

EeMAP Energy Efficiency Mortgage Pilot Scheme Implementation Guidelines: Draft for Consultation

At the recent One Planet Summit in Paris, the European Commission urged the financial sector to take stronger action on climate-change. The EeMAP initiative seeks to equip stakeholders in the mortgage market to meet this challenge. The [EeMAP consortium partners](#) have responded to calls from the banking, valuation and building sectors to develop draft guidelines for a standardised European ‘energy efficient mortgage’ product. The guidelines will underpin a pan-European energy efficiency mortgage pilot scheme, starting in June 2018. These initial draft guidelines are the result of extensive research and consultation with finance, building and valuation experts across Europe.

The [EeMAP consortium partners](#) invite all European stakeholders with an interest in sustainable finance and building energy efficiency to provide their views on the draft guidelines via this public consultation, which closes on 12 March 2018. **Your input is critical to ensure that the guidelines are as robust and widely agreed as possible, so that the Energy Efficiency Pilot Scheme launched on [14 June 2018](#) is a success!**

EeMAP (Energy efficient Mortgages Action Plan) aims to create a pan-EU framework for energy efficient mortgages. These mortgages incentivise borrowers to improve the energy efficiency of their buildings or acquire highly energy-efficient properties. The incentives the energy efficient mortgage will offer borrowers (e.g. reduced interest rates and/or increased loan amount) aim to reflect the reduced credit risk of these loans. Lower risks also deliver a strong incentive for banks to enter the market and play a central role in driving climate action across Europe’s building sector.

How to Provide Feedback on the Draft Guidelines

Please fill in our short online survey, providing your details so we can keep you informed about the latest developments.

Survey link: <https://www.surveymonkey.com/r/W69XRPQEeMAPPilotPhase>

You can also see if one of EeMAP’s national events is taking place near you. The full schedule of events across Europe can be viewed here: <http://energyefficientmortgages.eu/upcoming-events/>

Key Information about the Draft Guidelines

These draft **Implementation Guidelines** are:

- **Split into three sections**

- 1) EeMAP Implementation Principles for Lending Institutions (page 3-7)
- 2) EeMAP Building Performance Assessment Criteria (page 8-12)
- 3) EeMAP Valuation Guidance and Energy Efficiency Checklist (page 13-19)

- **Intended to be simple and flexible in scope and application**

They adopt a principle-based approach so that lending institutions may apply them in a way that is appropriate for a specific national market. The EeMAP consortium are establishing national partner networks who can advise on appropriate local interpretations of the framework. The guidelines are intended to be valid for new and existing residential and commercial properties.

- **A work in progress**

Feedback from the consultation and national events will be used to update and improve the guidelines ahead of the launch of the pilot scheme in June 2018. The EeMAP consortium will establish a governance structure to review and update the guidelines over time as appropriate to respond to the market.

The EeMAP Energy Efficiency Mortgage Pilot Scheme

Under the pilot scheme, lending institutions, energy efficiency experts, valuers and other actors will test the EeMAP guidelines in an operational environment. This will create the learning and relationships needed to strengthen the value-chain that delivers energy efficiency mortgages to consumers.

It is anticipated that, in due time, new mortgages will be issued, in line with EeMAP's proposed guidelines, and also that lenders will have the opportunity to analyze their portfolios to identify and 'tag' existing mortgages on buildings that meet the requirements in the guidelines. The data on the energy performance of these properties and the associated mortgages will be collected in anonymized form by the EeMAP consortium.

For further information on the pilot scheme please contact:

- info@hypo.org – For financial institutions
- europe@worldgbc.org – For building sector companies and experts
- ricseurope@rics.org – For valuation experts

Further Resources

To understand the development of these guidelines, you may wish to review the following reports which the EeMAP Consortium has released:

- (i) [White Paper: Creating an Energy Efficient Mortgage for Europe](#)
- (ii) [Review of the State of Play of Green Finance](#)
- (iii) [Review of the State of Play on Building Performance Indicators that Impact Mortgage Credit Risk](#)
- (iv) [Review of the State of Play on Mortgage Lending Valuation and the Impact of Energy Efficiency Value](#)
- (v) [Review of the Impact of Energy Efficiency on the Probability of Default](#)
- (vi) [National building assessment briefings for a number of key EU markets](#)
- (vii) [Consumer Insights Research \(available on the EeMAP website from 15 Feb 2018\)](#)

1. EeMAP Implementation Principles for Lending Institutions

The following 12 principles¹ provide the overarching structure of the EEM framework and should be implemented in conjunction with the Building Performance Assessment Criteria (Section 2) and the Valuation Guidance and Energy Efficiency Checklist (Section 3). The principles are intended to guide and facilitate successful implementation of the EeMAP Energy Efficient Mortgage (EEM) concept within lending institutions' existing internal procedures, whilst leaving room for specific national market characteristics and legal requirements to be accommodated.

