

Annex 4: Schedule for the fulfilment of Article 2a of the EPBD

Division/Department
Centre for Energy Efficiency

MSC/HLM

Date
18. September 2020

Ref. No 2019 - 93913

Content of Article 2a of EU Directive – long-term renovation strategy	Description of fulfilment of the point.
<p>Point 1 – Long-term renovation strategy for aid</p> <p>Each Member State shall establish a long-term renovation strategy to support the renovation of the national stock of residential and non-residential buildings, both public and private, into a highly energy efficient and decarbonised building stock by 2050, facilitating the cost-effective transformation of existing buildings into nearly zero-energy buildings. Each long-term renovation strategy shall be submitted in accordance with the applicable planning and reporting obligations and shall encompass:</p>	
<p><i>What must the Member State provide?</i></p>	
<p>a) an overview of the national building stock, based, as appropriate, on statistical sampling and expected share of renovated buildings in 2020;</p>	<p>The overview referred to above was prepared in the report 'Heat savings in existing buildings' (SBI 2017), which uses data from over 600 000 energy ratings to assess the energy status of the building stock and the energy saving potential in connection with renovation</p> <p>The anticipated percentage of renovated buildings in 2020 is described in the section 'Renovation depth of the existing building stock' and Annex 2</p>

<p>b)the identification of cost-effective approaches to renovation relevant to the building type and climatic zone, considering potential relevant trigger points, where applicable, in the life-cycle of the building;</p>	<p>The report entitled 'Heat savings in existing buildings' (SBI 2017) identifies specific renovation measures for the Danish building stock for the most common building types. It is also documented that it is profitable in terms of private economics to implement the aforementioned renovation measures in connection with compliance with the requirements of the current Building Regulations (BR18).</p> <p>In addition, the report 'Cost-optimal levels of minimum energy performance requirements in the Danish Building Regulations' evaluates the requirements in BR18 in relation to the Energy Performance of Buildings Directive (EPBD). The report contains a number of calculations for the cost-optimal level of renovation compared with the requirements in BR18. The calculations are performed for the most common building types, i.e. single-family houses, apartment buildings and office buildings, and documents that the requirements in BR18 are profitable in terms of private economics. Finally, the profitability of renovating apartment buildings is assessed using two apartment buildings as examples in the section 'Energy renovation of apartment buildings: Economy and associated benefits associated with the energy renovation of apartment buildings to the requirements in BR15 and Building Class 2020 level'. Both reports are presented in the Annexes.</p>
<p>c)policies and actions to stimulate cost-effective deep renovation of buildings, including staged deep renovation, and to support targeted cost-effective measures and renovation for example by introducing an optional scheme for building renovation passports;</p>	<p>The section 'Roadmap for energy efficiency: Overview of existing and allocated support' accounts for Denmark's existing and allocated support measures for energy renovation, which also supports deep renovations.</p> <p>In addition, it may also be noted in particular that:</p> <ul style="list-style-type: none"> • The BedreBolig (BetterHousing) scheme complies with the EU's description of a building renovation passport • The building fund focuses on the least energy efficient buildings and realising the full savings potential, which promotes deep renovations in particular. • The Building Regulations ensure that energy renovations are carried out at the most cost-effective time, namely in connection with ongoing renovations. Moreover, the Building Regulations stipulate that only profitable energy renovations must be carried out.

