Svenska Bankföreningen
Finance Sweden

GUIDANCE

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Guidance for the Calculation of Financed Emissions from Real Estate in Sweden

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Contents

1. Introduction

The purpose of this guidance is to provide a uniform and transparent methodology for banks to calculate financed emissions from real estate in Sweden. Financed emissions refer to greenhouse gas emissions that arise from customers whose activities are financed by banks through lending and investments.[1] In other words, these are emissions enabled by the bank's operations. By following this guidance, comparability between banks is enhanced. The calculations are based on the international standard from the Partnership for Carbon Accounting Financial (PCAF) and are adapted to Swedish conditions.

At the beginning of 2024, Finance Sweden published an initial guidance for calculating financed emissions for tenant-owner associations and tenant-owned apartments. The guidance has now been expanded to also cover multi-family buildings, single-family houses, and commercial properties.

The starting point is that all member banks that calculate and disclose their financed emissions from real estate in Sweden should apply this guidance. If a member bank deviates from any part of the guidance, this should be clearly described when the figures are published. The guidance is updated annually with the latest available emission factors and published on the website of Finance Sweden.

2. Types of Properties and Use of Buildings on the Property

A property, in legal terms, is a defined area of land that may contain one or several buildings. Properties are classified according to their use and building type, such as single-family houses, multi-family buildings, or commercial properties. In financial contexts, a financial institution's lending is linked to properties or to different forms of ownership and rights of use, such as tenant-owner associations and individual tenant-owned apartments. This guidance covers on-balance sheet loans to:

a**) Tenant-Owner Associations**

Lending for specific purposes – namely, for the counterparty's purchase and refinancing of buildings. The purpose of a tenant-owner association is to grant the use of apartments in the association's building(s) to members with tenant-ownership without any time limitation.

[1] Emissions are reported in three categories – scope 1, 2, and 3 – where scope 1 refers to direct emissions from the organization's own operations, scope 2 refers to indirect emissions such as purchased electricity, and scope 3 refers to emissions from customers' activities (the value chain). The emissions generated by activities of customers that are financed by the bank are referred to as financed emissions (scope 3).

b**) Tenant-Owned Apartments**
Lending for specific purposes – namely, for the counterparty's purchase and refinancing of tenant-owned apartments within a tenant-owner association. This definition implies that the property is generally used for residential purposes. When the term apartment is used, it refers to individual tenant-owned apartments within a tenant-owner association.

c**) Multi-Family Buildings**
Lending for specific purposes – namely, for the counterparty's purchase and refinancing of multi-family buildings for residential purposes. A property may consist of one or several buildings.

d**) Single-Family Houses**
Lending for specific purposes – namely, for the counterparty's purchase and refinancing of single-family houses. This definition implies that the property is used for residential purposes.

e**) Commercial Properties**
Lending for specific purposes – namely, for the counterparty's purchase and refinancing of commercial properties, such as schools, health centers, and elderly care facilities. A property may consist of one or several buildings.

3. Emissions Covered

Financial institutions' reporting covers scope 1 and 2 emissions[2] that are related to the energy use of the property or apartment financed through the loan or mortgage, i.e., emissions from heating and electricity use. The method therefore refers to the operation of properties and not to climate impact resulting from the construction of new buildings.

a) **Tenant-Owner Associations**: Scope 1 and 2 emissions for all shared areas of the property shall be included, including electricity use for economic activities, referred to as property electricity or operational electricity.

b) **Tenant-Owned Apartments**: Scope 1 and 2 emissions related to the apartment shall be included, including emissions from the individual apartments of tenant-owners.

[2] This does not apply to the emission factor for electricity, which also includes upstream components in scope 3 (category 3) through the addition of adjustments for transmission and distribution losses as well as trade adjustments.

c) **Multi-Family Buildings**: Scope 1 and 2 emissions for the entire property shall be included, including emissions from electricity use in the property (referred to as property electricity).

d) **Single-Family Houses**: Scope 1 and 2 emissions related to the house shall be included, including emissions from electricity use in the property (referred to as household electricity).

e) **Commercial Properties**: Scope 1 and 2 emissions for the entire property shall be included, including emissions from electricity use in the property (referred to as property electricity).

4. Method for Calculating Financed Emissions

Calculation formula

Financed emissions are calculated by attributing the lender's share of the property's emissions. The emissions should include both heating and electricity use for the household or other activities within the property.

$$\boldsymbol{Financed\ emissions} = \sum_{i=1}^{n} \boldsymbol{Attribution\ factor_i} \times \boldsymbol{Property\ emissions_i}$$

Where i is each property and n is the total number of properties.

