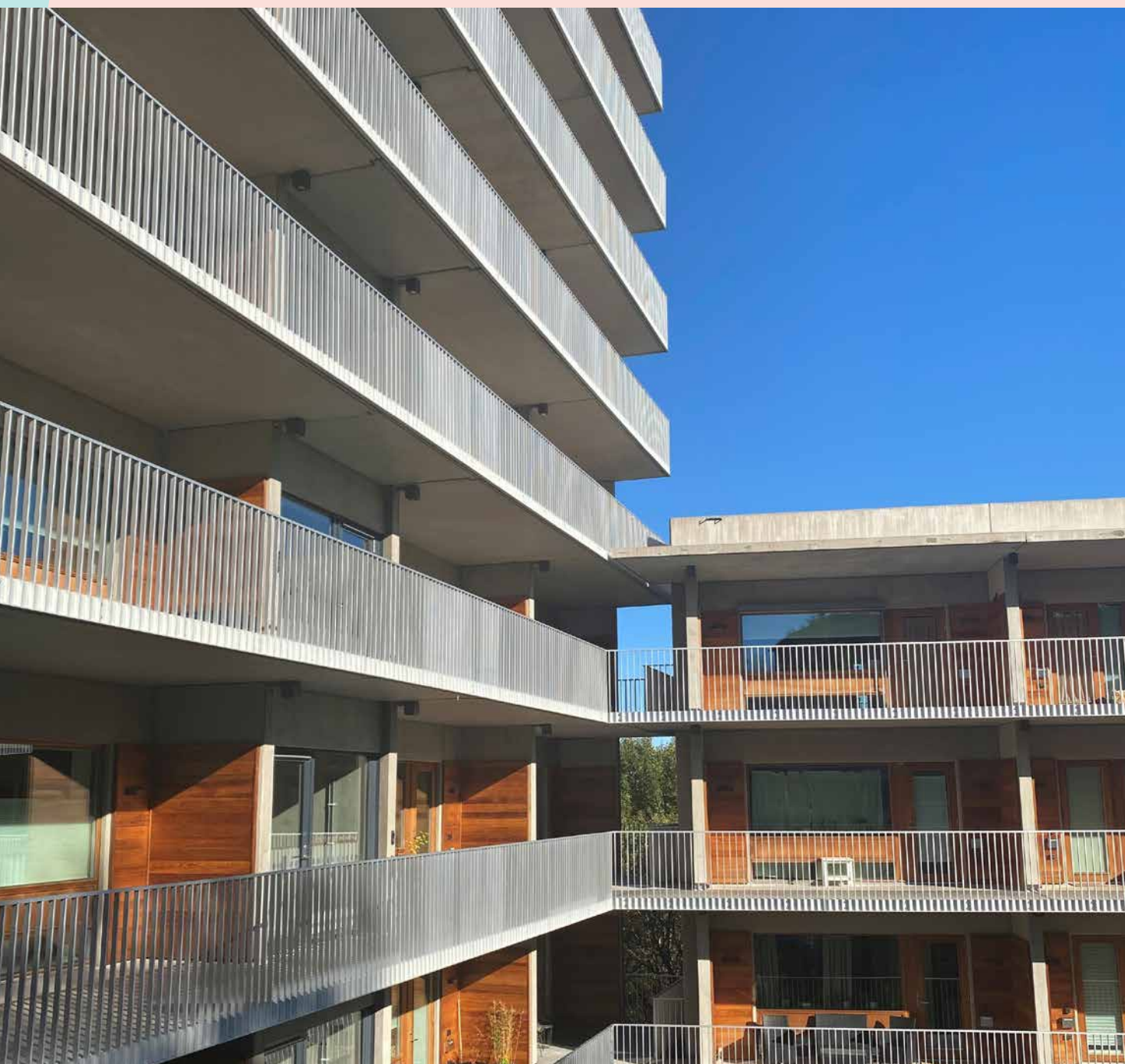


2022

State of Housing in the Nordic Countries

Affordable Housing and climate politics
- Getting the Nordic housing sector Fit for 55



NBO Members

BL - Danmarks Almene Boliger – The Danish Federation of Non-Profit Housing Providers

Búseti – a co-operative building association in Iceland

Felagsbustadir Hf – a limited company owned by Reykjavik Municipality, Iceland

HSB – a co-operative building association in Sweden

KOVA – The Finnish Affordable Housing Companies' Federation

NBBL – The Co-operative Housing Federation of Norway

Public Housing Sweden – Organization of municipal and private owned public housing companies in Sweden

Riksbyggen – a co-operative building association in Sweden



Content

- 02 Members
- 04 Preface
- 06 About NBO and what we are working for
- 08 Getting the Nordic housing sector Fit for 55
- 10 Ambitious renovation and construction
- 14 A socially just and cost-effective green transition
- 15 Policy recommendations
- 16 Fact I. The 3 per cent obligation
- 17 Fact II. NZEB renovation
- 18 Fact III. EPC and MEPS
- 20 Country insights – Norway
- 24 Country insights – Sweden
- 28 Country insights – Iceland
- 32 Country insights – Denmark
- 36 Country insights – Finland

Preface

What if all people had access to decent and affordable homes where they could live prosperous and healthy lives – homes that were designed, constructed, and operated without jeopardizing the lives of our descendants?