When lending institutions have started originating Energy Efficient Mortgage products as part of the EeMAP pilot scheme, they will be requested to self-certify that their Energy Efficient Mortgage products are compliant with the all three sections of the framework.

- **Principle 1 EEM Product:** The EEM product should finance the purchase/construction of an energy efficient property or the energy efficient renovation of an existing property.
- **Principle 2 EEM Financing Mechanism:** The EEM product should provide access for consumers to favourable financing conditions (see Section 0 for a non-exhaustive list of examples) reflecting the positive impact of energy efficiency on borrower and property risk profiles², provided significant improvement in the energy performance of the mortgaged property is demonstrated or superior energy performance is demonstrated against comparable properties in the market (see Section 2 for building performance criteria).
- **Principle 3 Ongoing Investment:** The EEM product should link the favourable conditions described in Section 0, as relevant, to continued improvement of the property, in order to incentivise the borrower to invest in the gradual improvement of the energy performance of the property during the lifetime of the mortgage.
- **Principle 4 Technical Experts:** The lending institution should receive and retain proof - from the borrower or a designated third party - that an appropriately qualified or accredited energy efficiency expert (see Section 2) has been involved in the design of the property or of the renovation works, including provision of advice to the borrower, and has delivered an updated Energy Performance Certificate (EPC) for the energy performance of the property.
- **Principle 5 SME/Contractor:** The lending institution should receive and retain proof - from the borrower or a designated third party - that all works relevant to energy efficiency performance have been undertaken and

¹ Whilst the majority of the principles are valid for both energy efficient renovation and the purchase of already energy efficient buildings, Principles 2, 3, 4 and 7 are specifically relevant in the case of energy efficient renovation.

²It is this correlation between energy efficiency and risk that would ultimately justify a realignment of capital requirements and allow lending institutions to extend favourable conditions to the customer.

guaranteed by a suitably qualified contractor using the appropriate materials and equipment as specified in the design (see Section 2).

