



EeDaPP

Energy efficiency
Data Protocol
and Portal

White paper on a
common minimum pan-
European green reporting criteria



Executive Summary

This White Paper presents a proposal for a standardised data protocol for the gathering, processing and disclosing of data related to energy efficient mortgages. The protocol consists of a list of data points which are categorised according to their mandatory (critical) and voluntary (aspirational) nature. This two-level approach is designed to ensure that, in the short term, a minimum list of data points will be available for lending institutions intending to originate energy efficient mortgages under the EEMI framework and, in the longer term, that the critical list can be developed and reinforced over time as more data becomes available, and practice in the market provides learning and confidence.

The proposed protocol is the result of two previous sets of analyses published under the EeDaPP project. The first report assessed currently available energy performance metrics in the real estate sector, regardless of the purpose and target audience of the performance measurements. The second analysis focused on the data needs of the financial sector for the origination of energy efficient mortgages, as well as the existing challenges and limitations to overcome the information gaps.

This White Paper is intended first and foremost as a consultation paper for lending institutions, data providers, built environment professionals and other relevant market stakeholders to assess the relevance of the proposed data points, both mandatory and voluntary, their respective categorisations as such, and the feasibility of gathering, processing and disclosing them. In this sense, the protocol should be considered as a “living” list to be adapted and refined according to market feedback.

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1. Introduction – where we stand

The Energy efficiency Data Protocol and Portal (EeDaPP) is an EU funded project under the Horizon 2020 programme. Started in March 2018, EeDaPP is part of a wider initiative, the Energy Efficient Mortgage Initiative (EEMI) that, together with the Energy efficient Mortgage Action Plan (EeMAP), aims to create a standardised European framework for mortgage loans which incentivise homebuyers to improve the energy efficiency of their properties or to acquire already energy efficient homes by way of favourable conditions linked to the loan.

The energy efficiency mortgage value chain is complex and fragmented, which is fully reflected in how data is being collected, managed, shared and reported. EEMI brings together a wide range and diverse set of individual stakeholders including lending institutions, borrowers, energy assessors, valuers and data warehouses, operating at different stages of the property life cycle who often have very different interests and priorities and typically tend to think and act in silos. Yet in the same time, mainstreaming energy efficiency mortgages and sustainable finance assume increased data transparency and disclosure.

At present, systematic data collection and management along a building's life cycle is more an exception than a rule. In addition, data and information is not adequately transferred from one stakeholder to the next. With each transaction, the flow of information is disrupted. To date, there is no universal, standardised system or protocol in place that would easily facilitate access, storage, update and transfer of building-related data and information in a standardised format along the energy efficiency mortgage value chain.

2. Rationale

2.1 Energy Efficient Mortgages Definition

The proposed template of data points, both mandatory and voluntary, is designed to be a support tool for banks which are considering issuing energy efficiency mortgages in compliance with the EEMI definition published in December 2018¹. This definition is the result of more than two years of extensive and wide-ranging engagement and consultation of the Energy Efficient Mortgage Initiative with banks, built environment professionals and consumers.

Definition of the Energy Efficient Mortgage

EEMs are intended to finance the purchase/construction and/or renovation of both residential (single family & multi-family) and commercial buildings where there is evidence of: (1) energy performance which meets or exceeds relevant market best practice standards in line with current EU legislative requirements and/or (2) an improvement in energy performance of at least 30%.

This evidence should be provided by way of a recent EPC rating or score, complemented by an estimation of the value of the property according to the standards required under existing EU legislation. It should specifically detail the existing energy efficiency measures in line with the EEM Valuation & Energy Efficiency Checklist.

In terms of the energy performance criteria and valuation guidelines, the EeDAPP data collection and reporting template closely follows the requirements set out in the definition, i.e. it focuses on the EPC as the main proxy to demonstrate compliance and improved energy performance levels. The valuation checklist is included as a reference to those indicators and observed energy efficiency characteristics which potentially could have an impact on value. Over the long term, capturing information on the indicators contained in the checklist is essential for measuring the performance of energy efficient mortgages and for benchmarking them in relation to key risk indicators such as probability of default (PD) or loss given default (LGD).

¹ <http://eemap.energyefficientmortgages.eu/eem-definition/>

2.2 Key principles

The successful implementation of the proposed list of common data points will require the template to:

- Be simple to understand and provide data for; user-friendly to ensure input capacity
- Be complementary and well-integrated with other similar data gathering and reporting templates currently in use by the market
- Be cost-effective and ask only for essential data to make the collection task initially less onerous for banks
- Be pragmatic
- Demonstrate quick wins and offer easy access for EEMI stakeholders
- Have a strong focus on linking building performance to value and financial risk
- Related to the above, ensure comparability and benchmarking to ensure compliance for the purposes of lending institutions' risk management and banking capital adequacy commitments and requirements, and to deliver transparency for investors.

2.3 Overall approach

The principles listed above imply that we need to develop a practical approach to a common data protocol which, on the one hand, is robust enough to meet the main technical aspects of measuring a building's environmental and financial performance but, on the other hand, is pragmatic enough to engage lending institutions to use the template for issuing new green loans or tag existing assets in their portfolios.