<p>d)an overview of policies and actions to target the worst-performing segments of the national building stock, split-incentive dilemmas and market failures, and an outline of relevant national actions that contribute to the alleviation of energy poverty;</p>	<p><i>The least energy efficient segments:</i></p> <ul style="list-style-type: none"> • The building fund focuses on the segment of the national building stock with the greatest savings potential, namely residential properties. Furthermore, there is competition in the building fund for savings per kWh/m², which ensures that the least energy efficient homes are targeted. <p><i>Split-incentive dilemmas</i></p> <ul style="list-style-type: none"> • The section ‘Rental accommodation initiatives’ describes the current initiatives in this area. <p><i>Market failure</i></p> <ul style="list-style-type: none"> • All of the measures described under point 1c are intended to counter market failure. In addition, financial support measures (mortgage credit system, National Building Fund (Landsbyggefonden) and Municipal Mortgage Credit (KommuneKredit)) are described in more detail under point 2 under financing mechanisms. <p><i>Relevant national actions that contribute to the alleviation of energy poverty</i></p> <ul style="list-style-type: none"> • These are described in the section ‘Measures that contribute to the alleviation of energy poverty’
<p>e)policies and actions to target all public buildings</p>	<p>These are described in the sections ‘Energy efficiency in state institutions’ and ‘Loan fund for municipalities and regions’</p>
<p>f) an overview of national initiatives to promote smart technologies and well-connected buildings and communities, as well as skills and education in the construction and energy efficiency sectors; and</p>	<p>An overview of the relevant initiatives can be found in the section entitled ‘Information, education and advice’</p>
<p>g)an evidence-based estimate of expected energy savings and wider benefits, such as those related to health, safety and air quality.</p>	<p>These points are addressed in the section entitled ‘Estimate of anticipated energy savings and indirect effects’</p>
<p>Point 2 – roadmap and indicative milestones</p> <p>In its long-term renovation strategy, each Member State is required set out a roadmap with measures and domestically established measurable progress indicators, with a view to the long-term 2050 goal of reducing greenhouse gas emissions in the Union by 80-95% compared to 1990, in order to ensure a highly energy-efficient and decarbonised national building stock and facilitate the cost-effective transformation of</p>	<p>This will be determined in connection with the climate action plan</p>

<p>existing buildings into nearly zero-energy buildings. The roadmap shall include indicative milestones for 2030, 2040 and 2050, and specify how they contribute to achieving the Union's energy efficiency targets in accordance with Directive 2012/27/EU.</p>	
<p>Point 3 – mobilisation of investments</p> <p>To support the mobilisation of investments into the renovation needed to achieve the goals referred to in paragraph 1, Member States shall facilitate access to appropriate measures for:</p>	<p>Article 2a(3) of the EPBD stipulates that Member States shall facilitate access to appropriate mechanisms for mobilisation of investments into the renovation needed to achieve the goals referred to in paragraph 1.</p> <p>The Danish Energy Agency interprets this provision to mean that if financial mechanisms have already been introduced nationally that fulfil the requirements of the provision, then Member States are not obliged to establish new mechanisms.</p> <p>The Danish Energy Agency has therefore reviewed existing and future financial mechanisms, and based on this, it is assessed that there is a robust and stable system in Denmark to finance energy efficient building renovations.</p> <p>It is also the Danish Energy Agency's assessment that the volume, complexity and diversity of existing financial mechanisms means that these can be notified to the Commission as fulfilment of Article 2a(3). The existing financial mechanisms are reviewed in Annex 7.</p> <p>There are not believed to be any barriers to the financing of energy renovations in peripheral areas, but the data that is available is sparse, and the Danish Energy Agency will therefore initiate a more detailed analysis of this.</p>
<p><i>a) the aggregation of projects, including by investment platforms or groups, and by consortia of small and medium-sized enterprises, to enable investor access as well as packaged solutions for potential clients</i></p>	<ul style="list-style-type: none"> • <i>Mortgage credit system:</i> A widely used system of well-established mortgage credit institutions which lend money to building owners with the value of the building as a guarantee. The financing is obtained through the sale of bonds. The rules for mortgage credit institutions ensure that the obligations are highly secure, which means the interest on loans to buildings owners is low. Building owners can obtain financing for the renovation of their buildings through this. • <i>Municipal Mortgage Credit (KommuneKredit):</i> A special credit institution that provides financial services to municipalities and regions, including loans. Financing is provided through the issuing of bonds, including green

