



## Annex 5: Implementation overview of the long-term renovation strategy from 2014/2017

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Centre for Energy Efficiency

MSC/HLM

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This memorandum describes the status of the renovation strategies from 2014 and 2017.

The table below provides an overview of the status of the renovation strategy from 2014 in key words. The overview is based on an update from 2017.

Initiatives under the strategy	Status of the initiative in March 2020
<b>Requirements relating to building components in the Building Regulations</b>	
1.1 Upgrade the energy requirements for the building envelope, apart from windows	<ul style="list-style-type: none"><li>- Requirements updated in the Building Regulations (BR)18.</li><li>- Requirements evaluated in connection with reporting of the 'Cost-optimal report' to the European Commission.</li></ul>
1.2 Upgrade the energy requirements for windows	<ul style="list-style-type: none"><li>- Requirements updated in BR15 (now BR18).</li><li>- Requirements to be tightened at end of 2020.</li><li>- Information material via SparEnergi.dk</li></ul>
1.3 Upgrade the energy requirements for installations in buildings	<ul style="list-style-type: none"><li>- Requirements updated in BR15 (now BR18).</li><li>- Demonstration projects have been initiated as part of the Danish Government's initiative 'Energy efficient and intelligent buildings' to assess the potential for energy efficiency via 'smart' data-driven technology for building automation. This assessment is expected to be completed by the end of 2020.</li><li>- Analyses have been performed of the pros and cons of ventilation with heat recovery. It has been assessed that there is no need to introduce requirements in this area.</li><li>- A decision has been made not to introduce commissioning requirements for large buildings. Instead, requirements relating to the functional testing of installations have been introduced with effect from 2017. These requirements will be extended in 2020 with RE systems, automation systems, boilers and heat pumps.</li></ul>
1.4 Ensure greater compliance with the Building Regulations	<ul style="list-style-type: none"><li>- Information on BR via SparEnergi.dk has been updated and improved, including in connection with the implementation of BR18.</li></ul>

	<ul style="list-style-type: none"> <li>- The Danish Energy Agency and the Danish Construction, Transport and Housing Authority have jointly initiated an investigation concerning compliance with the requirements in BR, which is expected to be complete by mid-2020.</li> <li>- The Danish Knowledge Centre for Energy Savings in Buildings has prepared guidance and examples regarding compliance with Building Regulations.</li> <li>-</li> </ul>
1.5 Introduce voluntary energy classes for existing buildings	<ul style="list-style-type: none"> <li>- Voluntary energy classes for new buildings in BR18 have been implemented</li> <li>- Building owners renovating existing buildings may opt for compliance with a voluntary energy class instead of compliance with the component-specific requirements in BR18. This has been implemented with Renovation Classes 1 and 2</li> </ul>
<b>Requirements relating to new buildings in the Building Regulations</b>	
1.6 Upgrade the energy requirements in new buildings	<ul style="list-style-type: none"> <li>- Evaluations of experiences with Low Energy Class 2015 and Building Class 2020 have been performed, which has led to new requirements for new buildings in BR15 (now BR18)</li> <li>- Reassessment has been performed and Building Class 2020 is now a voluntary low energy building class.</li> <li>- New rules in BR15 (now BR18) for leakage testing, which provides an incentive to pressure test buildings.</li> </ul>
<b>Information on energy-efficiency for building owners and businesses</b>	
1.7 Step up information and communication activities about energy renovation and energy efficiency in the building industry	<ul style="list-style-type: none"> <li>- The platform SparEnergi.dk has been strengthened.</li> <li>- There are ongoing campaign initiatives concerning energy efficient renovation aimed at home buyers/new home owners/existing home owners in houses with poor energy ratings.</li> <li>- A programme has been implemented targeted at municipalities to establish partnerships to promote EE. Experiences from this have been collated and disseminated, including at a conference for all municipalities. The material is available at ens.dk.</li> <li>- The Danish Knowledge Centre for Energy Savings in Buildings has strengthened and developed its range of services and tools for energy renovation and energy efficiency in buildings, and has expanded its focus to also include initiatives targeted at sustainable construction.</li> </ul>
<b>Work done by energy companies</b>	
1.8 Target energy-saving efforts by energy companies	<ul style="list-style-type: none"> <li>- In a new agreement on the energy saving initiative from 2016, the insulation of the building envelope and pipes and window replacements were assigned greater importance than previously for buildings heated using district heating.</li> </ul> <p>The energy saving initiative will be concluded on 31 December 2020 and replaced by two funds targeted at buildings and businesses (described in more detail in LTRS)</p>
<b>Energy rating of buildings (Energy Performance Certificate)</b>	
1.9 Maintain an effective and targeted energy rating scheme for buildings	In connection with the action plan for better energy ratings, a user satisfaction survey amongst other things has been carried out in relation to owners of