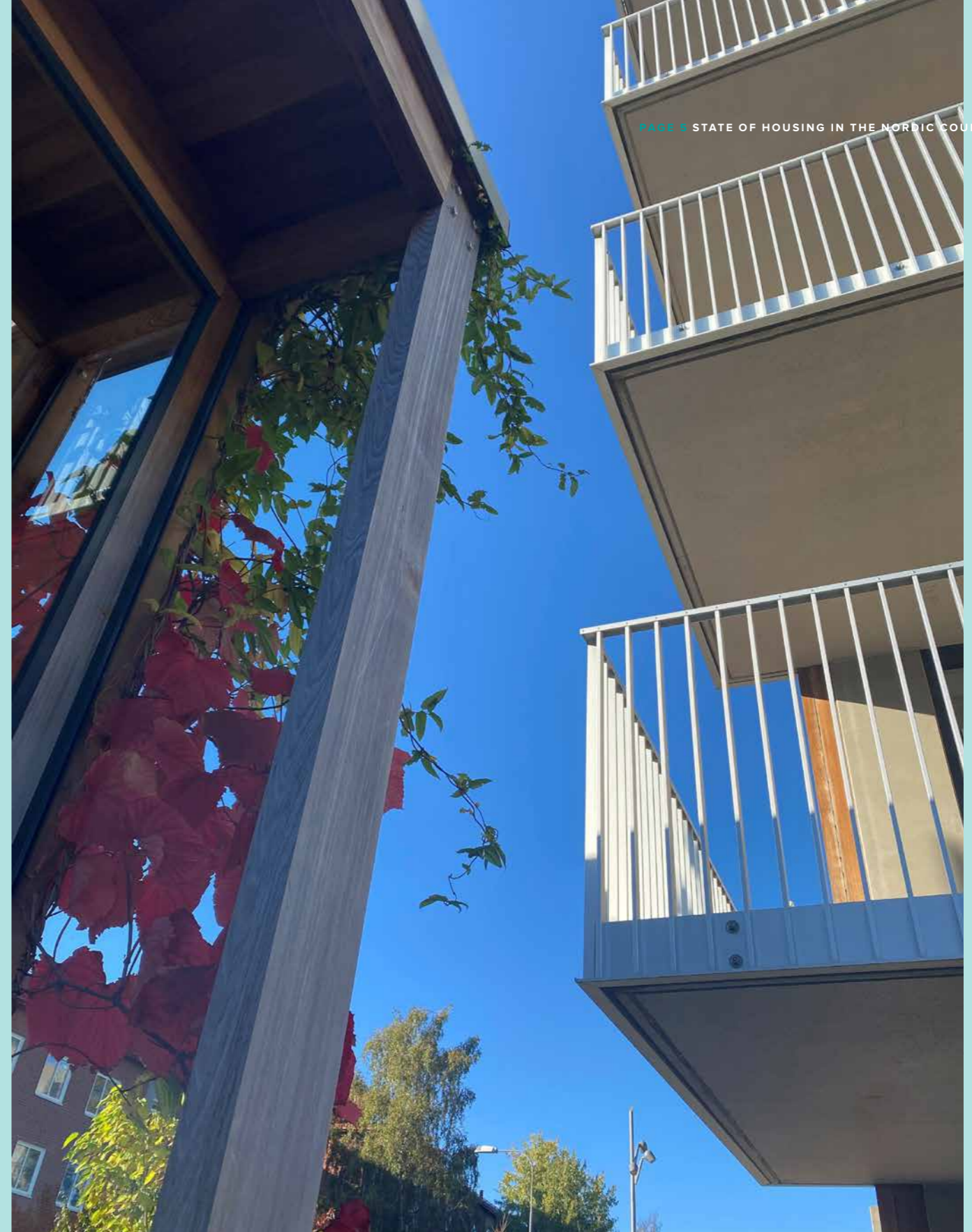
This imagination holds the vision of NBO – Housing Nordic and it embraces the importance of balance between availability, affordability, and sustainability – as the primary nodal points of the cooperative, public and non-profit housing sector.

With this ideal in mind NBO – Housing Nordic welcomes the overall ambition to create sustainable, available, and affordable housing for all citizens in Europe. As key actors on the affordable housing market it is our job to bring many of these ambitions to life, therefor we also feel the obligation to speak up when the important balance of sustainability, availability and affordability is at risk.

With this year's State of Housing in the Nordic Countries report we give our perspective on the current most important issue – energy and climate politics – in relation to housing. More accurately we bring forward our thoughts on the Fit for 55 package and what to pay attention to.

We encourage Nordic decision makers to hear our perspective and consider the recommendations we put forward.

Bent Madsen
Chairman of NBO



Brf. Viva, photo by Liv Jørgensen

About NBO and what we are working for

As cooperative, public, and non-profit organizations we are not motivated by profit – but strive to create economically, environmentally, and socially sustainable housing for all as a contribution to society.

NBO-Housing Nordic was formed in 1950 and is composed of eight cooperative, public and non-profit housing associations in Finland, Iceland, Norway, Sweden, and Denmark. Together we ensure affordable homes to almost 5 million people living in 2.5 million dwellings. As cooperative, public, and non-profit organizations we are not motivated by profit – but strive to create economically, environmentally, and socially sustainable housing for all as a contribution to society.

Economically sustainable housing – AFFORDABILITY:

Decent quality, affordable housing is key to human well-being. United Nations Economic Commission for Europe points out that housing is an integrative good that is linked to many other sectors such as: health, economic security, energy security, transportation, education, employment. Not least it influences issues such as social cohesion and the sense of neighborhood safety (UNECE 2015).

While the benefits for the individual of social housing may appear obvious, the reward for society is even more so. Inadequate housing burdens EU economies by nearly €194 billion a year – in direct costs associated to health-care and related medical and social services, and indirect costs such as lost productivity and reduced opportunities. To bring the standard of housing up to an acceptable level an investment of €295 billion would be needed. This would be repaid within 18 months by savings in healthcare and better social outcomes (Eurofund 2016).

Socially sustainable housing – AVAILABILITY:

Availability of affordable housing is essential to maintaining the high level of equality that defines the Nordic societies. Right now, we are looking into a deficit of affordable housing within the Nordic countries and a market that, on its own, seems unable to supply sufficient suitable housing – for students, young people, and low-income groups. This challenges the whole idea of the Nordic welfare model, social cohesion, and equality as characteristics of the Nordic region (Nordregio 2020).



*HSB brf Sjöparken in Strängnäs,
by Johan Elfving*

The risk of housing exclusion touches a large part of the population. From the increasing number of people with low income who find it difficult to find a place to live within their economic abilities to the middle class that sees increasing housing costs becoming an issue in the household economy, especially in the most dynamic urban areas (OECD 2019).

As the impact of housing on inequalities is increasingly recognized and supported by evidence (as highlighted for instance by the Council of Europe (CEB 2017) and World Bank (2018)), policies aimed at redressing the problems in accessing decent and affordable housing become increasingly important.

Environmentally sustainable housing – SUSTAINABILITY:

Reducing human driven energy consumption and greenhouse gas emissions is central for the future of our planet and the well-being of all living creatures. Considering that buildings account for 40 % of energy consumed and 36 % of energy-related direct and indirect greenhouse gas emissions. And considering the current geopolitical context following Russia's invasion of Ukraine. The need to accelerate energy efficiency, renewable energy, and becoming independent from third countries, is more crucial than ever (The European Commission 2022). With expertise in construction and renovation activities public, cooperative, and non-profit housing are undoubtedly important contributors to these goals.



Brf Viva, photo by Liv Jørgensen

Getting the Nordic housing sector Fit for 55

The 'Fit for 55' package aims to translate the ambitions of the Green Deal into law. With the 'Fit for 55 package' EU is working on revising its climate, energy and transport-related legislation in order to align current laws with the 2030 and 2050 ambitions. Fit for 55 refers to the EU's midway target of reducing net greenhouse gas emissions by at least 55 % by 2030 (European Council 2022).

¹Directive 2010/31/EU.
²Directive 2012/27/EU.
³COM(2021) 802 final. Energy performance of buildings (recast).
⁴Directive 2018/2001/EU.

