



Annex B

Presentation to the Commission of a long-term strategy for mobilising investment in the renovation of residential and commercial buildings pursuant to Article 4 of the Energy Efficiency Directive.

Office/department

Centre for System Analysis,
Energy Efficiency and
Global Advice

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1. Introduction

This report contains a description of the policy and measures to promote the energy efficiency of the building stock.

This report has been prepared pursuant to Article 4 of the Energy Efficiency Directive (EED), and forms part of Denmark's report to the European Commission of the National Energy Efficiency Action Plan (NEEAP) on 30 April 2017.

The report contains:

- Status of 'Strategy for the Energy Renovation of Buildings', which was reported to the European Commission on 30 April 2014.
- Policies and measures to stimulate cost-effective deep renovations of buildings (see EED, Article 4(c))
- Identification of cost-effective approaches to renovations of buildings (see EED, Article 4(b))
- A forward-looking perspective to guide investment decisions of individuals, the construction industry and financial institutions (see EED, Article 4(d))
- General benefits of energy renovations (see EED, Article 4(e))
- A description of the national building stock and expected energy savings (EED, see Article 4 (a) and (e))

Enclosed is the report 'Potential heat savings due to ongoing building renovations through to 2050', dating from March 2014, which presents an analysis of the building stock and the opportunities for savings linked to ongoing renovations.

The report refers to websites and reports. The references are inserted as links in the text, so that they can be accessed insofar as necessary.

2. Status of 'Strategy for the Energy Renovation of Buildings' from 2014.

The government of the time prepared a strategy for the energy renovation of buildings, which was presented in April 2014 and which contained an account of the government's policy to stimulate the energy renovation of buildings. The strategy was included in the presentation to the European Commission of the long-term strategy for the renovation of buildings pursuant to Article 4 of EED in 2014.

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Following the parliamentary election in 2015, the previous government was replaced by a new government with a different party colour. The new government is not bound by the previous government's energy renovation strategy. However, as the overwhelming majority of the initiatives in the strategy was established through broad political agreements, which also cover the current government, the strategy's initiatives either have been or are in the process of being implemented. A status of the individual initiatives in the strategy from 2014 is enclosed in Annex C.

3. Energy consumption in buildings

This report concerns the energy consumption for the conditioning of indoor climate in buildings with a view to creating a good indoor climate for people. This also includes energy consumption for hot water. Energy consumption for appliances is not included in this report.

This covers a high proportion of the energy consumption in housing, the public sector and the commercial and service sector, as well as a small proportion of the energy consumption in manufacturing industry.

The final energy consumption for heating and hot water in housing, the public sector and commerce and service, which is covered by this report amounted to approximately 200 PJ in 2015. In addition, around 10 PJ is used for heating buildings in manufacturing enterprises. In total, this amounted to approximately 33 per cent of the total final energy consumption in Denmark in 2015.

4. The government's policy to stimulate energy efficiency improvements to buildings

4.1 The government's objectives for the energy policy

The government's overall objectives for the energy policy are:

- In 2030, Denmark shall cover at least 50 per cent of its energy demand by renewable energy.
- In 2050, Denmark's energy supply shall be independent of fossil fuels.

Energy efficiency improvements to buildings play an important role in connection with the fulfilment of these objectives. Energy savings in buildings reduce the total energy demand, which in turn reduces the need for expansion of the renewable energy supply which must be carried out in order to realise the objectives for renewable energy. This means that the lower the energy consumption of buildings, the less renewable energy must be expanded in order to achieve the objectives.

4.2 Instruments to stimulate energy efficiency improvements to buildings

The government's policy contains a raft of instruments which are intended to stimulate cost-effective energy savings in the energy consumption of buildings.

The following description is based on a subdivision of the instruments into:

- *Economic instruments*, which provide a stronger incentive to improve energy efficiency. Instruments of this type could for example include energy and environmental taxes and grant schemes
- *Normative instruments*, e.g. in the form of regulations and requirements. The requirements of the building regulations are examples of this.
- *Informative instruments*, which are intended to increase the level of awareness of the various opportunities and to influence consumer behaviour.
- *Other measures*, this encompasses the utilisation of data to stimulate energy efficiency improvements to buildings.