To calculate the emission intensity of the entire loan portfolio, the financed area also needs to be calculated.

$$\boldsymbol{Financed\ area} = \sum_{i=1}^{n} \boldsymbol{Attribution\ factor_i} \times \boldsymbol{area_i}$$

Where i is each property and n is the total number of properties.

$$\boldsymbol{Financed\ emission\ intensity} = \frac{\boldsymbol{Financed\ emissions}}{\boldsymbol{Financed\ area}}$$

Attribution Factor

When calculating financed emissions, annual emissions are attributed to the lender or mortgage provider based on the loan-to-value (LTV) ratio. The attribution factor is calculated as the ratio between the outstanding amount at the time of greenhouse gas reporting and the value of the property or apartment at the time of the loan.

(2 a) $$Attribution\ factor_a = \frac{Outstanding\ amount_a}{Property\ value_a}$$

(a=property)

(2 b) $$Attribution\ factor_b = \frac{Outstanding\ amount_b}{Apartment\ value\ _b}$$

(b=apartment)

If the value at the time of the loan is not available, financial institutions should instead use the property value available at the baseline year and fix this value for the following years in greenhouse gas reporting, i.e., the denominator remains constant.

If the loan amount has increased and the property has received a new valuation, the new valuation should be used and then fixed. If the property has received a new valuation without an increase in the loan amount, the initial fixed property value shall remain fixed. The attribution factor can never exceed 100%.

If the loan is used to refinance a previous loan or mortgage and this loan is provided by the original lender or mortgage provider, the new loan replaces the original loan or mortgage. If the refinancing is done by an institution other than the original lender, the new loan and the emissions associated with the property or apartments are attributed to the institution providing the refinancing.

Property Emissions

The property's annual emissions are calculated by multiplying the emission intensity of the building type by its heated area. For tenant-owner associations, a distribution factor based on heated floor area is also used to allocate emissions between the association and the apartments (see section "Heated Floor Area").

$$\boldsymbol{Property\ emissions_f = \sum_{i=1}^{n} Emission\ intensity_i \times area_i}$$

Where i is each building on property f and n is the total number of buildings on the property.

If the building lacks an Energy Performance Certificate (EPC), estimates for carbon emissions should be used. The Partnership for Carbon Accounting Financial (PCAF) provides national estimates for emission intensities of different building types.

If the building has an EPC, the building's emission intensity should be calculated based on its energy intensity. The energy performance or primary energy number (kWh/m²) provided by Boverket (The National Board of Housing, Building and Planning) represents energy intensity for heating and is used for calculating property emissions. The energy performance or primary energy number includes heating and

hot water according to Boverket's building regulations.[3] For the calculation of total emissions from a property or apartment, household and property electricity should also be included.

$$Emission\ intensity = \begin{matrix} \sum_{i=1}^{n} Energy\ intensity\ (heating)_i \times emission\ factor_i \\ + \\ Energy\ intensity\ (electricity) \times emission\ factor_{electricity} \end{matrix}$$

Energy intensity – heating

EPC data contains information on energy performance/energy intensity (kWh/m^2/year), heated floor area (in Swedish, Atemp), and main energy source (which may be a combination of different energy sources). The energy performance is multiplied by the emission factors for each energy source (see section "Emission Factors") to convert energy performance to carbon dioxide equivalents (CO_2e), resulting in the building's emission intensity in CO_2e/m^2 from heating and hot water.

Energy intensity – electricity use in household or activities

Emissions from electricity use in the household or activities, also referred to as property electricity, should be included in the calculation of total emissions for all building types and are provided by the Swedish Energy Agency. If emissions are calculated using EPC data, emissions from household and property electricity must be added, as these are not included in the energy performance. Note that when using estimates from the PCAF European Building Database, household and property electricity are already included in the estimates.

When calculating emissions based on EPCs, the electricity intensity (kWh/m^2) from Energimyndigheten (the Swedish Energy Agency) file should be multiplied by the emission factor for electricity ($kgCO_2e$/kWh) to obtain the emissions from the building type per square meter ($kgCO_2e/m^2$). This applies to all building types covered by this guidance.