The package is linked to the Green Deal, the plan to transform the EU into a modern, resource-efficient, and competitive economy, ensuring three important goals: No net emissions of greenhouse gases by 2050; economic growth decoupled from resource use; and that no person nor place will be left behind (European Commission 2022).

Within the package there are several legislative elements and reforms that directly or indirectly touches upon housing and construction.

- **The Energy Efficiency Directive (EED)¹**

To step up its efforts, the Commission put forward in July 2021 a proposal for a recast directive on energy efficiency. The proposal promotes 'energy efficiency first' as an overall principle of EU energy policy.

- **The Energy Performance of Buildings Directive (EPBD)²**

To boost energy performance of buildings, EU has established a legislative framework that includes the Energy Performance of Buildings Directive and the Energy Efficiency Directive. In December 2021, the Commission proposed a revision of the directive that will upgrade the existing regulatory framework to reflect higher ambitions and more pressing needs in climate action.³

- **The Renewable Energy Directive (RED)⁴**

The directive sets a common target – currently set at 32 % – for renewable energy in the EU's energy consumption by 2030. The directive was revised in 2018, but the Commission proposed another revision in 2021 to align it with the increased climate ambitions (European Commission (n.d.)).

In acknowledgement of the need to substantially reduce Greenhouse gas emissions and final energy consumption in the European and not least the Nordic households, and the need to set a long-term vision for a climate neutral building sector in the EU by 2050; NBO welcomes an ambitious legislation.



Dorthervej, photo by Liv Jørgensen

Ambitious renovation and construction

Housing organization across the Nordic region have for a long time been vested in improving and creating good living conditions in the housing estates including climate adaptation, energy efficiency and local production of renewable energy.

AL2bolig, Langkærparken, Århus (renovation)

The renovation of Langkærparken is a model example of how a holistic social approach and ambitious climate goals can enrich a residential area – both through the architecture, the technical solutions and during the construction process itself. The entire area has undergone an extensive energy renovation by means of a high-insulated building facades, new insulation in the roof, just like the plinth has been insulated from the outside. Windows have been replaced with high-power energy windows.

On the roof you will now find Denmark's largest solar power plant – 34 housing blocks with solar panels on the rooftops that produces electricity for the residents – consumed by individual apartments and by local laundries. In addition to the economic benefits for residents the huge solar panels are also expected to result in a reduction of CO2 emissions at around 315 tons of CO2 per year.

Furthermore, residents can track the production of electricity online.



AL2bolig

Riksbyggen, Brf Viva, Gothenburg (new build)

The housing project is rated according to the Environmental System Certification Miljöbyggnad at Gold level, applying a life cycle perspective throughout the construction process and enabling a long-term maintenance.

To reduce the ecological footprint the following has been installed:

- Concrete with a lower carbon impact
- A solar powerplant system coupled with an in-house developed electricity system of reused bus batteries to accommodate for fluctuations in production and consumption.
- An energy efficient ventilation system.
- A smart waste system.
- Furthermore, the estate is planned and designed for daily living with no need of a private car. Instead, mobility solutions include a carpool, electric bicycle pool, a well-designed easy access indoor parking space for bikes, and good access to public transportation.



Photo by Riksbyggen

HSB brf Blanka, Lindholmshamnen, Gothenburg (New build)

In February 2021, residents started moving in to HSB brf Blanka, where ambitions for sustainability were high right from the start of the project.

- Solar panels on the roof
- Low energy consumption
- Building materials chosen with care to avoid harmful substances
- Charging points for electric cars and easily accessible bicycle storage
- Surface water handled with green roofs, ground storage and infiltration
- A well planned outdoor environment benefitting residents and sustainability

It was also the first HSB Dela-project, making it easier for young people to enter the housing market.

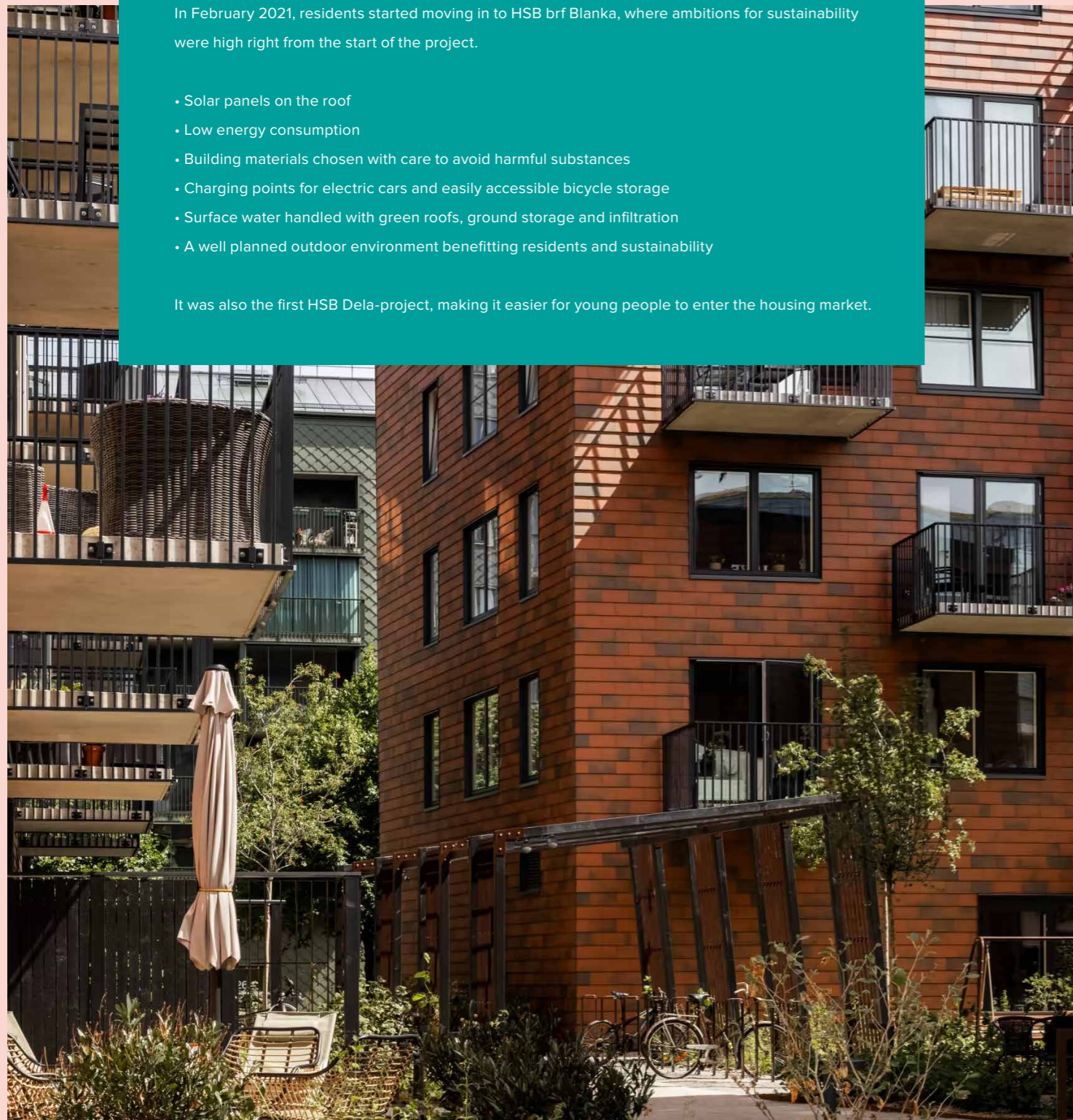


Photo by HSB

Photo by A-Kruunu Oy



A-Kruunu Oy, Syväsalmenkatu, Espoo City (new build)

