweis) PED: Primary Energy demand

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Reference benchmarks – Residential assets in Germany

Ø-Reference values: Energy		Ø-Reference values: CO_2-equivalent	
Building stock weighted reference benchmarks: **End energy:** Ø146.8 kWh/(m²a) **Primary energy factor:** Ø1.052 **Primary energy:** Ø145 kWh/(m²a)	<table><tr><th>Label</th><th>End energy demand</th></tr><tr><td>A+</td><td>≤ 30 kWh/(m²a)</td></tr><tr><td>A</td><td>≤ 50 kWh/(m²a)</td></tr><tr><td>B</td><td>≤ 75 kWh/(m²a)</td></tr><tr><td>C</td><td>≤ 100 kWh/(m²a)</td></tr><tr><td>D</td><td>≤ 130 kWh/(m²a)</td></tr><tr><td>E</td><td>≤ 160 kWh/(m²a)</td></tr><tr><td>F</td><td>≤ 200 kWh/(m²a)</td></tr><tr><td>G</td><td>≤ 250 kWh/(m²a)</td></tr><tr><td>H</td><td>> 250 kWh/(m²a)</td></tr></table>	Building stock weighted reference benchmark: CO_2-Intensity: Ø0.236 kgCO_2/kWh	Building stock weighted reference benchmark: 34.6 kgCO_2/(m²a)

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