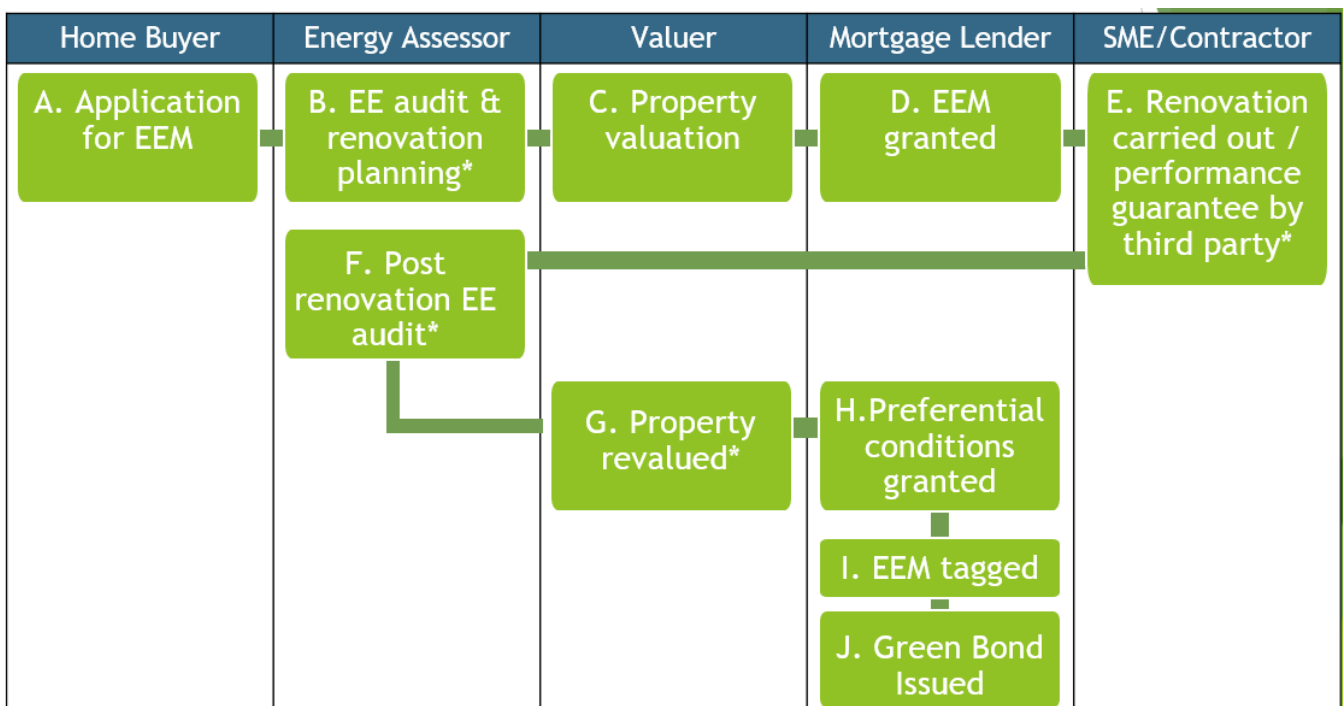
- **Principle 6 Access to Additional/Complementary Sources of Finance:** The lending institution or their designated third-party should also advise borrowers of and/or make easily available (e.g. through the website of the lending institution) information about potential European/national/regional/local public subsidies and fiscal benefit schemes which may further assist the financing of energy performance improvement, in addition to the energy efficiency mortgage finance made available by the lending institution.
- **Principle 7 Valuation Requirements:** Lending institutions should instruct valuers (either internal or external to the lending institution) to collect, log and assess any energy efficient features of the property when conducting property valuations for lending purposes. The valuer should be instructed by the lending institution according to the EeMAP Valuation Guidance & Energy Efficiency Checklist in Section 3. Depending on the subject of the financing (renovation, acquisition, construction), both pre-and-post valuation of the impact of the energy performance improvement on the property value should be undertaken in line with lending institutions' typical practice.
- **Principle 8 Customer Relationship Management:** As part of their customer relationship management, lending institutions offering EEMs should provide, where appropriate, information and explanations which: (i) describe to borrowers how their mortgage conditions could improve if they took up the EEM and constructed/purchased an energy efficient property (where a comparable investment is available) or improved the performance of an existing property (clarified in Section 1.2) and (ii) inform borrowers about any additional products which the lending institution may offer to further support building energy efficiency.
- **Principle 9 Optimising Relationship with Other Relevant Actors:** Lending institutions should consider the possibility of working together with relevant actors specialised in energy efficiency, such as utility providers, energy agencies, Green Building Councils, one-stop-shop services, etc. in the deployment of the EEM to increase the level of support and service available to the borrower.
- **Principle 10 IT-Systems:** Mortgages which are originated according to these guidelines (Sections 1, 2 and 3) should be tagged as EEMs within lending institutions' IT-systems. Lending institutions should collect information, based on a future standardised IT protocol, which is currently being developed through the Energy Efficiency Data Portal & Protocol (EeDaPP) Initiative, and aligned with the recommendations included in EPCs and, when available, with a building passport approach, to optimise subsequent use of this information³. Data collection should be conducted in line with data protection regulation, on the retail, prudential (risk management) and funding (investor due diligence) sides of the mortgage lending business.

³ Collection of this data will facilitate a link and deliver traceability of the property and its energy efficient features, the related loan characteristics and performance and the borrower's information.

- **Principle 11 Data Recording:** Data monitoring and reporting for EEMs should be analysed for risk assessment purposes, particularly in relation to probability of default (PD) and loss given default (LGD) parameters, and shared with the EeMAP Coordinator, the EMF-ECBC, for the purposes of the analysis of the impact of energy efficiency on risk.
- **Principle 12 Mortgage Funding:** If a mortgage is used as a cover pool asset, a lending institution’s funding department should tag the asset as an EEM for the purpose of energy efficient funding.