	<p>bonds to finance things such as energy efficient building renovations.</p> <ul style="list-style-type: none"> • <i>Banks and financing companies:</i> The ordinary banking system provides building owners with access to finance for building renovations, including special loans at an attractive interest rate, e.g. for energy efficient renovations. • <i>National Building Fund:</i> The National Building Fund is a self-governing institution providing support, including for energy efficient renovations in social housing. The fund is financed via payments made by all social housing associations. • <i>Municipal partnerships:</i> A special model for municipal cooperation, e.g. to develop and implement energy efficient building renovations. Specific project partner companies include EnergiAlliance Trekanten, ProjektZero, Gate21, Clean, etc.
<p><i>b) the reduction of the perceived risk of energy efficiency operations for investors and the private sector</i></p>	<ul style="list-style-type: none"> • <i>A strengthened energy rating:</i> From 2019, the energy rating will be boosted by elevating quality, taking action against errors and promoting dissemination. It is therefore anticipated that energy ratings will become an even more important tool in supporting energy efficient renovations. Stronger emphasis is also being placed on the benefits associated with energy efficiency, such as indoor climate and comfort. • <i>Standard value catalogue:</i> The Danish Energy Agency has brought about the determination of standard values for energy savings to simplify the calculation of realised energy savings. The calculation is performed using a simple multiplication of the standard value with the number of initiatives implemented. The basis for the standard values is a professionally well-qualified proposal for the energy savings that will be achieved through an activity. • <i>SBi instruction 269:</i> The instruction concerns the method and process for the execution of energy renovation projects for large buildings from conception to operation. The instruction provides guidance for parties involved in a renovation project on the execution of energy renovation projects in all phases. The instruction contributes to the realisation of energy gains in connection with major renovation projects.

<p><i>c) the use of public funding to leverage additional private-sector investment or address specific market failures</i></p>	<ul style="list-style-type: none"> • <i>Housing-Job Scheme (Bolig job ordning):</i> The Housing-Job scheme grants tax reductions of up to DKK 12 200 per person per year (in 2019) for wages, including VAT, for skilled trade work carried out in homes. This reduction can be utilised through additional insulation, window replacement, improving heating systems and the replacement of heating control systems, etc. The scheme is permanent in the sense that no expiry date has been set. • <i>Heat pumps on subscription:</i> Under this scheme, selected companies install, own and operate a heat pump for a building owner. The building owner typically only pays a connection fee, ongoing subscription and payment for heat that is consumed. The selected companies receive a grant for each heat pump installation. The scheme expires in 2020 but will be continued under a new scheme focusing on scrapping oil boilers (see below). • <i>Grants for scrapping oil boilers after 2021:</i> Aid fund for scrapping oil boilers. The fund covers the years 2021-2024 and amounts to DKK 20 million annually to support the replacement of oil boilers with individual heat pumps. • <i>Energy companies' energy-saving initiative:</i> Under the Energy companies' energy-saving initiative, companies and private consumers can apply for a grant for and/or advice concerning energy saving measures, including building renovation, where it is possible to apply for aid for a wide range of measures such as summer insulation, window replacement, heat conversion and the control of heating systems, etc. Aid may be applied for directly with an energy company or through an actor with an agreement with an energy company and provided the work results in energy improvements. The scheme expires in 2020. The Energy companies' energy saving initiative will be replaced from 2021 by a fund targeted at energy process energy savings for businesses and a fund targeted at energy consumption savings in the buildings (see below). • <i>Fund for energy savings in buildings:</i> DKK 200 million has been allocated for the years 2021-2024 for energy savings in buildings. Because the potential savings are greatest in residential properties, the initiative is aimed
---	---

	<p>exclusively at this segment. Grants are awarded to building owners who can document the greatest energy saving potential (greatest possible saving in kWh/m²). At the same time, there are requirements to realise the full profitable energy saving potential for the building elements that grants have been applied for.</p> <ul style="list-style-type: none"> • <i>Energy savings in businesses:</i> A total of DKK 300 million has been allocated for the years 2021-2024 for energy savings in businesses, including non-residential buildings.
<p>d) guiding investments into an energy efficient public building stock, in line with Eurostat guidance; and</p>	<ul style="list-style-type: none"> • <i>ESCO financing:</i> When concluding ESCO contracts, the end users may also agree to access to financing for energy savings. A considerable number of municipalities and regions have concluded ESCO contracts in recent years to carry out energy efficiency measures. In some cases, the contracts also cover financing. In most cases however, municipalities and regions choose to obtain financing themselves, as Municipal Mortgage Credit offers them access to funding on more advantageous terms than ESCO can offer. Examples of where ESCOs have been used in Denmark include the partnership between Frederiksberg Municipality and Schneider Electric and Region Zealand and Siemens. • <i>Circular on energy efficiency in the State:</i> Energy consumption in the public sector is high and there are many savings to be made. It has therefore been determined nationally that energy consumption shall be reduced by 14% in 2020 as compared with 2006 in State institutions, etc. The target is specified in the circular and it is up to individual Ministries to ensure the target is met, including via energy efficient renovations. • <i>Green bonds from Municipal Mortgage Credit:</i> Municipal Mortgage Credit issues green bonds, which are securities where the funds borrowed are used to finance specific environmental and climate-related investments, including energy efficient renovations. The bonds are sold to institutional investors wishing to invest in projects that reduce climatic impacts and promote climate-friendly growth. • <i>Gate21:</i> Gate21 is a partnership between regions, municipalities, businesses and knowledge institutions in Greater Copenhagen (Region