Electricity use, not for heating and hot water, per building type Source: Energy Indicators in Figures 2025	**kWh/m^2** **Table from Energimyndigheten 2023**	**kWh/m^2** **Table from Energimyndigheten 2022**
Single-Family Houses, household electricity (SFH)	28	30
Multi-Family Buildings, property/household	46	49

[3] Boverkets byggregler (2011:6) – föreskrifter och allmänna råd, BBR. This consolidated version is available in Swedish only.

electricity (MFH) incl. Tenant-Owner Associations & Apartments		
Premises, property/operational electricity	137	136

Emission Factors

The EPC specifies the primary and secondary energy source. If there are two energy sources for heating, a combined emission factor is calculated as follows[4]:

$$Combined\ emission\ factor = \frac{(Emission\ factor\ primary\ energy\ source + Emission\ factor\ secondary\ energy\ source)}{2}$$

The emission factors used to calculate building emissions are the latest available according to the table below. For grouping of Boverket's various combinations of energy sources, see Appendix 2 "Energy Sources and Emission Categorization." Some emission factors are static by nature and do not change over time, while others are updated annually. This document provides the latest available emission factors that can be used in financial institutions' annual reports. Depending on the source, the available reference years differ at the end of Q3 when this document is updated.

The table below also shows which *Assessment Report (AR)* the factors are based on, i.e., which Global Warming Potential (GWP) values are used to convert gases to CO_2 equivalents. According to European Sustainability Reporting Standards (ESRS), the latest GWP values published by the IPCC – based on a 100-year time horizon – should be used to calculate emissions in CO_2 equivalents for greenhouse gases other than carbon dioxide. The latest GWP values are found in AR6.

[4] It should be noted that official statistics may show a different distribution, and therefore other distributions than this one may be applied in other calculations for properties with multiple heating sources. It should also be noted that the current distribution may be subject to change as more precise statistics become available in the future.

The recommendation is to use the following reference years, emission factors, AR, and sources.

Energy Source	Type	Refer-ence Year	Emission factor (gCO_2e/kWh)	Assess-ment Report	Source
Electricity[5]	Annual update	2023	Requires license for use[6]	AR6	International Energy Agency (IEA)
District heating	Annual update	2024	49,6	AR4	Energiföretagen (Swedenergy)
Oil	Static	2023	268,12 [7]	AR6	Naturvårds-verket
Gas	Static	2023	203,96 [8]	AR6	Naturvårds-verket
Biofuel	Static	2014	0	-	IPCC Table A.III.2 / GHG protocol

[5] Also includes energy sources such as geothermal heat, ground source heat, and air source heat pumps powered by electricity.

[6] Raw data from the IEA is licensed and therefore cannot be published. Access to the emission factor for electricity from the IEA is available through the purchase of a license, and the final emission factor is available in October. This is the factor that should be used. The following emission components must be added when using data from the IEA: emissions per kWh from electricity for CO_2 (total), CH_4 (total), and N_2O (total), adjustment for transmission and distribution losses (CO_2 total), and trade adjustment (CO_2 total) (a total of 5 rows from the Summary tab are summed for the latest reported data (not estimated/provisional)). If another equivalent data source is used, it is recommended that the same emission components are used and added.

[7] The factor for oil is based on the emission values for Heating Oil 1. The factor consists of emissions of nitrous oxide (N_2O), methane (CH_4), and carbon dioxide (CO_2), and is determined by first converting the emissions of nitrous oxide (N_2O) and methane (CH_4) to carbon dioxide equivalents (CO_2e) using Global Warming Potential (GWP) values from the IPCC 6th Assessment Report. All gases (N_2O, CH_4, and CO_2) are then summed to a total expressed in CO_2e.

[8] The factor for gas is based on the emission values for Town Gas. The factor consists of emissions of nitrous oxide (N_2O), methane (CH_4), and carbon dioxide (CO_2), and is determined by first converting the emissions of nitrous oxide (N_2O) and methane (CH_4) to carbon dioxide equivalents (CO_2e) using Global Warming Potential (GWP) values from the IPCC 6th Assessment Report. All gases (N_2O, CH_4, and CO_2) are then summed to a total expressed in CO_2e.

Heated Floor Area

If the heated floor area for a property (including apartments) is known, it is used in the calculation.[9] If it is unknown, an estimated heated floor area for the building type may be applied. The estimate can be based either on national statistics for different building types or on the bank's own lending data on the average heated floor area for each building type.