4.1.2 Economic instruments

Energy taxes

Since the late 1970s, high taxes have been imposed on energy for households and public institutions. Since the mid-1990s, the taxes imposed on industry's energy consumption for the heating of buildings have been raised to the same level as households, with the result that taxes are levied on all energy used to condition indoor climate and produce hot water in buildings.

These taxes give consumers an incentive to implement savings in energy consumption via investments in energy saving measures and via behavioural changes with a view to the appropriate use of energy.

The taxes primarily consist of energy taxes and CO₂ taxes, which reflect CO₂ emissions linked to consumption of the applicable fuel or energy form.

The taxes on the most commonly used energy forms are shown in Table 1. It can be seen that the taxes amount to approximately 50 per cent of the consumer price, with the result that there is a strong tax-related incentive to reduce the energy consumption of buildings.

Table 1. Taxes on energy and energy prices (end 2015),

Energy	Unit	CO ₂ tax	Energy tax	VAT ²⁾	Consumer price Inc. VAT ²⁾	Taxes as per cent of consumer price
Gas oil (max. sulphur concentration 0.001 per cent)	Øre/l	45.5	202	173	864	49
Natural gas	Øre/Nm ³	38.4	216	134	672	58
Electricity (for heating) ¹⁾	Øre/kWh		38	46	169	50
Other electricity	Øre/kWh		87.8	34	231	53

¹⁾ Electricity which exceeds 4 000 kWh annually in permanent homes which are heated by electricity.

²⁾ Mean values. The relevant values for the individual user depend on the supplier and delivery terms and conditions.

Taxes on district heating are calculated based on the taxes on the fuels that are used to generate district heat.

The green BoligJobordning household employment scheme

In 2016 and 2017, a scheme is in force according to which owners of residential properties may be entitled to tax deductions for salary costs to carry out a range of energy-saving measures. For example, a deduction may be granted for the retrospective insulation of roofs, cavity wall insulation, window replacement, etc. Deductions are also given for costs linked to energy advice.

A maximum deduction from taxable income of DKK 12 000 per year is given for each person in the household.

The energy companies' energy saving obligation

Energy companies in Denmark are obliged to implement energy savings. The principle for this initiative is that the individual energy companies have an annual target for the savings that must be realised. The companies are then free to realise savings in areas and sectors where the savings can be achieved most cheaply.

As a consequence of this, it is the energy companies which decide how the initiative should be distributed between the various sectors, including how many savings should be made in buildings.

The breakdown of the savings between sectors is shown in Figure 1. It can be seen that the savings target in 2015 amounted to 12.2 PJ, of which 45 per cent was realised within households, public institutions and the commerce and service sector, where the majority of energy consumption is used for heating purposes. The savings realised through building-related measures amounted to approximately 35 per cent of the companies' reported savings in 2015.

Figure 1. Breakdown of the energy companies' savings between sectors.

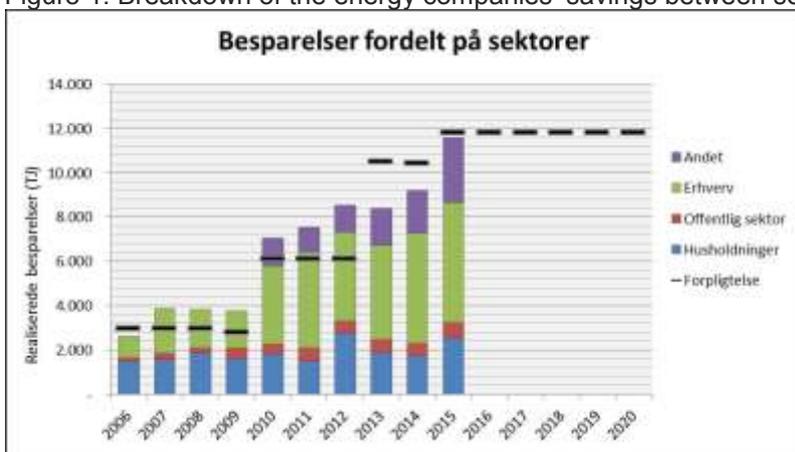


Figure 1 key:

- Realised savings (TJ)
- Savings broken down per sector**
- Other
- Industry
- Public sector
- Households
- Obligation



4.2.2 Normative instruments

The building regulations

[The Building Regulations](#) implement requirements in the EU's Building Directive (EPDB).