Taking a pragmatic view, EeDaPP advocates a staged approach to developing the data protocol. The starting point is the systematic organisation of existing and available data with an emphasis on EPC certificates, valuation checklist as well as common supervisory reporting templates, leaving the possibility open to extend the scope of data points when more data becomes available and when the common data protocol is fully established within markets. In that sense the list would need to be created as a "living tool".

From a lender's perspective, it is important to understand and harness the links between the asset's energy performance, value, credit risk assessments and the determination of financing/loan conditions. The building's physical characteristics and environmental performance information can be aggregated or used to generate valuable (i.e. decision-relevant) information. One of the concerns is that lending institutions often do not know what "technical data" should be collected and often do not realise how this information can be harnessed.

The aim of the common data protocol is to help lending institutions to manage the complexity of energy efficiency and sustainability metrics and organise information flows more efficiently. It also

ensures that all energy efficiency related risk and value information are translated into a valuable resource for lending decisions.

Therefore, at the initial stage, the focus of the template is on capturing relevant “short form” indicators (i.e. EPC) since lending institutions, at this point in time, will only need to see aggregate figures which can be readily understood and rolled out across whole portfolios. In the longer term, the minimum list can be developed and reinforced as more data becomes available and practice in the market provides learning and confidence. The availability of more granular data is a core element for more accurately reflecting energy efficiency in mortgage lending valuations and assessing lending risk. As long as the quality and quantity of data in terms of energy remains thin, the influence on market value and, therefore, key risk indicators will remain muted.

Likewise, in the medium to long-term, by facilitating convergence of the collection of data, the list will deliver increased comparability, which in turn will promote quality and transparency of data. These outcomes are vital from a risk management and therefore macro prudential and financial stability perspective. They will also provide certainty for investors, by providing access to reliable energy efficiency information and facilitating their due diligence processes.

Two-pronged approach

Short list (core indicators) – aim: set up a minimum set of data points and criteria to allow lending institutions to roll out energy efficiency loans.

Long list (aspirational, extended indicators) – aim: create a positive incentive chain across the mortgage value chain for more consistent and standardised data collection and management.

3. Data tree and core list of data points

3.1 Data tree and the general structure of the template

The following figure presents the schematic view of the EEM reporting requirements. The reporting protocol includes data fields that provides information in three key areas (i) Identifiers, (ii) Financial and Banking Data and (iii) Energy Efficiency data. Each component of the following diagram reads itself according to the following legend:

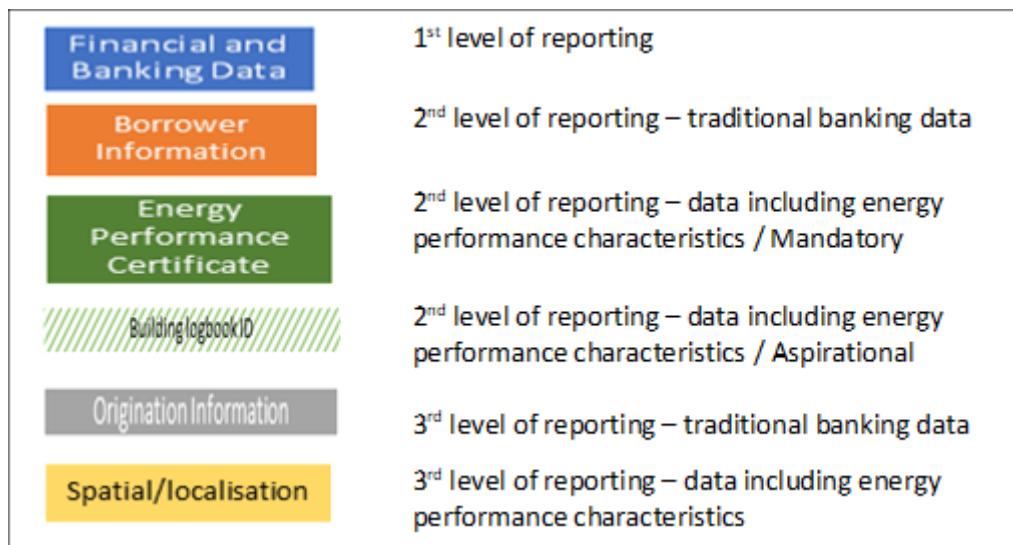


Figure 1. EEM Reporting Data Tree



Sources. EeDaPP

3.1.1 Identifiers

The identifiers section comprise key ID fields to connect the different concepts and information sources between the borrower, the lending institution, the loan, the collateral property and the information relating the energy performance, in the form of an Certificate (unique certificate number) or, if or when available, the key identifier that links the property to a “building passport” containing all relevant construction and technical characteristics information. As discussed in the previous EeDAPP reports, identifiers are needed to tag the existing data and establish links between different data sources and databases:

- Loan/borrower database
- Property Valuation database
- Energy Performance & Efficiency Database
- Building Logbook² database (upon availability)
- EPC register database (upon availability)

3.1.2 Financial and banking data

The financial and banking information is broken down into four areas:

1. Borrower information
2. Loan characteristics
3. Collateral (property)
4. Performance and risk

The starting point of the common template is the data and data templates already reported by lending institutions to comply with regulatory disclosure requirements. In the Eurosystem, the regulatory templates are designed and collected by the European Central Bank and the European Supervisory Agencies (ESAs): the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA).