1.1. The Energy Efficient Mortgage Process

The EEM concept described above can be translated into an indicative flowchart, with the aim of illustrating the potential process of origination. Given the level of heterogeneity across markets and business models, the flowchart is designed to provide the necessary scope for lending institutions to adapt the process to their internal practices and national market and legislative context.



*B (renovation planning), E, F & G are only relevant in the case of renovation. An audit could involve the issuing of a new Energy Performance Certificate for a residential property, although more comprehensive audits might be considered for commercial properties.

1.2. Financing Conditions and Mechanisms

The following is a non-exhaustive list of examples of favourable financing conditions & potential underlying mechanisms - according to building categories.

1. Preferential Interest Rates: According to the positive impact of energy efficiency on probability of default (PD) and loss given default (LGD), lending institutions could offer preferential interest rates to mortgage borrowers on the following basis:

- **New & Nearly Zero-Energy Buildings**

- Borrowers of mortgage finance for the construction or purchase of new or already renovated buildings which comply with the relevant criteria in Section 2 of these guidelines, could qualify for access to preferential interest rates.

- **Renovation of Existing Buildings**

- Borrowers of mortgage finance for the purpose of renovating an existing building could also benefit from access to a preferential interest rate provided they comply with the relevant criteria in Section 2 of these guidelines. These preferential rates could be granted in the following way:
 - according to the improvement in the energy performance of the mortgaged property, and
 - after the renovations have been undertaken and the energy savings certified.

- The calculation of the discount in the interest rate would be decided internally within lending institutions.

Theoretical Mechanism for Granting of Preferential Interest Rate:

The discount on the interest rate could be determined on the basis of a progressive scale, with the aim of incentivising more significant improvements in properties at the lower end of the energy rating. A borrower would receive a larger percentage of the discount the further they move their property up in terms of energy rating. In this scenario, the maximum discount value of 100% will be achieved by those borrowers who improve their energy rating to the best category.

In this way, borrowers will be incentivised to improve the energy performance of their property enough to mitigate the potential risk of “brown discounting” and achieve progressive improvements of performance levels, with a view to achieving the gradual and ongoing movement of the property towards the top end of the market. In light of different national energy rating categories, this progressive scale would need to be adjusted and refined over time to take into account national (or sub-national) benchmarks and averages for energy efficient rating levels.

This example is purely for illustrative purposes.

2. Additional Funds: In recognition of the potential enhanced property value resulting from energy efficient renovation:

- For an existing property to be renovated, at the time of loan origination, the lending institution could factor in additional funds due to the potential and expected increased value of the property determined by the loan to value following the renovation. Hence, the risk for the lending institution remains the same⁴.
 - This mechanism would:
 - allow any expected increase in value due to renovation to be factored in at origination, and
 - enable the borrower to carry out renovation at the time of the purchase of the property.
- 3. Higher LTV:** In recognition of the potential enhanced property value resulting from energy efficient renovation for example, lending institutions could lend at a higher loan-to-value.

⁴ The possibility to take account of an increase in the value is suggested in the recently published Basel III reforms to the Standardised Approach for Credit Risk, which, at point 62 on page 20, states that “modifications made to the property that unequivocally increase its value could also be considered in the LTV”.

2. EeMAP Building Performance Assessment Criteria

This section of the document sets out the proposed building performance assessment criteria to determine eligibility for an energy efficient mortgage (EEM) during the pilot phase of the EeMAP project.

The criteria set minimum requirements for piloting EEMs and should not preclude the application of more rigorous standards in those markets where lenders and other market actors deem this to be appropriate.

They are intended to be simple and flexible, so lending institutions testing the EEM framework may apply them in a way that is appropriate for a given market. The EeMAP consortium are establishing national partner networks who can advise on appropriate local interpretations of the criteria.

The criteria are listed in section 2.1 and Section 2.2 then provides definitions of some of the key terms used. Section 2.3 explains the future ambition for the EeMAP building performance assessment criteria, outlining aspects of energy and environmental performance assessment of buildings which will need to be reviewed and considered for incorporation into the EEM framework as the market matures. The EeMAP consortium will establish a governance structure to review and update the guidelines over time as appropriate to respond to the market.

2.1. Pilot Scheme EEM Criteria

The following three criteria shall be used by lending institutions during the EeMAP pilot scheme to determine eligibility for an EEM.

Text highlighted with ***bold, italic typeface*** indicates that a technical definition is provided in the Section 2.2 General Definitions, which follows.