Finnoo, the new residential area in Espoo City, aims to serve as an example of combating climate change. The zoning has aimed for a carbon-neutral area, where energy consumption is minimized, and energy sources are those with the lowest possible emissions. In the residential area, it is required to measure the properties constantly and submit the measurement data to the city as part of the land transfer arrangement. The collected data is public and is used for comparison and development work.

On Syväsalmenkatu, a street in the area, the housing organization A-Kruunu Oy is erecting a new housing department designed to achieve energy efficiency reference figure E-number2018 equivalent to 72 kWhE/(m²/year), which is 20 % better than the standard level. The building thus belongs to the best A energy class level.

A total of 50 m² of solar heat collectors have been installed on the roof of the house as well as a five m³ hot water heater in the technical room, each of which are used to heat the building's domestic water. The building's main form of heating is district heating, and the source has been chosen on the basis that it is 100 % renewable energy source or waste heat. This choice makes it possible to reduce the carbon footprint during use.

The project was granted MuniFin's green finance.

A socially just and cost-effective green transition



Photo by Nadia Fransen for NBBL, refurbishment in Oslo

Despite the statement that the Green Deal needs to be cost-effective, fair, and socially balanced (European Commission 2022), and the comprehensive attention that energy poverty and affordability is given in both the EED and the EBPD there are noteworthy risks of severe social consequences if we do not go forward with adequate caution.

Achieving the 2030 climate and energy targets is expected to require additional annual investments of more than EUR 260 billion from both the public and private sector, a lot more than the annual EU budget. To ensure the political

intentions of social balance and a green transition of sufficient scale cost effectiveness is crucial. Otherwise transition investments will quickly transform energy-poverty into even more severe housing-poverty due to rising housing costs – if they will be prioritized at all.

The negotiation of the package's different elements is coming to an end, and the next step will be to implement the amendments and changes into national law. In doing so we encourage Nordic decision makers to take affordability and availability into consideration to ensure a socially just and an extensive green transition in the short and longer run.

Policy recommendations

When implementing the directives related to energy reduction in existing buildings, it is vital to have a political focus on three issues. Otherwise, the overall goals will not be met.

1: The 3 % obligation (EED)

The first issue relates to the obligation to renovate 3 % of the total floor area of buildings owned by public bodies each year⁵.

There is risk that in time this will create a demand for renovating buildings that already have an acceptable energy performance. This jeopardizes the important balance between the investment in energy efficiency and the derived reduction on the energy bill, hence leading to higher housing costs. The commission has wisely proposed an option to exempt housing owned by public bodies from the 3 % rule. National political focus on this is needed to secure a sustainable social transition.

2: Nearly-Zero-Energy-Buildings (NZEB) (EED)

The second issue relates to the NZEB obligation within the 3 % rule for buildings owned by public bodies⁶.

Today the most cost-effective renovations relate to older buildings where a profound energy-renovation brings them up to a modern energy standard. Here the achieved energy savings will cover the initial investment through a reduced energy bill. Renovating to NZEB-level is, under normal circumstances, very costly and will all together result in higher housing costs. This is not socially sustainable looking at the economy of individual families, nor is it cost-effective at a societal level. Moving from a cost-effective investment to a cost ineffective but NZEB investment means that the society could have used the resources better. More energy savings could have been obtained for the same investment.

3: The Energy Performance (EPC) scale and Minimum Energy Performance Standards (EBPD)

The third issue concerns revising the EPC's categories, placing the 15 % lowest-performing buildings in the lowest category (G)⁷. Either these 15 % of the building stock are renovated over a short period, before 2027, or building owners are at risk of being penalized. Moving of the goal posts is of serious concern since investing in improving the energy standards in buildings takes long-term planning.

As stated earlier, NBO believes that the green transition is necessary. The three issues above should, therefore, not be regarded as a criticism of the overall goals of the green transition. On the contrary, it indicates potentially severe barriers in the directives, which can slow the transition. With that starting point, we want to ensure the best conditions for the greenest transition our money can buy. Cost-effective for the individual families as well for the society. In this way, the green transition goes hand in hand with social responsibility.

⁵Art. 6 in (COM(2021) 558 final) Proposal for a directive on energy efficiency (recast). Public bodies include public and non-profit housing in Denmark, Sweden, and Finland.

⁶Ibid.

⁷Art. 9 in (COM(2021)802 final) Proposal for a recast Directive on the energy performance of buildings.

Fact I. The 3 per cent obligation

The requirement to renovate 3 % of the floor area is set for public buildings and public and social housing to NZEB level⁸.

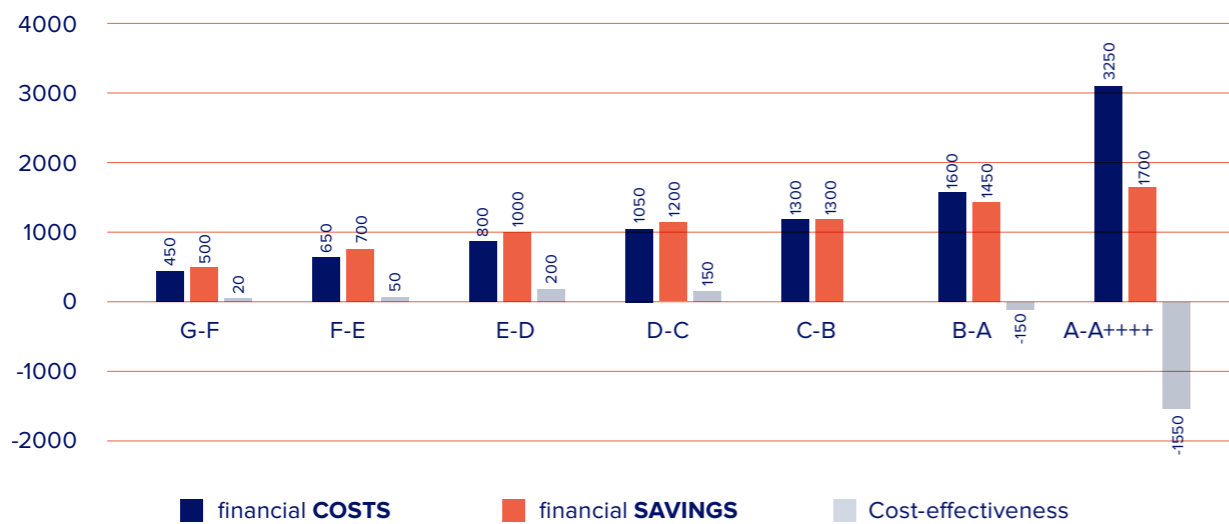
As a starting point, ambitious environmental requirements are positive, but they must be designed wisely. This means, among other things, that they

must be aimed at the least energy efficient buildings. A general 3 per cent obligation will not ensure this. On the contrary, the risk is that additional renovation measures will be directed to buildings that already perform well. This will mean limited energy savings per investment and rising costs for households and for society.