Relevant standardised supervisory templates considered for the purpose of the common EEMI template:

1. ECB – RMBS templates (managed by European Data Warehouse)
2. EBA – Non-Performing Loans and Exposures templates

² The building logbook is the repository of all building related information such as its energy consumption, energy production, executed maintenance and construction plan. The number of criteria, granularity and the number of criteria used in a building logbook can be very large. For example, the building logbook designed by the IBRoad project contains 5 modules of data (General and Administrative Information; Building Construction Information; Building Energy Performance; Building operation and use; Smart Information) and 3 levels of information detail

3. EBA – STS Templates / Annex 2 relative to Real-estate exposures
4. COREP/FINREP templates

Other templates: there are further regulatory reporting requirements established at regional or national levels such as the ECBC Covered Bond Label templates (HTT). The EeDaPP reporting framework and database will include all these relevant templates issued at national level.

3.1.3 Energy Efficiency Criteria

The Energy Efficient Mortgages Initiative and the EeDaPP reporting protocol are built on the EEM definition detailed above. In this sense, the common data protocol includes the following key areas and information categories:

- Energy Performance Certificate (EPC)
- Building codes and construction standards (captured by the construction year)
- Energy efficiency valuation assessment conducted in line with the EeMAP Valuation “checklist” that includes an extended list of indicators which the valuer will consider to make a more explicit assessment of the potential value and risk implications of energy efficiency (see annex 4.1 for the complete EeMAP Energy Efficiency Valuation Checklist).
- Reporting of complementary financing schemes and subsidies that can provide additional funding (upon availability and voluntary basis)

The Energy Performance Certificate is the key indicator selected by the Energy Efficient Mortgages Initiative to demonstrate compliance and monitor the energy performance of the property (for both residential and commercial buildings).

An EPC generally offers four different types of information:

1. The relative ranking of the building with respect to the overall building stock according to a scale of final energy consumption
2. The relative ranking of the building with respect to the overall building stock according to a scale of net CO₂ emission
3. An estimated range or value of the annual energy consumption (in kWh/m²)
4. As estimated range or value of the annual carbon emission (in CO₂ equivalent)

As the EED and the EPBD has been implemented by all EU countries, it makes EPCs an important “standardised” tool which is gaining traction and should be increasingly available to all stakeholders along the green mortgage value chain. However, whilst EPCs may at first glance appear to measure the same thing – efficiency at the asset level – they do not: even within countries, the regulations vary and this means that, on the longer term, the data protocol will need to capture information related to

the assessment methodology used to define the EPC as well as the input parameters used to calculate the EPC rating.

3.2 Core table of data collection template

The following table is an overview of core indicators to report on:

Level 0	Level1	Level 2	Level 3
Identifiers	Bank	Bank ID	Bank ID
	Loan	Loan ID	Loan ID
	Borrower	Borrower ID	Borrower ID
	Property Collateral	Property ID	Property ID
		Property Valuation Report Key	Property Valuation Report Key
		Building Logbook Key	Building Logbook Key
	Energy Performance Certificate	EPC ID	EPC ID
EPC Register Key		EPC Register Key	
Financial and Banking Data	Borrower Information	Socio-demographic data	Age
			Employment Status
		First time Buyer	
		Income Information	Income
	Loan Characteristics	Interest rates	Interest Rate Type
			Current Interest Rate Index
			Current Interest Rate
			Current Interest Rate Margin
			Interest Rate Reset Interval
			Interest Cap Rate
			Date Information
			Purpose
			Maturity and Term Information
			Balance Information
	Payment Information		
	Performance & Risk	Credit rating information	Debt to Income Ratio
			Borrower Credit Score Data
		Property Rating Score Data	
		Default Indicators	Status
			Arrears data
Foreclosure Data			
Expected Loss Data			



	Collateral Property	Geographic Characteristics	Address Data
		Physical Characteristics	Type
		Building Documentation	Condition
			Occupancy
			Purpose
		Valuation Data	Legal Ownership
			Valuation Date Information
			Valuation Provider Information
			Valuation Assessment Information
		Energy Efficiency	Energy Performance Certificate
EPC Methodology			
EPC Label			
EPC Score			
EPC Provider Information	EPC Estimated kWh/m ²		
	Expert Type		
	Expert Name		
	Energy / EPC Expert Identifier		
EPC Date Information	EPC Register		
	Issue Date		
Building Codes	Term Date		
	Construction information		Construction Year
Energy Efficiency Financing Support Schemes	Flag		Additional financing schemes
	Financing Scheme Information		Subsidised loan
			Scheme name
			Government tax incentive
		Tax rebate scheme	
Amount perceived			