Criterion 1 - Energy Performance:

A building will qualify for an EEM if its ***energy performance*** is either:

- a. compliant with the relevant national definition of nearly zero energy buildings (NZEBS);
- or**
- b. 20% better than required by current applicable national building regulations (for example, where NZEB definitions have not been finalized); or
- or**
- c. improved by a minimum of 30% in the case of renovations. The lending institution may offer a scale of improved loan conditions for greater improvements, for example if a 40, 50 or 60% improvement is achieved.

Criterion 2: Ongoing performance monitoring:

The borrower, or the borrower's nominated third party, shall report the following to the lending institution or their nominated third party:

- a. The building's ***measured energy consumption***, according to each energy carrier (e.g. electricity or fuel), at least once per year.

- b. A revised Energy Performance Certificate after renovation, where applicable.

As indicated earlier, all lending institutions participating in the EeMAP pilot should also report this data, together with the average annual emissions intensity of each energy carrier, to the EeMAP Coordinator in an anonymized format, complying with all relevant data protection laws. This data will be used by lending institutions and by the EeMAP Coordinator for the purpose of ongoing analysis of the risk profiles of these loans and to demonstrate their impact on energy efficiency and climate goals.

Criterion 3: Quality Assurance

All works that impact on the energy performance of the building shall be:

1. Planned by a competent person with an appropriate, ***nationally recognised*** qualification or accreditation; and
2. planned and implemented in such a way as to ensure that the cost or technical feasibility of future energy efficiency improvements needed to bring the building's performance up to the equivalent of the top national EPC band rating at the time are not adversely affected; and
3. undertaken by a competent contractor with the appropriate, ***nationally recognised*** qualifications or accreditations, and approved by the lender; and
4. evidence of all works undertaken, including product performance levels and manufacturer warranties, shall be collected and submitted to the lender or the lender's nominated third party.

2.2. General Definitions

This section sets out requirements for key elements in the building performance assessment criteria above. Throughout the criteria, bold, italic text indicates a reference to these general definitions.

Energy performance

For the EeMAP pilot scheme, the ***energy performance*** assessment shall be based on a calculation⁵ of the delivered energy (kWh/m² per annum) for heating, domestic hot water, cooling and ventilation. For commercial buildings, lighting shall also be included and may be included for residential, wherever this is part of existing national calculation methodologies. Calculations should be based on either

- a. National calculation methodology (such as an asset rating Energy Performance Certificate)
- b. Other calculation tools that comply with relevant European standards, such as applicable parts of EN 52000.

⁵ Energy calculations for a building are based on standard assumptions about the internal and external climate and as such are a predictor of the inherent performance of the building, independent of its occupants.

Calculations, such as asset rating Energy Performance Certificates, will only be eligible where the inputs have been verified by site inspection and checking of documentary evidence. This shall be conducted by a competent person, accredited by a **nationally recognised** body.

If calculations based on either option *a* or *b* above are not available, then **measured energy consumption** may be used as an alternative metric to demonstrate compliance with Criterion 1, provided that this is normalised for climatic conditions and based on at least 2 years' worth of data. This data could, for example, be taken from an operational rating Energy Performance Certificate.

Measured energy consumption

The measured energy consumption of a building refers to actual energy consumed, as recorded by a meter installed at the premises. It therefore reflects the actual internal and external climatic condition and can differ significantly from the calculated energy requirement. In the EeMAP pilot scheme, measured energy shall be monitored using smart meters, wherever feasible. Manual meter readings will be accepted but must be recorded at least monthly. Meter data must be available for each energy carrier used in the property. The data must be made available to the lender, or the lender's nominated third party, to evaluate performance and must in turn be passed on to the EeMAP Coordinator in anonymized form, complying with all relevant data protection laws,

Nationally recognised

National recognition (of a method, approach or accreditation as being appropriate for fulfilling one of the criteria set out in this document) shall be defined by mutual agreement of the national organisations representing EeMAP (EeMAP national governance to be confirmed as part of the pilot phase). These national organisations shall consult and take advice from other relevant stakeholders in the mortgage finance value-chain. In some countries, these definitions may need to be set differently for different regions.

During the EeMAP pilot scheme, these definitions shall be overseen by the EeMAP Consortium.