These regulations lay down requirements for existing buildings, which must be fulfilled through alterations or other changes to building elements.

The building regulations contain requirements concerning energy efficiency for building elements and installations which are replaced during renovation. This applies for example to windows, external walls and roofs; see Table 2.

Table 2. The building regulations' energy requirements for new building elements upon replacement.

Building element	
External wall and basement wall to ground	0.18
Partition walls and floor partitions to rooms which are unheated or heated to a temperature which is 5 °C more or less than the temperature in the room concerned.	0.40
Ground floors, basement floors to ground and floor partitions above open air or ventilated crawl space.	0.10
Loft and roof structures, including attic walls, flat roofs and inclined walls directly against the roof.	0.12
Gates.	1.80
Hatches, new double windows and skylights	1.40
Renovated double windows.	1.65
Building element.	Line loss [W/mK]
Foundations.	0.12
Joint between external wall, windows or external doors, gates and hatches.	0.03
Joint between roof structure and roof windows or skylights.	0.10

In addition to the above requirements, there are also requirements linked to the replacement/installation of heating systems, ventilation systems and other technical building elements.

For maintenance work and alterations which do not involve replacement, there is a requirement for energy efficiency improvements to be implemented if the marginal investment for such improvements is profitable for the building owner. If the repayment period for the marginal investment for energy saving is less than three quarters of the lifetime of the energy saving measure, the saving is defined as profitable and must then be carried out. This means that there is an obligation to carry out the energy saving measure if:

$$Investment/Annual\ saving < 0.75 \cdot Lifetime$$



In addition to the obligatory requirements, the building regulations contain two voluntary energy classes for existing buildings. If the renovation of a building is carried out in accordance with one of the voluntary energy classes, the energy requirements for the individual components in connection with renovation will cease to apply.

The voluntary energy classes are defined through three conditions:

1. the energy supply requirement must be reduced by at least 30 kWh/m^2 ,
2. a proportion of the building's energy supply must be based on renewable energy,
3. the energy supply required per year after the renovation must be less than:
 - Energy class 1: $(52.5 + 1650/A) \text{ kWh/m}^2$
 - Energy class 2: $(110 + 3200/A) \text{ kWh/m}^2$,

where A is the area of the building in m^2 . The abovementioned energy consumptions apply to buildings which are used for residential purposes. Corresponding limits apply to buildings which are used for commercial purposes.

The building regulations are regularly revised. The current regulations were adopted in 2015, and new regulations are scheduled to be introduced with effect after 2020.

4.3.2 Informative instruments

There are other measures which are intended to inform citizens about energy efficiency. These encompass:

- Energy labelling of buildings
- SparEnergi.dk
- Bedre Bolig (Better Homes)
- Danish Knowledge Centre for Energy Savings in Buildings

Energy labelling of buildings

The energy labelling implements requirements in the EU's Building Directive (EPDB).

It is a requirement that buildings used for residential or commercial purposes where the index climate is adjusted with a view to ensuring that people can remain in the building must have a valid energy label upon the sale or letting of the building or a part thereof.

In order to obtain an energy label, the building must be reviewed by an independent expert, who will assess the energy efficiency of the building and the scope to implement savings. The energy efficiency is described by calculating an indicator for energy efficiency described through a letter, A - G, where A is best. The expert will also prepare a report on the scope for implementing energy savings. The individual proposals for savings will be documented through a calculation of the energy saving and the cost of implementing the saving.



The label will be valid for seven or ten years, depending on the scope of the energy savings. If the expert concludes that there are potential energy savings amounting to more than 5 per cent of the annual energy consumption, the period of validity will be seven years. Others, the period of validity will be ten years.