As shown in the figure below, the highest gains in energy savings are archived by raising a building from an energy standard G to, for example, C or B. By doing so you get the most (climate-)value for money. Therefore, investments must be targeted here.

Financial cost and savings of energy renovations per EPC label in the Netherlands

(Euro per housing unit per year)



⁸25 years investment horizon at a 6 % discount rate. Source: Economisch Instituut voor de Bouw (2018), "Klimaatbeleid en de gebouwde omgeving" In Copenhagen Economics (2021)

Fact II. NZEB renovation

Many older buildings were built before the first oil crisis in 1973, and compared to today, there were few requirements for the building's energy performance. To some extent, this also applies to buildings from the 1970s, where energy requirements were limited compared to today.

When older buildings are renovated, they are typically raised by two-three energy levels, resulting in energy savings up to 30 % (SBI, 2017 and 2020 and Copenhagen Economics, 2014). Raising an existing building to a NZEB-level is technically very difficult and will, always, require a thorough and very expensive renovation, that do not correspond with the projected energy savings. This is reflected in one of the examples (page 10) where renovations have been carried out with high energy performance but not zero energy as the absolute

goal. In Langkærparken, as a prelude to the major renovation the possibility of achieving zero energy was explored but soon again abandoned, as it could not be justified financially.

Requirements for NZEB standards⁹ will risk stalling the necessary renovation efforts and may hinder many renovations from being carried out at all as residents can simply not afford it. In worst case ambitious energy measures become a barrier to the necessary green transition.



⁹Ibid.

Photo by Andreas Hylthén

Fact III. EPC categories and Minimum Energy Performance Standards

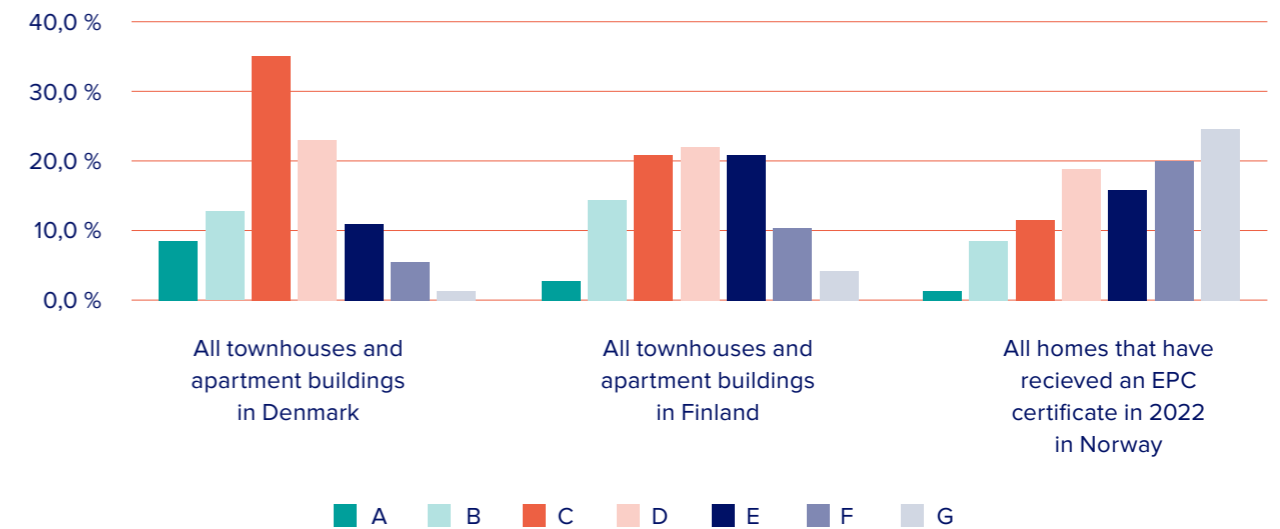
Virtually all buildings in the Nordic countries have had energy labels made, and these are continuously updated. The energy labels are a benchmark that, for example, housing companies use to plan their long-term investment strategy. At the same time, consumers navigate according to the energy labels when choosing their future home. Energy labels are thus important, and therefore it is also crucial that they are robust.

Hence, it is worrying that it is proposed that energy labels must be recategorized according to a percentage distribution so that the 15 % of buildings with the worst energy standard are placed in the lowest category G¹⁰. As shown in the figure, prospect for Finland and Denmark is that basically all buildings in category F and in Denmark even the majority of category E in the future will be recategorized to G, even though no changes have occurred.

Furthermore, the proposal dictates Minimum Energy Performance Standards which means that the lowest performing buildings (G) are to be improved to category F by 2030 and E by 2033. Ten years is a very short time in construction and renovation, and it is questionable if raising the energy performance for 15 % of the entire building mass is possible within the timeframe. The penalty for not complying in time will be a national matter.

¹⁰ Article 16. Energy Performance Certificates (COM(2021) 802 final).

Distribution of EPC labels in Denmark, Finland and Norway



In the Danish non-profit housing-sector the 15 % with the worst performing energy performance covers all buildings in category E, F and G

Prospect for Finland and Denmark is that basically all buildings in category F [...] in the future will be recategorized to G, even though no changes have occurred.

This needs to be considered if we want responsible use of resources and renovated homes with low energy consumption, which benefit both the environment and families with modest incomes.

Country insights

Norway



Photo by Ulvenparken

Due to the high level of housing prices, the main policy challenge and question in Norway is how to increase housing construction, especially centrally located homes. NBBL is fighting for better conditions for both the development of new houses, and for ordinary people's ability to acquire a decent home.

The housing market at a glance

- Norway has a total of 2.67 million dwellings.
- 76.4 % of the Norwegian households are homeowners. That include around 14 % that own their dwellings through a co-operative. 23.6 % of the households are living in rental dwellings, and only appr. 4 % have access to public housing, so the big majority are living in private renting.