2.3. Future Ambition

There are a number of areas which will necessarily need to be strengthened in the future as the EEM market matures. These areas are outlined below. The EeMAP consortium envisage the development of a governance structure for EEMs, consisting of one or more advisory groups. Their job will be to review the framework of guidelines and update them at appropriate regular intervals, ensuring that the EEM framework continues to be improved and reflects the state of the market. The ultimate goal is that the framework becomes robust enough to ensure EEMs support the levels of improvement of Europe's building stocks and the increase of renovation rates, which is needed in order to develop a sustainable, competitive, secure and decarbonised energy system and meet the EU's climate and energy targets.

Energy Metrics

The key eligibility criteria for ensuring a building meets the necessary level of energy performance will need to be regularly reviewed. In particular, the use of calculated or measured energy data or a combination of these should be reviewed, as should the thresholds set for new builds and for renovations. Furthermore, in future, techniques to evaluate the real energy performance of a building using site measurements may become available. These

techniques can be used to measure the intrinsic performance of the building envelope and the energy systems in the building, separate from the energy use pattern of any specific occupant(s). As these approaches mature, they could offer lenders a more accurate assessment of the actual thermal performance delivered by a renovation or of a new building. The suitability of these techniques will remain under review.

In reviewing the energy metrics and criteria, it will be necessary to observe and respond to the ongoing developments of national minimum energy performance requirements, NZEB definitions and other regulatory and voluntary standards in the market. In particular, the potential for regulatory developments to introduce the risk of obsolescence, such as the introduction of minimum energy efficiency standards at sale or rental, will need to be closely monitored.

Ongoing Performance Monitoring and Performance Guarantees

A key element in the ongoing design of the EEM will be to develop suitable mechanisms to ensure that the predicted performance or performance improvement is realised in practice. At this early stage of development of the concept, requiring a full performance guarantee is considered to be too onerous for the pilot stage. The mechanisms for ensuring performance levels are met and maintained will be regularly reviewed. One important consideration will be whether, for the purposes of monitoring lending risk, the performance is monitored at the level of individual properties or across portfolios.

Building Energy/Renovation Passports

Building energy or renovation ‘passports’ can improve the availability of data for valuers and lenders and ensure that any renovation works are planned and implemented in a technically sound manner. Research undertaken by the EeMAP Consortium indicates that borrowers see the value of having a building energy passport linked to the EEM. However, there are currently only three pilots of such passports in existence in Europe. Therefore their incorporation into the EEM criteria cannot be a prerequisite for the pilot and will be subject to ongoing review. In particular the EeMAP project will be working with the [iBRoad project](#) to assess likely future requirements for building energy passports and how these instruments can be made most useful for lenders, valuers and other actors in the EEM value chain.

Wider Sustainability

The evidence gathered by the EeMAP initiative shows that there is a strong case to be made for expanding the criteria for EEMs to incorporate wider sustainability performance aspects. These aspects are often much stronger drivers of property value and their incorporation could have a greater risk mitigation effect for lenders than energy performance alone. These aspects can be assessed using voluntary sustainability certification schemes, which are already increasingly common in the commercial property sector and are in early development in the residential sector in several European countries. The European Commission’s new ‘[Level\(s\)](#)’ framework for sustainable building performance reporting is intended to further standardise the metrics and approaches used to evaluate these wider sustainability aspects. The suitability of Level(s) and other voluntary schemes to form the basis of criteria and assessment for a more comprehensive ‘green mortgage’ framework will be the subject of ongoing review within EeMAP’s governance.

For markets where voluntary sustainability certifications for new commercial buildings have become standard practice, the pilot phase criteria set out above are not intended to preclude lenders applying a more rigorous

standard. Additional criteria, based on an accepted voluntary sustainability certification scheme, may also be used provided the three basic criteria above are also complied with.

3. EeMAP Valuation Guidance and Energy Efficiency Checklist

3.1. Background

The objective of the draft checklist in Annex I for use by valuers conducting secured lending valuations is to support European lending institutions to develop a dedicated ‘Energy Efficiency Mortgage’ market-based lending product that will help drive the ambition to achieve low carbon buildings. The proposed valuation guidance and energy efficiency checklist are intended to be an additional section to existing lending valuation instructions. It is expected that, over time, it may become part of the standard valuation instruction letters issued by banks.