Tenant-owner associations differ from other building types in that information on heated floor area is not available. Therefore, a distribution factor must be applied. If a bank finances a tenant-owner association, 30% of the floor area of the property (the association's buildings) is allocated to the tenant-owner association.[10] The distribution is based on an estimate that common areas in the association, such as laundry rooms, corridors, stairwells, storage spaces, and communal facilities, constitute about 30% of a tenant-owner association's heated area. For the calculation of the association's total emissions, total area, financed emissions, and financed area, all are adjusted with the distribution factor of 30%. The remaining floor area of the property is attributed to the tenant-owned apartments.[11,12]

5. Data och Data Quality

Using a building's actual energy consumption is preferable, but such data is not always available. In the absence of metered data, energy consumption can be estimated based on a building's characteristics and publicly available data. Energy consumption can be estimated using the energy class and information available in Energy Performance Certificates (EPCs). In EPCs, financial institutions can find information about a building's energy efficiency, heated area, and energy sources. Energy class and EPC data are available from Boverket. Note that EPCs are only available at the building level and not at the apartment level.

For buildings that lack both an energy class and EPC data, financial institutions may need to use estimates to approximate the building's emissions. Financial institutions

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[9] In the Energy Performance Certificate, heated floor area is referred to as Atemp.
[10] The allocation factor is primarily based on floor area but is supported by other allocation keys such as loan-to-value ratio and energy consumption for common areas. The allocation factor will be reviewed every five years. It was first established in 2023. To calculate a tenant-owner association's emission intensity, 30% of the property's total emissions shall be divided by 30% of the property's total floor area (Atemp).
[11] The energy intensity should not be adjusted with the distribution factor; the property's average energy performance per square meter should be the same for both the tenant-owner association and the tenant-owned apartments.
[12] In Sweden, tenant-owned apartments do not have their own Energy Performance Certificate. EPCs are only available for the buildings of the tenant-owner association. The main assumption is that the building's energy intensity (kWh/m²) and heating source(s) can be used to calculate the carbon emissions of individual apartments. The emission calculation requires information on the apartment's area, either actual or estimated.

are recommended to be transparent in their reporting regarding the sources of any estimates used. Different data and estimates imply different data quality, as shown in the table below.

Data Quality	Options for Estimating Financed Emissions	When Each Option Should Be Used	
		Single-Family Houses, Multi-Family Buildings, Commercial Properties, and Tenant-Owner Associations	Tenant-Owned Apartments
Score 1	Option 1: Actual emissions from the building (1a)	Primary data based on **actual energy consumption** (metered data) **for the relevant building** is available. Emissions are calculated based on the building's actual energy consumption and a **supplier-specific emission factor** for each energy source.	Primary data based on **actual energy consumption** (metered data) **for the relevant apartment** is available. Emissions are calculated based on the apartment's actual energy consumption and a **supplier-specific emission factor** for each energy source.
Score 2	(1b)	Primary data based **on actual energy consumption** (metered data) **for the relevant building** is available. Emissions are calculated based on the building's actual energy consumption and an **average emission factor** specific to each energy source.	Primary data based **on actual energy consumption** (metered data) **for the relevant apartment** is available. Emissions are calculated based on the apartment's actual energy consumption and an **average emission factor** specific to each energy source.
Score 3	Option 2: Estimated emissions from the building based on floor area (2a)	**Estimated energy consumption for the building per floor area based on the building's official energy label AND floor area is available.** Emissions are calculated based on the building's estimated energy consumption and an **average emission factor** specific to each energy source.	**Estimated energy consumption for the building per floor area based on the building's official energy label AND apartments' floor area is available.** Emissions are calculated based on the building's estimated energy consumption and an **average emission factor** specific to each energy source.
Score 4	(2b)	**Estimated energy consumption for the building per floor area based on building type and site-specific data AND floor area is available.** Emissions are calculated based on the building's estimated energy consumption and an **average emission factor** specific to each energy source.	**Estimated energy consumption for the building per floor area based on building type and site-specific data AND apartments' floor area is available.** Emissions are calculated based on the building's estimated energy consumption and an **average emission factor** specific to each energy source. *If a tenant-owned apartment cannot be linked to a specific tenant-owner association but the **apartment's floor area is available**, data quality level 4 applies.*
Score 5	Option 3: Estimated emissions from the building based on data from a number of buildings	**Estimated energy consumption per building based on building type and site-specific data AND data on the number of buildings is available.** Emissions are calculated based on the building's estimated energy consumption and an **average emission factor** specific to each energy source.	**Estimated energy consumption per building based on building type and site-specific data AND data on an average floor area for apartments is available.** Emissions are calculated based on the building's estimated energy consumption and an **average emission factor** specific to each energy source. *If a tenant-owned apartment cannot be linked to a specific tenant-owner association and the **apartment's***

			***floor area is not available**, data quality level 5 applies.*

Expired Energy Performance Certificates

An expired EPC still provides information for estimating a building's energy performance. EPCs that have expired, up to five years after their expiration date, should therefore be considered as corresponding to data quality level 5 according to the PCAF framework (see table above).[13] For regulatory reporting, specific requirements apply regarding valid EPCs.