4. Annexes

4.1 EeDaPP Reporting Template Extended table

Index	Category	Sub-Category	Field	Description	Source	Target (mandatory or Optional)	Link to Existing Template
ID	Identifier						
ID1	Identifier	Loan Identifier	Loan Identifier	Unique identifier (ID) for each loan. The loan ID should not change through the life of the transaction. If the original loan ID cannot be maintained in this field enter the original ID followed by the new ID, comma delimited (e.g. further advances / second liens are shown as separate entries). Refer to Taxonomy for multiple loan definitions.	ECB Template	Mandatory	AR3
ID2	Identifier	Bank Identifier	Bank Identifier	Unique key ID of the Bank that is granting the mortgage	ECB Template	Mandatory	AR5
ID3	Identifier	Borrower Identifier	Borrower Identifier	Unique identifier (ID) per borrower (not showing the real name) - to enable borrowers with multiple loans in the pool to be identified (e.g. further advances / second liens are shown as separate entries). Should not change over the life of the transaction. If more than one borrower list the Borrower ID's comma delimited with primary borrower first.	ECB Template	Mandatory	AR7
ID4	Identifier	Property Identifier	Property Identifier	Unique identifier per property to enable properties with multiple loans in the pool to be identified (e.g. further advances / second liens are shown as separate entries). Refer to Taxonomy for multiple loan definitions.	ECB Template	Mandatory	AR8
ID5	Identifier	Valuation Assessment Identifier	Valuation Assessment Identifier	Unique key related to the valuation report/appraisal linked to the property valuation assessment (report that contains Energy Performance assessment as per the EeMAP Valuation Checklist)	ECB Template	Mandatory	
ID6	Identifier	EPC Identifier	EPC Identifier	Unique key ID of the energy performance certificate delivered (there can be several certificates linked to the same financing scheme in the case of energy retrofit for example)	ECB Template	Mandatory	
ID7	Identifier	EPC Register	EPC Register Identifier	Unique key ID to link and identify EPC register Identifier	EPC register	<i>Optional</i>	
ID8	Identifier	Building Logbook Identifier	Building Logbook Identifier	Unique key ID to link and identify, the building logbook (or building energy passport) database (upon the availability at national or regional level of such technology).	Building Logbook Provider	<i>Optional</i>	

FB	Financial/ Banking Data						
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FB5	Borrower Information	income	Primary Income	Primary borrower underwritten gross annual income (not rent). If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR26
FB6	Borrower Information	Income	Secondary Income	Secondary borrower underwritten gross annual income (not rent – if single borrower then 0). When there are more than two borrowers indicate total annual combined income.	ECB Template	<i>Optional</i>	AR28
FB1	Borrower Information	Social & Economic Data	Borrower Year of Birth	Borrower year of birth	ECB Template	<i>Optional</i>	AR18
FB2	Borrower Information	Social & Economic Data	Borrower's Employment Status	Employment status of the primary applicant: Employed or full loan is guaranteed (1) Employed with partial support (company subsidy) (2) Protected life-time employment (Civil/government servant) (3) Unemployed (4) Self-employed (5) No employment, borrower is legal entity (6) Student (7) Pensioner (8) Other (9) No Data (ND)	ECB Template	Mandatory	AR21
FB3	Borrower Information	Social & Economic Data	First-time Buyer	First time buyer flag.	ECB Template	<i>Optional</i>	AR22
FB7	Borrower Information	Social & Economic Data	Resident	Whether primary borrower is resident of the country: Resident less than 3 years (1) Resident >= 3 years (2) Not Resident (3) No Data (ND)	ECB Template	<i>Optional</i>	AR30
FB8	Collateral Property	Characteristics	Legal Owner of the Property	Legal owner of the Property Collateral	EBA NPL Template	<i>Optional</i>	11,001
FB9	Collateral Property	Characteristics	Sector of Property	Sector which the property is used for, e.g. commercial real estate, residential real estate, etc.	EBA NPL Template	<i>Optional</i>	11,003
FB10	Collateral Property	Characteristics	Type of Property	Type of the Property, e.g. Apartment, Semi Detached House, Terraced House, Land, etc.	EBA NPL Template	Mandatory	11,004



FB11	Collateral Property	Characteristics	Purpose of Property	Purpose of the Property, e.g. Investment property, owner occupied, Business Use, etc.	EBA NPL Template	Optional	11,006
FB12	Collateral Property	Characteristics	Condition of Property	Quality classification of the property, e.g. Excellent, Good, Fair, Poor. and include explanation of the category, and please provide the internal methodology used to decide the categories as a part of the transaction documents	EBA NPL Template	Optional	11,007
FB13	Collateral Property	Characteristics	Address of Property	Street address where the Property is located at, including flat / house number or name	EBA NPL Template	Mandatory	11,008
FB14	Collateral Property	Characteristics	City of Property	City where the Property is located at	EBA NPL Template	Mandatory	11,009
FB15	Collateral Property	Characteristics	Geographic Region of Property	Province / Region where the Property is located at	EBA NPL Template	Mandatory	11,010
FB16	Collateral Property	Characteristics	Property Postcode	Postcode where the Property is located at	EBA NPL Template	Mandatory	11,012
FB17	Collateral Property	Characteristics	Property Country	Country of residence where the Property is located at	EBA NPL Template	Mandatory	11,013
FB18	Collateral Property	Characteristics	Area Type of Property	Area type where the Property is located at , i.e. City centre, Suburban and Rural	EBA NPL Template	Optional	11,014
FB30	Collateral Property	Characteristics	Completion of Property	Indicator as to whether the construction of the Unit is complete	EBA NPL Template	Mandatory	11,051
FB31	Collateral Property	Characteristics	Geographic Region List	The region description of where the property is located. See Taxonomy for relevant choices	ECB Template	Optional	AR128
FB32	Collateral Property	Characteristics	Property Postcode	First 2 or 3 characters must be provided at a minimum. Full postcode can be reported if the confidentiality status (data encryption) is set	ECB Template	Mandatory	AR129
FB33	Collateral Property	Characteristics	Occupancy Type	Type of property occupancy: Owner-occupied (1) Partially owner-occupied (A property which is partly rented) (2) Non-owner-occupied/buy-to-let (3) Holiday/second home (4) Other (5) No Data (ND)	ECB Template	Optional	AR130