Mortgage lending valuations are typically undertaken by expert, qualified and independent valuers who inspect the property, taking note of all factors considered salient to value and then analysing other market transactions from within the locality. Current prevailing practice for secured lending is that valuers are not instructed specifically to consider the energy performance of the property. If considered relevant to value, based on market evidence, energy efficiency will be implicitly factored in by a valuer. Nevertheless, their report will normally not make specific reference to energy certification or characteristics observed. However, it is known that in many cases, buildings which are energy inefficient may well represent a value risk moving forward, whilst those that are efficient will probably be more saleable and in time hold their value more robustly.

Greater clarity and standardisation of instructions to valuers, with respect to reporting on energy efficiency when commissioned to undertake secured lending valuations, will assist lending institutions to develop a clearer and more explicit understanding of the potential risks associated with properties that could be subject to value depreciation due the building’s energy characteristics.

3.2. Practical Application of the Checklist

Buildings are complex structures, and every element from design to construction materials, to location, is likely to have an impact on the building’s energy performance. Assessing a building’s energy efficiency credentials as well as their potential impact on value is a complex activity and not a precise science. It is the role of the valuer to synthesise the information that they can gather and form a reasoned professional judgement based upon evidence as to the extent, if any, that the level of energy efficiency – or indeed inefficiency – impacts on the value. This assessment is done at a moment in time and does not provide the lender with information as to whether the property being offered as security for a loan presents a high or low risk of value depreciation moving forward and yet it is the risk attached to any loan that is of interest to the lender.

Annex I contains a standardised draft checklist of indicators which valuers should consider for the purpose of carrying out valuations for energy efficient mortgages. The extent and approach of reflecting this in value estimates will strongly depend on a range of factors including, among others:

- the underlying definition of value,
- property type,
- regional and local market conditions,
- regional and local climate and energy price relationships,

- regional and local conventions, etc.
- availability of comparable evidence within the local sub-market.

It follows that the impact of energy efficiency on value will vary significantly, as will the potential for value stability or decline in relation to energy factors. In addition, the valuer's professional judgement will also affect the strength of the impact.

The draft checklist is aimed at improving and standardising the due diligence process undertaken by valuers. The checklist was tailored for residential properties however it is intended to be flexible enough to also apply to commercial properties. The valuer is required to use the list of indicators within their overall decision-making matrix to form holistic judgements. Making energy efficiency risks more explicit is central to the EeMAP initiative, as it will provide the possibility of aggregating and analysing the data, establishing evidence and correlation with probability of default and loan-to-value differentiation. Further scoring and weighting of risks will be carried out by the lending institutions against additional credit-worthiness criteria, such as the profile of the borrower.

Valuers are therefore recommended to:

- assess the extent to which the subject property currently meets energy efficiency criteria and arrive at an informed view on the likelihood of these impacting on value, i.e. how a well-informed purchaser would take account of them in making a decision as to an offer price;
- provide a clear description of the energy efficiency related property characteristics and attributes that have been collected, that may include items not directly reflected in the final advice as to value;
- provide a statement of their opinion on the relationship between energy efficiency factors and the resultant valuation, including a comment on the current benefits/risks that are associated with these sustainability characteristics, or the lack of risks; and
- provide a statement of the valuer's opinion on the potential impact of these benefits and/or risks to relative property values over time.

3.3. Collecting evidence: inspection and data availability

For owner-occupied residential buildings, the role of the valuer is to assess market value in the light of evidence normally obtained through analysis of comparable evidence. Energy efficiency characteristics should only be built into a report on value where market evidence would support this.

Mortgage lending institutions and their valuers are strongly advised to collect and record appropriate and sufficient energy efficiency data, as and when it becomes available, for future comparability, even if it does not currently impact on value. This could be particularly beneficial where the valuer is retained to provide regular reports to a client.

Valuers should be satisfied that sufficient information is held to enable them to make an informed judgment and provide sound advice to the client. Information may have been provided through valuers' due diligence processes and must be subject to appropriate verification. In undertaking their investigations, the valuer should ask the lender and the energy assessor to provide data on energy performance **according to the EeMAP building performance assessment criteria** (see Section 2). If lending institutions are unable (or unwilling) to provide data, then this should be treated as a potential additional risk factor.