General housing trends

In the broader picture, Norwegian house prices have risen seven-fold since they reached a low in 1992, averaging a massive 7 % increase annually. Since tighter credit regulations was introduced in January 2017, house prices have increased modestly from 2017 to 2020. In the last two years, through the pandemic, house prices have again increased by approx. 7-8 % per year. Higher house prices have led to increased debt among Norwegian households. Pressure in the economy in Norway, as in many other countries, has led to high inflation. Norges Bank has increased the key interest rate, and several interest rate increases have been announced. High income growth and a lack of housing in central areas lead to great uncertainty as to how house prices will develop. Statistics from OECD show that the debt-to-income ratio among Norwegian households is highest among the European countries. (OECD June 2022)

Political and societal trends and challenges

The primary vision for Norwegian housing policy is adequate and secure housing for all. The goals and roles of Norwegian housing policy have been relatively stable, though instruments of policy have been adjusted continuously. Norwegian housing policy was strongly orientated towards housing investments (to build enough affordable housing); now the policy is more orientated towards supporting people who cannot afford decent housing on their own.

Electricity prices are at record levels in 2021-2022 due to the war in Ukraine and low energy-production in Norway and Europe. The government will supply costumers more than 20 billion NOK in electricity subsidies in 2022. The government and the municipalities receive record revenues due to the large public ownership in hydro power. The major political discussion is whether smaller businesses should receive electricity support.

Due to the high level of housing prices, the main policy challenge and question in Norway is how to increase housing construction, especially centrally located homes. Young people shall be able to get into the market for buying a house or a flat. This is a huge challenge in larger cities, and especially in Oslo. NBBL is therefore fighting for better conditions for both the development of new houses, and for ordinary people's ability to acquire a decent home. For the time being some co-operative housing associations are involved in new projects that aim for an easier entry to the housing market – especially for young first-time buyers (e.g., rent-to-own projects), but also other households with adequate income but not enough savings. There is also growing attention to the need for more suitable housing for a growing number of elderlies. Although the State Housing bank are offering quite substantial economic support to the municipalities for building care homes, both NBBL and other stakeholders argue that there is a need for a much broader policy-approach to meet this big challenge.

In a broader perspective there are huge challenges connected to making the existing housing stock more sustainable – socially, economically, and environmentally – and the co-operative housing sector in Norway wants to play an important role in this transaction.

Energy and climate politics – challenges and potentials

The government is facing dilemmas. Electricity subsidies do not motivate households to save. The government is awaiting the Energy Commission in which NBBL participates, before deciding to terminate electricity subsidies or introducing subsidies for electricity saving in buildings.

NBBL works together with environmental, consumer and industry organizations so that the government will allocate NOK 1 billion to support energy efficiency in housing and buildings. The political will has been great to help households with urgent measures at a time of energy crisis in Europe and unusually high electricity prices in southern Norway. It has been necessary. We ask that the government for 2023 also allocate funds for measures such as energy efficiency and electricity production in buildings, which provide lasting protection against high electricity prices.

Norway has a target of 10 TWh energy savings in buildings in 2030. NBBL and the organizations specifically refer to the follow-up of the following point in the budget agreement between the government parties and SV from 29 November 2021:

In a broader perspective there are huge challenges connected to making the existing housing stock more sustainable – socially, economically, and environmentally – and the co-operative housing sector in Norway wants to play an important role in this transaction.

“Stortinget asks the government to draw up a plan with a set of measures that will reduce energy use in buildings by at least 10 TWh in 2030 and increase electricity production in buildings.”

The base year from which the energy savings are to be calculated is 2015, where energy consumption was 79 TWh. Statistics from Statistics Norway show that in 2021 energy use in buildings is 83 TWh. The fact that development has gone in the wrong direction, means that powerful and concrete measures are required to reach this target. The electricity crisis and the demand for a maximum price for electricity means that the government contributes more strongly to consumers saving electricity themselves, and implements eco-friendly measures, so that electricity costs are lower.

To reach the target of 10 TWh energy savings in buildings by 2030, energy consumption must be reduced by 1.5 TWh each year in the period 2022 – 2030. NBBL therefore expect that the government, in the plan will have measures and instruments to reduce energy use in buildings by a minimum of 1.5 TWh already in 2023.

According to Statnett's forecasts, Norway may move towards a power deficit in a normal year from 2026. A power deficit will weaken security of supply and result in higher electricity prices for households and businesses. New hydropower and wind power on a large scale take time to build because it requires planning, investigation, and network development, where national and local authorities must agree. A commitment to energy efficiency and electricity production in buildings can be started much more quickly since one is not dependent on lengthy regulatory processes or technological development.

The target of 10 TWh energy savings in buildings by 2030 will mainly have to be achieved through the large-scale roll-out of known and proven energy measures. Due to various types of market failure, and to achieve a sufficient pace in the transition, it is necessary to have support schemes and other instruments adapted to different building categories (public buildings, commercial buildings, small houses, and blocks of flats). Support for the introduction of new technology is important, but not enough on its own to achieve our goals for energy saving.

Country insights

Sweden



Brf. Viva. Photo by Liv Jørgensen

Actions towards increased sustainability in the housing and construction sector have increased rapidly the last years. The sector has a strong focus on recycling, renewable materials, and climate improved concrete and must move to more circular solutions.

The housing market at a glance

- Sweden has a total of 5.1 million dwellings (As of January 1st, 2022).
- Hereof 2.1 million (42 %) are single-family houses, and 2.62 million (52 %) are apartments in multi apartment buildings.
- In multi-apartment buildings, tenancy is the most common form of ownership with 58 % (just over 1.5 million apartments) of the stock, while 42 % (just under 1.1 million apartments) are condominiums.
- In detached houses, the absolute majority, 91 %, are private homeowners.
- The most common apartment type in apartment buildings is 2 rooms and a kitchen, followed by 3 rooms and a kitchen. The two apartment types make up 68 % of the housing stock in apartment buildings.

General housing trends

In 2021, around 71,500 homes were started, which was a historically high rate. In 2022, around 61,000 homes will be started according to the Housing Agency's forecast. Next year, the number of housing construction starts may fall below 50,000. But the development is difficult to predict, for all actors. Already in the first quarter of 2022 there was a significant drop in new construction according to Statistics Sweden. During the first quarter of 2022 13 % fewer housing constructions were started compared to the same period in 2021. The drop is most significant when it comes to multi-apartment buildings.

In 2021, approximately 34,000 new rental properties and approximately 21,000 condominiums in apartment buildings were started. According to the forecast, the number of started rental properties and condominiums will decrease by 40 and 35 % respectively from 2021 to 2023. Sharply rising interest rates and higher construction costs make new investments less attractive. Construction can also be affected by the availability of certain building materials, where not least the availability of cement is an uncertainty next year, as well as the possibility of granting investment support after 2022. For rental properties, there are also signs of increased saturation, where the large difference in rent between new production and stock represents a risk.