FB34	Collateral Property	Characteristics	Property Type	Property type: Residential (House, detached or semi-detached) (1) Residential (Flat/Apartment) (2) Residential (Bungalow) (3) Residential (Terraced House) (4) Multifamily house (properties with more than four units securing one loan) with recourse to the borrower (5) Multifamily house without recourse to the borrower (6) Partially commercial use (property is used as a residence as well as for commercial use where less than 50% of its value derived from commercial use, e.g. doctor's surgery and house) (7) Commercial/business use with recourse to the borrower (8) Commercial/business use without recourse to the borrower (9) Land Only (10) Other (11) No Data (ND)	ECB Template	Mandatory	AR131
FB35	Collateral Property	Characteristics	New Property	New property specifications: New build (1) Existing building (2) Other (3) No Data (ND)	ECB Template	<i>Optional</i>	AR132
FB36	Collateral Property	Characteristics	Construction Year	Indicate the year when the property was originally built (YYYY format). In the case of a conversion of a building into flats, the date of conversion should be supplied. If no data available refer to Taxonomy for inputs.	ECB Template	<i>Optional</i>	AR133
FB37	Collateral Property	Credit Score	Property Rating	Internal rating of property or credit scoring of property.	ECB Template	<i>Optional</i>	AR134
FB19	Collateral Property	Valuation	Currency of Property	Currency that the valuation and cash flows related to the Unit are expressed in	EBA NPL Template	<i>Optional</i>	11,029
FB20	Collateral Property	Valuation	Initial Valuation Amount	Value of the Unit assessed at loan origination	EBA NPL Template	<i>Optional</i>	11,030
FB21	Collateral Property	Valuation	Date of Initial Valuation	Date that the initial valuation was assessed	EBA NPL Template	<i>Optional</i>	11,031
FB22	Collateral Property	Valuation	Internal / External Initial Valuation	Indicator as to whether the initial valuation was outsource, or done internally	EBA NPL Template	<i>Optional</i>	11,032
FB23	Collateral Property	Valuation	Type of Initial Valuation	Type of the initial valuation for the Unit i.e. Full Appraisal, Drive-by, Automated Valuation Model, Indexed, Desktop, Managing / Estate Agent, Purchase Price, Hair Cut, Mark to market and Borrower's Valuation	EBA NPL Template	<i>Optional</i>	11,033
FB24	Collateral Property	Valuation	Provider of Initial Valuation	Name of the external appraiser or managing / estate agent is when "Full Appraisal" or "Managing / Estate Agent" is selected in field "Type of Initial Valuation". If the valuation was done internally, please select "Internal"	EBA NPL Template	<i>Optional</i>	11,034
FB25	Collateral Property	Valuation	Latest Valuation Amount	Value of the Unit when last assessed	EBA NPL Template	Mandatory	11,036



FB26	Collateral Property	Valuation	Date of Latest Valuation	Date that the latest valuation took place	EBA NPL Template	Mandatory	11,037
FB27	Collateral Property	Valuation	Internal / External Latest Valuation	Indicator as to whether the latest valuation was performed internally or by an external appraiser	EBA NPL Template	Mandatory	11,038
FB28	Collateral Property	Valuation	Type of Latest Valuation	Type of the latest valuation for the Unit i.e. Full Appraisal, Drive-by, Automated Valuation Model, Indexed, Desktop, Managing / Estate Agent, Purchase Price, Hair Cut, Mark to market and Internal Institution Valuation	EBA NPL Template	Mandatory	11,039
FB29	Collateral Property	Valuation	Provider of Latest Valuation	Name of the external appraiser or managing / estate agent when "Full Appraisal" or "Managing / Estate Agent" is selected in field "Type of Latest Valuation". If the valuation was done internally, please select "Internal"	EBA NPL Template	<i>Optional</i>	11,040
FB38	Collateral Property	Valuation	Original Loan to Value	Originator's original underwritten Loan To Value ratio (LTV). For 2nd lien loans this should be the combined or total LTV. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR135
FB39	Collateral Property	Valuation	Valuation Amount	Property value as of date of latest loan advance prior to a securitisation. Valuation amounts should be in the same currency as the loan (field AR65).	ECB Template	Mandatory	AR136
FB40	Collateral Property	Valuation	Original Valuation Type	Valuation type at origination: Full, internal and external inspection (1) Full, only external inspection (2) Drive-by (3) AVM (flag as AVM only if this type of valuation has been used for origination purposes) (4) Indexed (5) Desktop (6) Managing Agent / Estate Agent (7) Tax Authority (8) Other (9) No Data (ND)	ECB Template	Mandatory	AR137
FB41	Collateral Property	Valuation	Valuation Date	Date of latest property valuation at time of latest loan advance prior to a securitisation. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR138
FB42	Collateral Property	Valuation	Confidence Interval for Original Automated Valuation Model Valuation	Confidence interval for original valuation if valuation method is Automated Valuation Model (AVM). If no data available refer to Taxonomy for inputs.	ECB Template	<i>Optional</i>	AR139
FB43	Collateral Property	Valuation	Provider of Original Automated Valuation Model Valuation	Name of Automated Valuation Model (AVM) provider if original valuation method is AVM. If no data available refer to Taxonomy for inputs.	ECB Template	<i>Optional</i>	AR140