The EeMAP building performance assessment criteria provide transparent, consistent and verifiable energy performance assessment, ongoing monitoring of the measured energy consumption and quality assurance of the energy-efficiency works undertaken. Additionally, it is envisaged that a building energy passport will be made available in the future, containing relevant and up to date building information and disaggregated data inputs.

3.4. Knowledge and skills

Valuers undertaking valuations for securing energy efficient mortgages are encouraged to complete the *Renovalue* training programme⁶ and the associated forthcoming EeMAP training module, specifically designed to educate valuers and help them recognise energy efficiency features and the implications these could have on property values in the short, medium and longer term. Over time, such training may be a pre-requisite to undertaking secured lending valuations.

⁶ Renovalue (www.renovalue.eu) is a free, publicly available training toolkit for property valuation professionals on how to factor energy efficiency and renewable energy issues into valuation practices and understand the impact of building performance on property values. Renovalue received financial support from the Intelligent Energy Europe Programme of the European Union. At the time of drafting this document, we understand that this is the only publicly available training programme on valuation and energy efficiency.

Annex I: Draft Valuation and Energy Efficiency Checklist

The checklist is aimed to complement existing valuation instructions. Since no standard reporting template exists, some of the indicators below might already be part of existing valuation instructions. It is, however, important to consider and make specific reference to those indicators and observed energy efficiency characteristics which potentially could have an impact on value. The checklist does not attempt to be a comprehensive list of all factors which the valuer will consider.

Key:

- Red:** Below market 'norm' – value actually/potentially at risk over period of proposed loan
- Amber:** Toward the lower end of market expectations – may be at risk in medium term
- Green:** At or above market expectations
- Grey:** No data available

Template

Indicators with potential impact on energy demand	Description	Red	Amber	Green	Grey	Comment (if required)
Building age						
Type of construction						
Condition of the property						
EPC rating (if any)						
Calculated and/or measured energy use in kWh/m ² /a (if available)						
Primary energy source						

Renewables on site (if any)						
Type of heating system						
Age of heating system						
Type of cooling system						
Age of cooling system						
Condition of heating & cooling system						
Windows						
Wall insulation (based on existing information)						
Floor insulation (based on existing information)						
Roof insulation (based on existing information)						
Orientation						
Implications of above against local climatic zone (hot, temperate, cold)?						

In line with current regulation?						
In line with local market expectations?						
Building documentation availability						

Annex II: Sample explanatory notes - to be developed for each indicator

Number	Item	Guidance
2	Type of construction	<p>The type of construction can materially impact on the energy efficiency of a building. Many older, heavy-weight construction buildings may retain heat and keep an even temperature; whilst not likely to be extremely efficient, such structures may be more efficient than those constructed in lightweight materials, particularly during the period following the Second World War when insulation was generally very limited.</p> <p>Structural types which are neither well insulated nor easy to insulate and where energy efficiency measures would be expensive and/or difficult to achieve would generally be scored Red; those which are below modern construction standards but where either some improvements to the efficiency have been achieved or they would be cheap and/or easy to achieve would normally score Amber; structures which are inherently efficient would be scored Green. Heritage assets which may not be possible to upgrade due to regulatory/legislative restrictions should be graded on the intrinsic efficiency of their construction, not their physical potential.</p>
4	EPC rating (if any)	<p>The Energy Performance Certificate (EPC) is a useful guide but may not give a full and accurate indication of the building's energy performance. Each country has introduced their own system and the valuer should be aware of what the EPC records and the level of reliability that can be placed upon it. The date on which it was</p>

		undertaken can also be critical as methodologies change and the building or some of its services may have been altered since the Certificate was issued. However, a building with an EPC rating that is significantly better than both the national norm and typical properties for the area should be given a Green rating; average scores an Amber and below average a Red.
12	Condition of heating & cooling system	The condition of the heating system may be difficult to ascertain from a visual inspection. However, the valuer should enquire as to service records. The valuer should bear in mind that in some cases, an older system that has been regularly serviced system may be more efficient than a more recently installed one which has not been serviced.
21	Building documentation availability	This indicator can provide information on the reliability of the underlying data and calculation methods on which the reported energy performance is based. Documentation refers to the availability of statutorily required certifications or ratings (e.g. EPC); voluntary certifications; building passports/building files; planning documentation; life-cycle assessments, ecological footprint analysis, etc. Lack of documentation should be flagged as Red.