The indicator for energy efficiency must be disclosed in all advertisements for sale or letting of the building or parts thereof.

All energy labels must be reported to the Danish Energy Agency, which has established a database containing information on the energy labels, including the indicator for energy efficiency and the proposals for energy savings. In addition, all technical background data concerning the building's energy-related characteristics, including the size, the area of the building envelope, the U value of external walls, ceilings, windows, design heat consumption, etc. is also stored.

Data from the database concerning energy labels are publicly available. On the website, SparEnergi.dk ([Find your energy label](#)), users can find the energy label for buildings in Denmark.

Approximately 55 – 60 000 energy labels are awarded every year.

[Analyses](#) have been carried out of the effect of the label on property prices. These analyses show that the energy labelling scheme has an effect on property prices and thereby helps to create transparency concerning energy efficiency on the property market. The effect corresponds to an increase in property price of approximately DKK 500/m² for each step on the energy scale.

SparEnergi.dk.

[SparEnergi.dk](#) is the Danish Energy Agency's user-oriented website which contains information on energy efficiency improvements to appliances and buildings.

As regards energy efficiency improvements to buildings, the website contains information concerning:

- Laws and regulations concerning energy efficiency improvements to buildings;
- Opportunities to obtain grants and deductions in connection with the implementation of energy savings;
- Opportunities to implement energy savings on individual building elements and guidance concerning the implementation thereof;
- Cases with specific examples of renovations which have been carried out;
- Video on the implementation of savings;
- An account of the benefits of implementing energy savings, including the effect on indoor climate, the environment and sustainability.

Among other things, SparEnergi.dk contains a [Building guide](#), which provides detailed information on 15 commonly occurring building types, including



the building structure, opportunities to implement energy savings relating to the individual building elements with a description of specific proposals which can be implemented, cost-effective methods for the renovation of the building elements, benefits for indoor climate, etc.

An evaluation of the website has been carried out which shows that the website is used by a large number of people (approximately 500,000 visits per month) and that users consider the information to be easy to understand and apply in connection with their deliberations regarding the initiation of building renovations.

Bedre Bolig (Better Homes)

Bedre Bolig is an approval scheme for energy advisers established by the Danish Energy Agency in 2013. Businesses which are approved under the scheme must have appointed advisers who have completed a special course on the energy renovation of buildings. Under the scheme, advisers can offer building owners the opportunity to carry out an energy review of the building in accordance with a special concept and prepare an energy plan for the building. They can also assist the building owner in implementing the energy renovation by managing the renovation process.

In the scheme, emphasis is placed on ensuring that the advice is provided according to a coherent concept which covers building renovation, energy savings and indoor environment, based on the needs and wishes of the user.

The scheme is market-based in the sense that building owners wishing to use the scheme must pay the market price for the services.

An [evaluation of the scheme](#) has been carried out which shows that although the scheme has not yet become widespread, building owners who use the scheme carry out renovation works on a larger scale than other building owners.

Danish Knowledge Centre for Energy Savings in Buildings.

The Danish Energy Agency has established a [Knowledge Centre for Energy Savings in Buildings](#) located at the Technological Institute, which has the aim of collating and disseminating information concerning energy savings in buildings for contracting firms and educational institutions in the area.

The Knowledge Centre has prepared and maintains a collection of [energy solutions](#) for different types of buildings in Denmark, which describes how energy savings can best be implemented for different building elements and building installations with a specification of energy savings and costs, so that contractors can advise citizens as regards how cost-effective renovations can be carried out on their buildings.



[Evaluations](#) of the Knowledge Centre have been carried out which show that the Centre is used by the target group, i.e. contractors within the area and energy consultants, advisers and educational institutions. The Centre's services are considered by the target group to be useful and of high quality.

4.4.2 Other instruments

In December 2015, the government signed an agreement concerning the start-up of the

'Energy Efficient and Intelligent Buildings' initiative, which is partly aimed at stimulating energy efficiency improvements to buildings via the use of data and digitalisation.

The purpose of the initiative is to stimulate energy efficiency improvements to buildings via the use of data concerning buildings, their energy consumption, weather, etc. which already exists in public registers or amongst the energy supply companies.