FB44	Collateral Property	Valuation	Current Loan to Value	Originator's current Loan to Value ratio (LTV). For 2nd lien loans this should be the combined or total LTV. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR141
FB45	Collateral Property	Valuation	Purchase Price Lower Limit	Original purchase price of the property rounded down to the nearest 10k. If no data available refer to the taxonomy for inputs.	ECB Template	<i>Optional</i>	AR142
FB46	Collateral Property	Valuation	Current Valuation Amount	Most recent valuation amount (if e.g. at repossession there were multiple valuations, this should reflect the lowest). Valuation amounts should be in the same currency as the loan (field AR65). If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR143
FB47	Collateral Property	Valuation	Current Valuation Type	Current Valuation type: Full, internal and external inspection (1) Full, only external inspection (2) Drive-by (3) AVM (flag as AVM only if this type of valuation has been used for origination purposes) (4) Indexed (5) Desktop (6) Managing Agent / Estate Agent (7) Tax Authority (8) Other (9) No Data (ND)	ECB Template	Mandatory	AR144
FB48	Collateral Property	Valuation	Current Valuation Date	The date of most recent valuation. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR145
FB49	Collateral Property	Valuation	Confidence Interval for Current Automated Valuation Model Valuation	List the Automated Valuation Model (AVM) supplier's confidence value for the most recent valuation. If no data available refer to Taxonomy for inputs.	ECB Template	<i>Optional</i>	AR146
FB50	Collateral Property	Valuation	Provider of Current Automated Valuation Model Valuation	Name of Automated Valuation Model (AVM) provider if current valuation method is AVM. If no data available refer to Taxonomy for inputs.	ECB Template	<i>Optional</i>	AR147
FB51	Collateral Property	Valuation	Property Value at Time of Latest Loan Advance	Property value at the time of the last advance. Valuation amounts should be in the same currency as the loan (field AR65). If no data available refer to Taxonomy for inputs.	ECB Template	<i>Optional</i>	AR148
FB52	Collateral Property	Valuation	Energy Efficiency Valuation Amount	Property value as of date of latest valuation assessment using EE criteria as per EeMAP Valuation Checklist	EeDaPP Addition	mandatory	



FB53	Loan Characteristics	Interest Rate	Interest Rate Type	Interest rate type: Floating rate loan (for life) (1) Floating rate loan linked to Libor, Euribor, BoE reverting to the Bank's standard variable rate (SVR), ECB reverting to Bank's SVR (2) Fixed rate loan (for life) (3) Fixed with future periodic resets (4) Fixed rate loan with compulsory future switch to floating (5) Capped (6) Discount (7) Other (8) No Data (ND)	ECB Template	Mandatory	AR107
FB54	Loan Characteristics	Interest Rate	Current Interest Rate Index	Current interest rate index (the reference rate off which the mortgage interest rate is set): 1 month LIBOR (1) 1 month EURIBOR (2) 3 month LIBOR (3) 3 month EURIBOR (4) 6 month LIBOR (5) 6 month EURIBOR (6) 12 month LIBOR (7) 12 month EURIBOR (8) BoE Base Rate (9) ECB Base Rate (10) Standard Variable Rate (11) No Index (12) Other (13) No Data (ND)	ECB Template	Mandatory	AR108
FB55	Loan Characteristics	Interest Rate	Current Interest Rate	Current interest rate (%).	ECB Template	Mandatory	AR109
FB56	Loan Characteristics	Interest Rate	Current Interest Rate Margin	Current interest rate margin (for fixed rate loans this is the same as the current interest rate, for floating rate loans this is the margin over (or under if input as a negative) the index rate. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR110
FB57	Loan Characteristics	Interest Rate	Interest Rate Reset Interval	The interval in months at which the interest rate is adjusted (for floating loans). If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR111
FB58	Loan Characteristics	Interest Rate	Interest Cap Rate	Interest rate cap (%). If no data available refer to Taxonomy for inputs.	ECB Template	Optional	AR112
FB59	Loan Characteristics	Origination Information	Loan Origination Date	Date of original loan advance. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR55