Results Depend on Data Quality

Many assumptions must be made to calculate the emissions for loans to tenant-owner associations and tenant-owned apartments, as data is often difficult to obtain for confidentiality reasons. Even though the calculation method is fundamentally the same, the data sources used can lead to different results – for example, when average consumption data is replaced by actual consumption data from electricity network operators.

6. Other Considerations

A Property Consisting of Several Buildings

A property may consist of several buildings, each with a separate EPC. In such cases, the emissions for each building should first be calculated individually and then summed to obtain the total property emissions. To calculate the emissions for a tenant-owned apartment in a property with multiple buildings, where it is unknown in which building the apartment is located, the following steps should be taken:

1. Calculate the total emissions for the property (sum the emissions from all buildings).
2. Calculate an area-weighted average emission intensity (CO_2e/m^2) for the property, based on the heated floor area (Atemp) of the different buildings.
3. Multiply the property's emission intensity by the apartment's floor area.

7. Biogenic Emissions

Biogenic emissions are not included in the calculation of greenhouse gas emissions but should, according to the GHG Protocol, be calculated separately. Biogenic emissions must not be summed with the calculated greenhouse gas emissions.

Biogenic emissions are those arising from the combustion or decomposition of biological materials and have separate emission factors. Biogenic emissions may, for

[13] An Energy Performance Certificate is valid for up to 10 years from its issuance according to current regulations.

example, result from fuel combustion in district heating plants. In the calculation, only carbon dioxide should be included (methane and nitrous oxide are included in the above-mentioned reporting of greenhouse gas emissions).

To calculate financed biogenic emissions from the energy use of properties, it is recommended to use the methodology described above (see Chapter 4), together with the emission factors, reference years, and sources listed below.

Energy Source	**Type**	**Reference year**	**Emission Factor (gCO_2/kWh)**	**Source**
Electricity[14]	-	-	0[15]	-
District heating	Annual update	2023	213,86[16]	Energiföretagen och Naturvårds-verket
Oil	Static	2022	0[17]	Naturvårds-verket
Gas	Static	2022	0[18]	Naturvårds-verket
Biofuel	Static	2014	378	Naturvårds-verket

[14] Also includes energy sources such as geothermal heat, ground source heat, and air source heat pumps powered by electricity.
[15] The factor is based on a Swedish context. Consideration must be given to the electricity mix and its possible biogenic share.
[16] The factor is based on the fuel mix reported by Energiföretagen in combination with emission factors from the Swedish Environmental Protection Agency (Naturvårdsverket).
[17] The factor for oil is based on the emission values for Heating Oil 1. Oil has no biogenic origin.
[18] The factor for gas is based on the emission values for Town Gas. Town Gas has no biogenic origin.

Appendix 1. Calculation Example when Energy Performance Certificate Data from Boverket is Available

If the building/tenant-owner association lacks an Energy Performance Certificate (EPC), estimates for energy performance or carbon emissions should be used; see the chapter “Data and Data Quality” for calculation methods based on data quality.

If the tenant-owned apartment cannot be matched to a property and a tenant-owner association, estimates of average emissions per m² for multi-family buildings in Sweden may be applied (for example, from PCAF).

Tenant-Owner Associations

1. EPC data from Boverket are matched with buildings and tenant-owner associations. EPCs contain information on energy performance (kWh/m^2/year), Atemp (heated area), and main energy source (which may be a combination of different energy sources).

2. Energy performance per m^2 is multiplied by Atemp to obtain the total energy required for heating and hot water.

3. The total energy required is then multiplied by the emission factor for the main energy source(s) to obtain the building’s total emissions from heating and hot water.

    - If a building has a combination of two different energy sources, a 50/50 split between the energy sources is assumed.

    - Emission factors for different energy sources are obtained from public sources. See the section *Emission Factors* for those used.