Political and societal trends and challenges

The state of the economy in society has changed in just a few months. Households' purchasing power is weakening, housing costs are expected to increase with rising interest rates and increased energy prices, while construction costs have increased sharply. This leads to falling housing prices and housing construction slowing down.

Interest rates may double in the next year, while electricity prices have risen sharply and may likely remain high or increase. High electricity prices particularly affect electrically heated detached houses in southern Sweden. However, about 90 % of the apartments in apartment buildings and some single-family houses have

district heating, where energy prices historically have not developed at the same rate as electricity prices.

Sweden is having national elections 11 September 2022 and will be holding the presidency of the Council of the European Union from 1 January 2023. It has been challenging during the last term of office to form a majority in the Swedish Parliament and currently the Socialdemocrats are in a minority government running the country on the oppositions budget. It remains to be seen how the parties can form a government after the election. In 2018, it took 129 days to form a government that since then has been turbulent and without a budget majority with a lot of changes also due to the consequences of the pandemic.

An example of this uncertainty is the investment support to construction of rental and student apartments that has been introduced and then terminated on short notice due to the parliamentary situation.

Energy and climate politics – challenges and potentials

The Swedish Parliament has adopted 16 environmental quality objectives (Sveriges Miljömål 2020), with the overall goal to be able to hand over a society to the next generation, where the major environmental problems have been solved. This being done without increasing problems outside the Swedish border.

When it comes to climate and energy politics rules and regulations are ever changing. In January 2022 new regulation on climate declarations for buildings were put in place, and it is already being discussed if the roadmap and limit values can be sped up and sharpened.

The housing sector, from construction to the lifestyle of inhabitants, accounts for a large part of the environmental impact. Buildings accounts for 40 % of the total energy consumption and an almost as big part of material use in society. In Sweden 14.2 of the total 35.7 billion metric ton waste come from construction and refurbishment waste. This is more than one third of Sweden's total waste. Therefore, actions towards increased sustainability in the housing and construction sector have increased rapidly the last years. The sector has a strong focus on recycling, renewable materials, and climate improved concrete and must move to more circular solutions.

There are also different roadmaps adopted within the initiative Fossil Free Sweden (n.d.), that brings together the business sector and politics, with actors such as companies, regions and municipalities in identifying obstacles and opportunities to speed up the transition. Roadmaps for the construction and heating sectors make it necessary to implement new ways of working, new materials, and increased cooperation, to reach the ambitious goals adopted, net zero emissions by 2040.

When it comes to climate and energy politics rules and regulations are ever changing. In January 2022 new regulation on climate declarations for buildings were put in place, and it is already being discussed if the roadmap and limit values can be sped up and sharpened.

With rising energy prices, as mentioned above, energy has become one of the most debated areas as Sweden is heading towards elections.

Country insights

Iceland



Árland, Iceland, Homes for disabled.
Photo by Thordis Erla

Emissions due to energy use are considerably lower than in most countries, as almost all electricity in Iceland is produced using renewable energy sources, emitting little in comparison with other power sources.

The housing market at a glance

- Iceland has more than 156 thousand dwellings (As of January 1st, 2022).
- Hereof 57 thousand dwellings are in Reykjavík, the capital. Approximately 5.3 % of them are social apartments and 3.3 % are affordable dwellings.

General housing trends

After a slump in housing construction between 2009-2015, Iceland is now experiencing a rapid rise in construction, with a record number of 3,816 dwellings being built in 2020. 2021 slightly behind but still around 3,400. The building boom is expected to continue, albeit at a slower rate.

Despite this, the demand for housing remains high and the population is increasing quickly. Around half of the population growth is due to immigration, with almost 6.600 more people moving into the country than out each year for the past three years. The price of housing has seen an unprecedented rise, going up by over 20 % in 2021 and by 24 % in the 12-month period until June 2022¹¹, with a corresponding increase in debts of households with mortgages.

This rise has been attributed to the afore mentioned demand, as well as lower index rates of mortgages, and higher income. Rental prices have also gone up, by 15 % in this year alone¹², and renters experience less housing security and greater housing burden than those who live in their own houses.

Political and societal trends and challenges

It is estimated that 3,500-4,000 dwellings must be constructed annually for the next 5-10 years to meet demands. However, only 2,453 new dwellings are expected to be completed in 2022 and 3,098 in 2023¹³.

¹¹Registers Iceland, 21. June, 2022
¹²Íslandsbanki, 9. August, 2022.
¹³SI and HMS analysis, 7. April, 2022.

In response to this challenge, a framework agreement for housing was signed in the summer of 2022 by the Ministry of the Interior, HMS (Housing Institute), and the Icelandic Association of Local Authorities. According to the agreement, 4,000 dwellings will be constructed per year in the next 5 years, and 3,500 dwellings in the following 5 years.

In general, the economic outlook is bright in Iceland, with expected economic growth of 5.1% this year, driven by a massive increase in the number of tourists. However, inflation has been rising in Iceland and is expected to peak at 10% in August (12-month period) of 2022 before slowly receding¹⁴. The inflation is partly due to external conditions on the global market but also in part due to the rise in housing prices.

In response, the Central Bank of Iceland has reverted to raising the key interest rate back up as well as tightening the loan conditions for indexed housing loans. The consequences of these measures are that household access to capital is significantly reduced and fewer people will have the opportunity to buy housing¹⁵.

While the war in Ukraine has had far-reaching effects in Europe and beyond, in Iceland it has largely been limited to the arrival of a small number of refugees and was and remains a contributing factor to inflation.

Energy and climate politics – challenges and potentials

The construction industry is responsible for around 30-40% of annual emissions across the globe and it is clear that housing development comes at a high cost for the climate. In Iceland, carbon emissions from the construction industry in one reference year are estimated at almost 360,000 tons of CO₂e/year, which corresponds to approx. one extra ton per inhabitant compared to what is already estimated in Iceland's Climate Accounting. For comparison, Iceland's total emissions in 2019 with land use and forestry were about 13,800,000 tons of CO₂.

Around 45% of the carbon footprint of Icelandic construction comes from the construction materials themselves, concrete in particular. Emissions from the energy use of structures are responsible for 30% of the carbon footprint, and transportation during construction is 13%. The remaining 12% are due to renovations and renewals¹⁶. Although research into the climate effects of construction in Iceland has hereto forth been somewhat limited, it is clear that emissions due to energy use are considerably lower than in most countries, as almost all electricity in Iceland is produced using renewable energy sources, emitting little in comparison with other power sources.

In June of 2020, the Icelandic government announced a renewed Climate Action Plan for 2020-2030 which included a new Action regarding construction industry emissions and how to reduce them.