FB60	Loan Characteristics	Origination Information	Date of Loan Maturity	The date of loan maturity. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR56
FB61	Loan Characteristics	Origination Information	Purpose	Loan purpose. Permissible answers: Purchase (1) Re-mortgage (2) Renovation (3) Equity release (4) Construction (5) Debt consolidation (6) Other (7) Re-mortgage with Equity Release (8) Re-mortgage on Different Terms (9) Combination Mortgage (10) Investment Mortgage (11) Right to Buy (12) Government Sponsored Loan (13) SCPI (14) Besson (15) Perissol (16) DOM (Défiscalisation Métropole) (17) No Data (ND)	ECB Template	Mandatory	AR59
FB62	Loan Characteristics	Origination Information	Loan Term	Original contractual term (number of months). If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR61
FB63	Loan Characteristics	Origination Information	Original Balance	Original loan balance (inclusive of fees). If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR66
FB64	Loan Characteristics	Origination Information	Current Balance	Amount of loan outstanding as of pool cut off date, This should include any amounts that are secured by the mortgage and will be classed as principal in the transaction. For example if fees have been added to the loan balance and are part of the principal in the transaction these should be added. Excluding any interest arrears or penalty amounts.	ECB Template	Mandatory	AR67
FB65	Loan Characteristics	Origination Information	Payment Due	Periodic contractual payment due (the payment due if there are no other payment arrangements in force).	ECB Template	Mandatory	AR71
FB66	Loan Characteristics	Origination Information	Payment Type	Principal payment type: Annuity (1) Linear (2) Increasing instalments (3) Fixed instalments (changing maturity) with structural protection (4) Fixed instalments (changing maturity) without structural protection (5)	ECB Template	Mandatory	AR72



				<ul style="list-style-type: none"> Bullet (6) Bullet + Savings deposit (7) Bullet + Life insurance (8) Bullet + Investment portfolio (9) Bi-annual (10) Tri-annual (11) Offset mortgage (12) Other (13) No Data (ND) 			
FB67	Loan Characteristics	Origination Information	Debt to Income	<p>Debt to Income (DTI) ratio with definition and calculation. For combined income.</p> <p>Debt defined as the Amount of loan outstanding as of pool cut off date, This should include any amounts that are secured by the mortgage and will be classed as principal in the transaction. For example if fees have been added to the loan balance and are part of the principal in the transaction these should be added. Excluding any interest arrears or penalty amounts.</p> <p>Income defined as combined income, sum of primary and secondary income fields (field numbers AR26 and AR28). If no data available enter ND for No Data.</p>	ECB Template	<i>Optional</i>	AR73
FB4	Performance & Risk	Borrower Credit Score	Class of Borrower	Class of borrower based on credit scoring or other classification	ECB Template	<i>Optional</i>	AR25
FB77	Performance & Risk	Borrower Credit Score	Bureau Score Provider	<p>Who has provided the score. For continental Europe give name of provider:</p> <ul style="list-style-type: none"> Callcredit (1) Experian (2) Equifax (3) Schufa (4) Bureau Krediet Registratie (BKR) (5) Internal Score (6) Other (7) No Data (ND) 	ECB Template	<i>Optional</i>	AR43
FB78	Performance & Risk	Borrower Credit Score	Bureau Score Type	<p>Type of scorecard provided:</p> <ul style="list-style-type: none"> Generation 8 B&F AAM - DCM (Experian) (1) Generation 8 B&F CRS - DCM (Experian) (2) Generation 7 Mortgage PD Score - DCM (Experian) (3) FSC109 - Risk Navigator (Equifax) (4) RNILF02 - Risk Navigator (Equifax) (5) RNISF02 - Risk Navigator (Equifax) (6) Internal Scorecard (7) Other (8) No Data (ND) 	ECB Template	<i>Optional</i>	AR44



FB79	Performance & Risk	Borrower Credit Score	Bureau Score Date	The date of the bureau score for this borrower. If no data available refer to Taxonomy for inputs.	ECB Template	Optional	AR45
FB80	Performance & Risk	Borrower Credit Score	Bureau Score Value	Borrower's score: >0 Regular Score -999 CAIS for mortgage not available -998 Notice of Correction or Notice of Dispute 0 Bankruptcy Restriction Order or Bankruptcy Restriction Undertaking If no data available refer to Taxonomy for inputs.	ECB Template	Optional	AR46
FB68	Performance & Risk	Default Indicators	Account Status	Current status of account: Performing (1) Arrears (2) Default or Foreclosure (3) Redeemed (4) Repurchased by Seller (5) Other (6) No Data (ND)	ECB Template		AR166
FB69	Performance & Risk	Default Indicators	Arrears Balance	Current balance of arrears. Arrears defined as: Total payments due to date LESS Total payments received to date LESS any amounts capitalised.	ECB Template		AR169
FB70	Performance & Risk	Default Indicators	Number Months in Arrears	Number of months this loan is in arrears (at pool cut off date) according to the definition of the issuer. If no data available refer to Taxonomy for inputs.	ECB Template		AR170
FB71	Performance & Risk	Default Indicators	Redemption Date	Date on which account redeemed. If no data available refer to Taxonomy for inputs.	ECB Template		AR175
FB72	Performance & Risk	Default Indicators	Default or Foreclosure	Total default amount before the application of sale proceeds and recoveries. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR177
FB73	Performance & Risk	Default Indicators	Date of Default or Foreclosure	The date of default or foreclosure (if this has occurred). If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR178
FB74	Performance & Risk	Default Indicators	Sale Price lower limit	Price achieved on sale of property in case of foreclosure, rounded down to nearest 10k.	ECB Template	Mandatory	AR179