In specific terms, the aim is to use data-driven decision-making tools to screen buildings with the aim of identifying buildings with the greatest potential for energy savings and determining what energy saving measures would be most appropriate for a particular building. This will enable advisers and enterprises which market energy saving solutions to reduce the costs they incur in marketing their services. It will also provide building owners with a better basis for deciding what measures should be carried out on their buildings.

A further aim is to develop smarter and more sophisticated tools to simulate the energy efficient operation of buildings, including systems for building automation which collect data on user behaviour, weather forecasts, building energy-related characteristics, etc. to improve operational efficiency while ensuring a good indoor environment at the same time.

Funds have so far been allocated to the initiative for a three-year period from 2016 to 2019. A decision will be taken regarding the continuation of the initiative at the end of this period.

5. Identification of cost-effective approaches to renovations of buildings

The initiative to stimulate energy efficiency improvements to the existing building stock is based on the fact that energy savings are cheapest when they are carried out in connection with the ongoing renovation of the building. This means that the cost of the energy saving represents the additional investment to implement the energy saving compared with the renovation that would have been carried out anyway.

Analyses conducted by SBi in 2010 showed that the cost of energy savings is considerably reduced when they are carried out in connection with the



renovations and replacements of building elements and components which must be carried out anyway as a result of ordinary maintenance and wear.

As an extension of this, the building regulations focus on the implementation of energy efficiency measures being carried out at the same time as essential building renovations. The requirements for existing buildings in the building regulations have therefore been formulated as requirements regarding how energy savings will be implemented in connection with renovations.

These requirements also provide guidance for building owners concerning cost-effective approaches to the renovation of their buildings.

As a supplement to this, the Danish Energy Agency's website SparEnergi.dk contains detailed information concerning 15 frequently occurring building types ([Building Guide](#)), with information on the building, its structure and how energy savings can be carried out most effectively.

In addition, the Knowledge Centre has prepared directories of relevant energy saving solutions ([Energy Solution Directory](#)), which can be used by contractors in connection with the renovation of different types of buildings. These solutions are also presented on the website, SparEnergi.dk ([Energy Solutions](#)), in a simplified version with a view to providing guidance to building owners on the opportunities for energy savings, how they can be carried out, costs, energy savings and other associated benefits.

6. A forward-looking perspective to guide investment decisions of individuals, the construction industry and financial institutions

Since 2006, there has been an emphasis on giving the building industry, citizens and individuals a long-term perspective for energy efficiency improvements to buildings.

This has been achieved by establishing two voluntary low-energy classes in the building regulations, which specify the requirements that will be made to the applicable requirements in the future, and which can also be used as a basis for construction clients who wish to fit out their buildings in a way which complies with future requirements.

Through the energy agreement of 2008, this was consolidated, as it was decided that the requirements for new (buildings) in 2010, 2015 and 2015 should be established so that the energy consumption of new buildings is reduced by 25 per cent on each occasion. The voluntary low energy classes have since implemented the requirements that would have entered into force in 2015 and 2020.

It should be emphasised in particular that these requirements particularly be markers for the construction industry's development and innovation initiatives, and for their investments in new technology. This has meant that the construction industry has been given the opportunity to focus their initiatives to promote