	<p>single-family houses and new training has been introduced for energy consultants, including a requirement for ongoing training refresher courses.</p> <p>An information campaign on the energy rating of buildings has been conducted, targeting building owners.</p> <p>The website SparEnergi.dk is where data on the energy rating of buildings is published and contains information on how the energy rating of buildings can be improved with specific savings measures.</p> <p>In connection with the 'Energy efficient and intelligent buildings' initiative, it has been assessed how background data from energy ratings can be used more effectively as a basis for promoting EE.</p> <p>There has been dialogue with stakeholders on how the energy rating scheme can be streamlined and the quality improved.</p>
<p><b>Data and technical tools for promoting energy efficiency</b></p>	
<p>1.10 Provide better data and tools for decisions on energy renovation</p>	<p>In connection with 'Energy efficient and intelligent buildings' and in follow-up to the Energy Agreement from 2018, analyses have been performed of data to promote the EE of buildings and the potential for savings: The data required has been identified and the data prerequisites have been clarified to promote the commercial development of 'smart' data-driven solutions for EE in buildings. Furthermore, analyses from the Danish Agency for Digitisation, the Danish Ministry of Industry, Business and Financial Affairs and the Danish Business Authority have addressed topics such as access to consumption data (including energy) and the value of data.</p> <p>Projects have also been initiated to develop methods for building screening and estimating renovation potential based on data. These projects will be complete by the end of 2020.</p>
<p><b>Analysis of financing conditions</b></p>	
<p>1.1 Promote favourable conditions for financing energy renovation</p>	<p>A number of analyses have been performed, including whether or not the housing market is sufficiently transparent so that price formation reflects the energy condition of buildings. One example is the analysis 'Do good energy standards result in higher house prices?' (Giver en god energistandard en højere boligpris) (CPH Economics 2015). An analysis has also been performed concerning demolition and potentially rebuilding as an alternative to the energy renovation of a property.</p>
<p><b>Development of a building policy strategy</b></p>	
<p>1.12 Produce a building policy strategy</p>	<p>The building policy strategy 'the route to more robust construction in Denmark – the Danish Government's building policy strategy' (Vejen til et styrket</p>

	byggeri i Danmark – regeringens byggepolitisk strategi) was published in November 2014.
<b>Promote energy renovation by providing advice</b>	
2.1 Promote energy renovation in single-family houses via the BedreBolig (BetterHousing) scheme	In 2014, the BetterHousing scheme was launched as a national market-based consultancy scheme to promote the energy-efficient renovation of single-family houses.
<b>Promote alternatives to oil- and gas-fired boilers based on renewable energy</b>	
2.2 Promote more widespread use of alternatives to oil- and gas-fired boilers based on renewable energy	<ul style="list-style-type: none"> <li>- The scheme 'Heat pumps on subscription' was launched in 2017 and runs until the end of 2020. This involves private companies installing and operating a heat pump for a property owner, who will be billed for the heat supplied. A similar scheme has been commissioned to start in 2021 and is targeted at owners of oil-fired boilers.</li> <li>- A considerable number of targeted information activities have been implemented to support more widespread use of heat pumps as a replacement for oil boilers, including local citizen meetings in cooperation with municipalities.</li> </ul>
<b>New model for energy renovation based on energy savings guarantees</b>	
3.1 Promote energy renovation of large buildings by means of public tenders with guarantees	- Following more detailed analysis, the State-led development of new models for carrying out energy renovations with a guarantee was found not to be appropriate.
<b>Promote the energy renovation of social housing, owners' and tenants' associations' properties and business premises.</b>	
3.2 Promote energy renovation of social housing	<ul style="list-style-type: none"> <li>- A model under which housing organisations provide guarantees for energy savings via a special reserve fund was not found to be appropriate.</li> <li>- No basis was identified for the establishment of an energy renovation platform for general construction, as platforms already exist.</li> </ul>
3.3 Promote energy renovation of private rental and cooperatives and owners' associations' properties	<ul style="list-style-type: none"> <li>- A change in the law regarding simplification and modernisation has been implemented.</li> <li>- The evaluation of the energy saving package has been completed</li> <li>- As of 1 January 2017, the BetterHousing scheme has been extended to also include apartment buildings.</li> </ul>
3.4 Promote energy renovation of commercial rental property	- The Commercial Rental Act has been amended to make it possible under certain circumstances for landlords to demand a rent increase for an energy renovation that results in energy savings for tenants of their properties
<b>Energy renovation of public buildings</b>	
3.5 Promote energy-efficient public buildings	<ul style="list-style-type: none"> <li>- The circular 'Energy efficiency in State institutions' was revised in 2014. Another revision was performed in 2019, entering into force in January 2020.</li> <li>- An evaluation of all energy saving initiatives implemented by Ministries has been performed.</li> <li>- There has been a dialogue with municipalities and regions regarding entering into a voluntary agreement. This has resulted in a number of measures to improve frameworks and tools for the EE initiative in municipalities and regions.</li> </ul>

	<ul style="list-style-type: none"> <li>- In 2016, the digital tool Public Energy Consumption (Offentligt Energiforbrug) was launched, which provides information on electricity, heat and water consumption in State buildings.</li> </ul>
<b>Individual energy metering</b>	
3.6 Update the requirements for the metering and visibility of energy consumption in buildings	<ul style="list-style-type: none"> <li>- The requirements for the individual metering of energy in buildings containing multiple residential and commercial units have been updated and a revised Order on this subject has been issued. There will also be a new revision of the Executive Order on Metering in 2020 as a result of the amendment of the Energy Efficiency Directive.</li> </ul>
<b>Raising of skills, etc.</b>	
4.1 Improve training and skills development within energy renovation	<ul style="list-style-type: none"> <li>- Supplementary training has been developed under the direction of the BetterHousing scheme for relevant professional groups in the construction industry</li> <li>- As referred to under 1.7, the operation of the Danish Knowledge Centre for Energy Savings in Buildings has been extended, and new tools and guidelines are continually being developed to strengthen the skills of actors working in the construction sector in relation to energy renovations.</li> <li>- A renewable energy (RE) accreditation scheme has been established for businesses that establish renewable energy systems.</li> </ul>
<b>Promoting research and innovation, etc.</b>	
4.2 Enhance research, innovation and demonstration of energy renovation	<ul style="list-style-type: none"> <li>- The innovation fund has supported a number of programmes relating to energy renovation.</li> </ul>