FB75	Performance & Risk	Default Indicators	Loss on Sale	Total loss net of fees, accrued interest etc. after application of sale proceeds (excluding prepayment charge if subordinate to principal recoveries). Show any gain on sale as a negative number.	ECB Template	Mandatory	AR180
FB76	Performance & Risk	Default Indicators	Cumulative Recoveries	Cumulative recoveries – only relevant for cases with losses. If no data available refer to Taxonomy for inputs.	ECB Template	Mandatory	AR181
Energy Efficiency and Performance Criteria	Energy Efficiency and Performance Criteria						Energy Efficiency and Performance Criteria
EE1	Energy Efficiency Criteria	EPC	EPC Type	Label, score, other	EeDaPP Additions	Mandatory	EE1
EE10	Energy Efficiency Criteria	EPC	Expert Name	Name of the expert that delivered the EPC	EeDaPP Additions	<i>Optional</i>	EE10
EE11	Energy Efficiency Criteria	EPC	Energy / EPC Expert Identifier	Identifier	EeDaPP Additions	<i>Optional</i>	EE11
EE12	Energy Efficiency Criteria	EPC	EPC Register	Name and Type of the EPC register	EeDaPP Additions	<i>Optional</i>	EE12
EE2	Energy Efficiency Criteria	EPC	EPC Methodology	Operational, theoretical, other	EeDaPP Additions	<i>Optional</i>	EE2
EE3	Energy Efficiency Criteria	EPC	EPC Identifier	Identifier	EeDaPP Additions	Mandatory	EE3
EE4	Energy Efficiency Criteria	EPC	EPC Label	Letter between A, B, C, D, E, F, G	EeDaPP Additions	Mandatory	EE4



EE5	Energy Efficiency Criteria	EPC	EPC Score	Score between 0 and 100	EeDaPP Additions	Mandatory	RREC 9
EE6	Energy Efficiency Criteria	EPC	EPC Qant.	Final energy Consumption estimate (in kWh/m ² /year)	EeDaPP Additions	Mandatory	EE6
EE7	Energy Efficiency Criteria	EPC	Issue Date	Date of deliverance of the EPC	EeDaPP Additions	Mandatory	EE7
EE8	Energy Efficiency Criteria	EPC	Term Date	Date of end of validity of the EPC (depending on the length of validity)	EeDaPP Additions	Mandatory	EE8
EE9	Energy Efficiency Criteria	EPC	Expert Type	Type of the expert that delivered the EPC (private agent, institution, architect.	EeDaPP Additions	<i>Optional</i>	EE9
EE13	Energy Efficiency Criteria	Policy and Schemes	Subsidised loan	Yes/No -	EeDaPP Additions	<i>Optional</i>	EE13
EE14	Energy Efficiency Criteria	Policy and Schemes	Additional financing schemes	Yes/no	EeDaPP Additions	<i>Optional</i>	EE14
EE15	Energy Efficiency Criteria	Policy and Schemes	Scheme name	Provide the official name of the financing scheme and the name of its provider	EeDaPP Additions	<i>Optional</i>	EE15
EE16	Energy Efficiency Criteria	Policy and Schemes	Government tax incentive	Yes/no - indication if the loan is subsidised i.e. benefits from a "zero" interest rate financing scheme (guarantee and subsidy granted by a public institution / governmental agency (example - French Eco-PTZ)	EeDaPP Additions	<i>Optional</i>	EE16
EE17	Energy Efficiency Criteria	Policy and Schemes	Tax rebate scheme	details of the scheme	EeDaPP Additions	<i>Optional</i>	EE17
EE18	Energy Efficiency Criteria	Policy and Schemes	Amount perceived	in monetary terms	EeDaPP Additions	<i>Optional</i>	EE18



4.2 EeMAP Valuation Checklist

VALUATION AND ENERGY EFFICIENCY CHECKLIST

	Indicators with potential impact on energy demand	Description (if not already included in valuation report)	Red (does not meet market norm/average)	Amber (in line with market norm/average)	Green (beyond market norm/average)	Grey (no information available)	Comment If required
CORE INDICATORS							
A1	EPC rating						
A2	Calculated &/or measured energy in kWh/m ² /pa						
A3	Building documentation availability (guarantees etc; evidence of regulatory compliance)						



A4	Condition of structure						
A5	Quality of windows and external doors						
A6	Insulation of building envelope / walls						
A7	Floor insulation						
A8	Roof insulation						
A9	Type of heating system						
A10	Age and condition of heating system						
A11	Type of cooling / ventilation system						
A12	Age and condition of cooling / ventilation system						



COMMENTARY REGARDING ADDITIONAL ENERGY PERFORMANCE-RELATED RISK CONSIDERATIONS

B1	Building age	
B2	Type of Construction	
B3	Renewables on site (electricity and/or heat?)	
B4	Primary energy source	
B5	Orientation and Exposure	
B6	External shading / solar control system?	
B7	Type of lighting system	

ASSESSMENT SUMMARY



		Description (if not already included in valuation report)	Red (does not meet market norm/average)	Amber (in line with market norm/average)	Green (beyond market norm/average)	Grey (no data available)	Comment If required
C1	Market expectations						
C2	Requirements for upgrade						
C3	Ease of upgrade						
C4	Risk of value decline based on energy assessments						

EeDaPP – Energy efficiency Data Protocol and Portal - is an initiative by the European Mortgage Federation - European Covered Bond Council (EMF-ECBC), Ca' Foscari University of Venice, CRIF S.p.A., European DataWarehouse GmbH, Hypoport BV, TXS GmbH and SAFE Goethe University Frankfurt. For more information, visit: www.energyefficientmortgages.eu



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