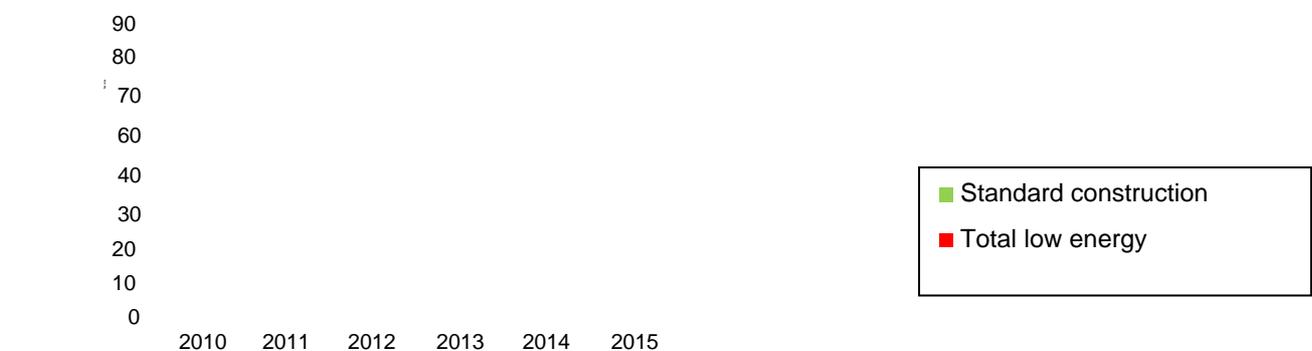


the development of new technology and investments in new production equipment in advance of the entry into force of the requirements concerned. The outcome has been that the construction industry has developed the new solutions when they entered into force, which has also meant that the prices of new solutions fell rapidly after the requirements entered into force.

The requirements in the voluntary energy classes are also used by building owners who are seeking to erect new buildings which go further than the current requirements as regards energy efficiency. This applies for example to certain office buildings where the building owner wishes to use the low energy classes to emphasise the enterprise's environmental profile. The low energy classes are also used by municipal authorities to establish requirements according to which new-builds must be erected in accordance with the regulations applicable to the voluntary low energy classes as part of the municipal energy and climate policy.

The breakdown of all buildings for residential and commercial purposes between the applicable requirements for energy efficiency (standard construction) and low energy construction is shown in Figure 2. It is apparent that the low energy requirement, particularly the requirements for buildings after 2015, was largely used before they entered into force.

Figure 2. Breakdown of buildings between low energy and standard construction [see original]



Percentage of floor area

General benefits of energy renovations

The energy renovation of existing buildings generally has positive effects for individual building owners and for society as a whole.

The direct effect of implementing savings through energy renovation is that it reduces energy bills. As mentioned previously, it has also been shown that energy efficiency also results in an increase in property value.

Moreover, energy renovations often create a better indoor climate and better comfort for users of the building. In many cases, this also leads to more



scope regarding the use of the building, as it is then possible to use areas in the houses around windows. [Studies have been carried out](#) in Denmark which show that there is a clear link between the energy standard of a house and the residents' perception of comfort. A high proportion of the households which have improved the energy standard of their home have also experienced improvements in their indoor climate.

[Analyses have also been carried out of the relationship between the energy standard of buildings](#) and the occurrence of disease. However, these analyses show that there is no clear link in Denmark between a building's energy standard and the health of the occupants.

Building owners are informed of these benefits via SparEnergi.dk.

7. The building stock's composition and expected energy savings

As a background to the Strategy for the Energy Renovation of Buildings from 2014, the Danish Energy Agency commissioned a comprehensive analysis of the building stock in Denmark and the expected energy savings which follow from the energy renovation of the existing building stock.

The results of this analysis are documented in the enclosed report, ["Potentielle varmesparelser ved løbende bygningsreovering frem til 2050"](#), SBI 2014.

A brief overview is presented below of the underlying data used in the analysis, the method and key results.

The underlying data

The underlying data consists of the BBR (Bygnings- og Boligregistret - the Danish National Building & Dwelling Register), which contains detailed information concerning all buildings in Denmark. This information includes building type and use, year of construction, area, heating system and construction.

This information has been merged with background data for energy labelling acquired in Denmark since 2006. This comprehensive data comes from around 250,000 buildings and includes data on floor area, the area of walls, floors and roofs, window areas and U values for all elements of the building envelope and windows.

On the basis of this, the following have been prepared:

1. a list of the building stock and its area broken down between building types/uses and year of construction,



2. a statement of the energy-related characteristics of buildings in each combination of type and year of construction, which encompasses a description of the insulation condition for the building envelope.

Based on the energy-related characteristics of the buildings, the net heating requirement is then calculated for buildings, which is then calibrated using information in the energy statistics.

Method

The calculation of energy saving is based on the assumption that energy savings are implemented in connection with ongoing renovation. Thus, a reference sequence is established for the way in which individual building components are replaced based on their average lifetimes. Among other things, this covers replacement sequences for roofs, windows and various types of external walls, with a statement of the number of square metres of each component replaced in each individual year through to 2050.