	<p>Zealand, the Capital Region of Denmark and Region Skåne), working towards the common goal of accelerating the green shift and growth, including promoting the demand for energy renovations. Gate21 is a proven platform for public-private innovation and cooperation.</p>
<p><i>e) accessible and transparent advisory tools, such as one-stop shops for consumers and energy advisory services, on relevant energy efficiency renovations and financing instruments.</i></p>	<ul style="list-style-type: none"> <p><i>The BetterHousing scheme (BedreBolig):</i> The Danish Energy Agency has developed the BetterHousing Scheme, which is a market-based consultancy scheme that makes it easier for building owners to renovate in an energy-efficient way. Advice can be given at any stage of a renovation project, and may include drawing up a BetterHousing plan that creates a complete overview of the anticipated investment and savings. The BetterHousing plan can help the building owner in any dialogue with banks or mortgage credit institutions.</p> <p><i>SparEnergi.dk</i></p> <p>SparEnergi.dk is a website containing resources, tests and guidance on how good and energy efficient solutions can be achieved, including best energy efficiency practice when buildings are renovated and extended, etc. The website was launched by the Danish Energy Agency.</p> <p><i>Danish Knowledge Centre for Energy Savings in Buildings (Videnscenter for energibesparelser i byggeriet):</i></p> <p>The Danish Knowledge Centre for Energy Savings in Buildings collates and systematises knowledge concerning energy savings in buildings and communicates this to the construction sector. The overall objective of the knowledge centre is to contribute to the realisation of more energy savings in the existing building stock. The knowledge centre has existed since 2008 and is financed via public tenders under the Danish Energy Agency. Specific tasks of the knowledge centre include generally improving qualifications in the building sector, providing information about existing schemes (e.g. the energy rating scheme), developing tools to support construction parties in connection with marketing, guidance and advice, developing attractive energy solutions and creating a common entry point for the construction sector in</p>

	relation to tools and solutions concerning energy savings.
<p>Point 4 – best practice</p> <p>The Commission shall collect and disseminate, at least to public authorities, best practices on successful public and private financing schemes for energy efficiency renovation as well as information on schemes for the aggregation of small-scale energy efficiency renovation projects. The Commission shall identify and disseminate best practices on financial incentives to renovate from a consumer perspective taking into account cost-efficiency differences between Member States.</p>	This point is only for information purposes.
<p>Point 5 – public consultations</p> <p>To support the development of its long-term renovation strategy, each Member State shall carry out a public consultation on its long-term renovation strategy prior to submitting it to the Commission. Each Member State shall annex a summary of the results of its public consultation to its long-term renovation strategy. Each Member State shall establish the modalities for consultation in an inclusive way during the implementation of its long-term renovation strategy.</p>	The strategy will be distributed for consultation at the start of 2020.
<p>Point 6 – updating the existing strategy and progress of this</p> <p>Each Member State shall annex the details of the implementation of its most recent long-term renovation strategy to its long-term renovation strategy, including on the planned policies and actions.</p>	See Annex 7.
<p>Point 7 – other content and benefits of the renovation strategy</p> <p>Each Member State may use its long-term renovation strategy to address fire safety and risks related to intense seismic activity affecting</p>	<p>Fire safety is already covered by existing Directives.</p> <p>There is no severe seismic activity in Denmark.</p>

energy efficiency renovations and the lifetime of buildings.'. .	
--	--