    - If no information on the main energy source is available (i.e., the building/tenant-owner association has not been matched to an EPC), average emission factors should be used.

    - If the property/tenant-owner association consists of more than one building (indicated by more than one EPC), total emissions for the property are calculated using weighted average emissions for each building, based on heated area.

4. Data on household and property electricity for multi-family buildings per kWh/m^2 is multiplied by the property’s total Atemp and the emission factor for electricity to obtain the total emissions from household and property

electricity.

- Data on household and property electricity is obtained from the Swedish Energy Agency (Energimyndigheten).[19]

5. The tenant-owner association's total emissions (Step 3 and 4 combined) are multiplied by the distribution factor 0.3 to obtain the emissions attributable to the tenant-owner association.

6. The total emissions attributable to the tenant-owner association (Step 5) are multiplied by the attribution factor for the tenant-owner association to obtain the lender's financed emissions per tenant-owner association.

7. Property emissions from heating and hot water (Step 3) are divided by Atemp (heated area) to obtain the emissions per m^2 (emission intensity per m^2) for the property (to be applied for calculating the emissions for individual tenant-owned apartments).

Tenant-Owned Apartments

1. The tenant-owned apartment is matched to the tenant-owner association's property, if possible.

2. Data on emissions per m^2 from heating and hot water for the specific building or the entire property (if several buildings) is collected from the tenant-owner association's calculations (Step 7 for tenant-owner associations).

3. Emissions from heating and hot water per m^2 (Step 2) are multiplied by the apartment's floor area to obtain the total emissions from heating and hot water for the apartment.

4. Data on household and property electricity for multi-family buildings (kWh/m^2) is multiplied by the apartment's floor area and the emission factor for electricity to obtain the total emissions from the apartment.

5. The total emissions attributable to the apartment (Step 4) are then multiplied by the attribution factor for that apartment to obtain the lender's financed emissions for the apartment.

[19] Energy Indicators (energimyndigheten.se); Energy Use in Buildings; Electricity Use in Multi-Family Buildings.

Other Properties (Multi-Family Buildings, Single-Family Houses, and Commercial Properties)

1. EPC data from Boverket are matched with buildings. EPCs contain information on energy performance (kWh/m^2/year), Atemp (heated area), and main energy source (which may be a combination of different energy sources).

    - If the building lacks an EPC, estimates for energy performance should be used.

2. Energy performance per m^2 is multiplied by Atemp to obtain the total energy required for heating and hot water.

3. The total energy required is then multiplied by the emission factor for the main energy source(s) to obtain the building's total emissions from heating and hot water.

    - If a building has a combination of two different energy sources, a 50/50 split between the energy sources is assumed.

    - Emission factors for different energy sources are obtained from public sources. See the section *Emission Factors* for those used.

    - If no information on the main energy source is available (i.e., the building has not been matched to an EPC), average emission factors should be used.

    - If the property consists of more than one building (indicated by more than one EPC), total emissions for the property are calculated by summing the emissions of the individual buildings.

4. Data on household and property electricity for the specific property type per kWh/m^2 is multiplied by the property's total Atemp and the emission factor for electricity to obtain the total emissions from household and property electricity.

    - Data on household and property electricity is obtained from the Swedish Energy Agency (Energimyndigheten)[20].

[20] Energy Indicators (energimyndigheten.se); Energy Use in Buildings; Electricity Use in Multi-Family Buildings.

5. The total emissions attributable to the property (Step 3 and Step 4 combined) are multiplied by the attribution factor for the property to obtain the lender's financed emissions per property.

Appendix 2. Energy Sources and Emission Categorization

Type of Heating	Energy Category	Reference Date
Direct electric heating	Electricity	2022-06-20
Air-based electric heating	Electricity	2022-06-20
Water-based electric heating	Electricity	2022-06-20
Heating oil	Oil	2022-06-20
District heating	District heating	2022-06-20
Wood chips/pellets/briquettes	Biofuel	2022-06-20
Fossil gas	Gas	2022-06-20
Ground source heat pump (el)	Electricity	2024-11-22
Natural gas, town gas	Gas	2022-06-20
Fossil oil	Oil	2022-06-20
Firewood	Biofuel	2022-06-20
Exhaust air heat pump (el)	Electricity	2022-06-20
Air/air heat pump (el)	Electricity	2022-06-20
Air/water heat pump (el)	Electricity	2022-06-20
Other biofuel	Biofuel	2022-06-20