A set of scenarios is then calculated which reflect various assumptions concerning the energy efficiency of the components that replace the replaced components. The costs are calculated based on the unit prices of the individual components.

Results

The results take the form of a set of matrices for energy consumption in 2011 and 2015 for combinations of building types and year of construction, and matrices with the associated costs.

The key results are summarised on the table on the next page, which shows energy savings linked to the individual scenarios and the costs associated therewith.

For example, it is apparent that the BAU scenario, which is based on a continuation of the then requirements in the building regulations through to 2050 will result in energy savings corresponding to 27 per cent of the net heating requirement of the building stock.

The energy renovation strategy of 2014 assumed that a raft of stricter requirements for buildings would be introduced in 2015, in 2020 and thereafter at some time after 2020, which collectively would result in energy savings of around 35 per cent through to 2050.

The present government is not bound by the strategy, and no stance has been taken as regards the possible introduction of new and stricter requirements in the building regulations in 2020 and thereafter. The calculations therefore do not at the present time reflect the government's expectations concerning energy savings in buildings through to 2050.

Scenario	Energy consumption in 2050 TJ/year	Saving relative to 2011 %	Saving relative to A0 % points	Investment relative to A0 DKK million	Current prices		Future prices		
					Total investment DKK million	DKK kWh per year	Investment relative to A0 DKK million	Total investment	
								DKK million	DKK kWh per year
Status 2011	206 178	-	-	-	-	-	-	-	-
A0 Business-as-usual	148 978	27.70 %	-	0	140 972	8.87	0	102 472	6.45
A1 Full BR compliance	141 446	31.40 %	3.70 %	29 112	170 084	9.46	23 290	125 762	6.99
A2 90 per cent BR compliance	145 212	29.60 %	1.80 %	15 284	156 256	9.23	12 227	114 699	6.77
A3 Longer lifetime of roofs ¹⁾	156 072	24.30 %	-3.40 %	-1 602	139 370	10.01	-1.281	101 191	7.27
A4 Requirement for roof insulation by 2050	145 943	29.20 %	1.50 %	144 775	285 747	17.08	115 821	218 293	13.05
A5 Rapid phasing-in of A windows ²⁾	148 978	27.70 %	0.00 %	4 418	145 390	9.15	9 955	112 426	7.08
B1 Stricter requirements for roofs + A2	144 075	30.10 %	2.40 %	37 113	178 085	10.32	26 691	132 163	7.66
B2 Stricter requirements for external walls + A2	143 445	30.40 %	2.70 %	42 481	183 453	10.53	33 985	136 457	7.83
B3 Stricter component requirements + A2	142 308	31.00 %	3.20 %	49 025	189 997	10.71	39 220	141 692	7.99
B4 Much stricter requirements for roofs + A2	143 318	30.50 %	2.70 %	51 396	192 368	11.02	41 117	143 589	8.22
B5 Much stricter requirements for external walls + A2	141 839	31.20 %	3.50 %	55 341	196 313	10.98	44 273	146 745	8.21
B6 Requirements concerning A+ windows + A2	140 067	32.10 %	4.30 %	43 212	184 184	10.03	20 605	123 077	6.70
B7 Automation and efficiency improvements + A2	141 683	31.30 %	3.50 %	25 925	166 898	9.32	20 870	125 342	7.00
B8 Much stricter requirements = B4+B5+B6	134 799	34.60 %	6.90 %	88 813	229 785	11.59	57 086	159 558	8.05
B9 Stricter requirements and A+ windows = B1+B2+B6	137 163	33.50 %	5.70 %	61 670	202 642	10.57	35 372	137 844	7.19
B10 Automation and efficiency improvements + B9	133 695	35.20 %	7.40 %	72 312	213 284	10.59	46 014	148 486	7.37
C1 BMV with VGV + B10	109 342	47.00 %	19.20 %	168 650	309 622	11.51	113 450	215 922	8.03

NB: Footnotes 1) and 2) illegible in source text.