In June of 2020, the Icelandic government announced a renewed Climate Action Plan for 2020-2030 which included a new Action regarding construction industry emissions and how to reduce them. For this purpose, a joint project between the government and the building industry's stakeholders was established. The project is called "Building a Greener Future"¹⁷ and its first phase was concluded in the summer of 2022 with a comprehensive report, a Roadmap to eco-friendly construction 2030. This is the first time that emissions, goals, and measures for ecological construction in Iceland have been defined in this way.

The report includes an assessment of the annual emissions of the construction sector, setting targets for reducing those emissions until the year 2030, and defining 74 actions to achieve those targets. About 50 parties from various directions are involved in implementing the measures in one way or another, e.g., the construction industry which has set itself the goal of reducing the annual carbon emissions of construction in Iceland by 43% by 2030, compared to current emissions, in collaboration with the authorities.

Some targets include rethinking the use of building materials e.g. requiring a life cycle analysis be made at the initial design stage and end of the design, a 70% reduction in emission from machinery, a 50% reduction in emissions from energy use, and a 95% reuse rate of construction and demolition waste.

The implementation of these actions has now begun, with 23 already ongoing by the time the report was published.

¹⁴ Islandsbanki estimate, 19. August 2022.

¹⁵ HMS – Monthly report July 2022.

¹⁶ Building a Green Future. Roadmap to eco-friendly construction 2030, published in June 2022.

¹⁷ Ibid

Country insights

Denmark



Non-profit housing, in Dortheavej Copenhagen
Photo by Liv Jørgensen

The most groundbreaking housing event in Denmark for the last two years is the political agreement favoring the non-profit housing sector with a plan to construct 22,000 new affordable and sustainable homes.

The housing market at a glance

- Denmark has a total of 2.96 million dwellings, of these 2.78 million are occupied.
- Approximately 50 % are owner-occupied, 29 % are private rentals and 21 % are non-profit social and common housing¹⁸.

General housing trends

The most groundbreaking housing event in Denmark for the last two years is the political agreement (Nov 2021) favoring the non-profit housing sector with a plan to construct 22,000 new affordable and sustainable homes (Regeringen et al. 2021).

For several years, the construction of non-profit housing has lagged behind the private housing market and the proportion of non-profit homes has steadily declined making it increasingly difficult for people with low- and middle-incomes to settle down in the bigger cities. The agreement is a step towards ending this development. Additionally, it includes a strengthened effort to eliminate homelessness.

Unfortunately, the price development on construction materials has hampered the execution of the plan and many projects have been put on hold or completely cancelled (BL 2022). Luckily, an additional political agreement has been made to keep the plan on track (Fagbladet Boligen 2022).

¹⁸ Statistics Denmark bol101 (2022).

Denmark

Political and societal trends and challenges

The remains of the corona pandemic, the Russian invasion of Ukraine and the following energy crises, have taken their toll on the global economy and consequently influenced the political landscape and society at large over the recent years.

Large parts of the world have been hit by record inflation. In Denmark, overall inflation reached a level of 8,7 % in July compared to the year before, the highest annual increase since February 1983¹⁹. Especially prices for electricity, food, fuel, and gas have increased.

In the winter of 2022, the tragic situation in Ukraine led to significant flows of refugees across Europe. Of them 31,000 applied for residence permit in Denmark according to the special refugee act (Udlændingestyrelsen 2022) that was introduced and justified by the proximity of the war to Denmark. Danish families were quick to find temporary accommodation, but in the longer run the non-profit housing sector will be the solution for most of the Ukrainians.

A general election is on the table looking into the fall of 2022. The primary housing related election-agendas are energy and climate, and the welfare challenge that comes with an ageing population. And last the Liberal party has launched a plan to secure 122,000 new privately owned homes thereby improving the conditions for homeownership. With the election ahead of

us there is no clear view of government outcome – left, right or center – it can go either way.

Energy and climate politics – challenges and potentials

Denmark has adopted ambitious climate targets, which oblige us to reduce greenhouse gas emissions by 70 % in 2030 compared to 1990. The objective will require pervasive energy efficiency improvements wherever possible, and it will require an extensive expansion of electricity from renewable sources. More solar energy and onshore wind are key tools to give further impetus to the green transformation of Danish energy consumption.

Renewable energy

In the non-profit housing sector, the potential and desire to contribute to the green transition by local production of solar energy is immense. The approx. 2,000 hectares of unused roof surfaces in the non-profit building stock entails an obvious opportunity for solar energy. If only a quarter of the area were to be covered with solar cells, it would increase the capacity of solar energy by 0.5 GW, corresponding to 39 % of the total solar energy capacity in Denmark in 2021. Furthermore, the roofs have no other usage, in contrast to farm areas being laid out for solar farms displacing natural and agricultural purposes.

But several barriers stand in the way of integrating the roofs in the green transition. Existing rules inhibit most housing departments from

In the non-profit housing sector, the potential and desire to contribute to the green transition by local production of solar energy is immense. The approx. 2,000 hectares of unused roof surfaces in the non-profit building stock entails an obvious opportunity for solar energy.

investing in decentralized solar energy on their roofs because they will be charged the full net tariff for the electricity they produce. This makes it economically unviable for the housing departments to invest in solar energy for tenants' own energy consumption. The consequence is that Denmark is passing up a significant opportunity for green transition of households' consumption. Calculations indicate that the potential calculated as CO2 reductions can be up to 80,000 tons of CO2 annually²⁰.

To unleash the potential the Electricity Supply Act needs to be clarified, so that a housing unit always has the right to set up a local energy community, where taxes and tariffs are not charged for the self-produced and self-consumed solar cell electricity.

Energy efficiency

The overall necessity to reduce household energy consumption and the new standard for sustainable construction²¹ is disrupting construction as we know it – also in Denmark. The will and the green ambition in the non-profit housing sector is broad, but the economic room for maneuvering is limited. The current construction climate with high prices on materials challenges an already tight economic framework. To unleash the potential of energy efficiency renovations and the construction of zero energy buildings we need an economic frame that makes it possible.

¹⁹ Statistics Denmark July 2022.

²⁰ Assuming 25 per cent. use of non-profit roof areas for solar cells. The CO2 displacement is based on actual CO2 emissions per sold kWh in 2020 and full load hours for solar systems are assumed to be similar to the average in Denmark (1,380 hours/year). Source: Energiestyrelsen (Key figures on energy consumption and supply | Energiestyrelsen (ens.dk)) and Dansk Solkraft (Solkraft_Factbook.pdf (danskolkraft.dk)).

²¹ National strategy for sustainable construction, (Indenrigs- og boligministeriet 2021).

Country insights

Finland



Espoon Asumus Oy

The main providers of social housing in Finland are municipal housing companies and other nonprofit companies.

The housing market at a glance

- Finland has a total of 3.12 million dwellings. 2.77 million of these are estimated to be permanently occupied.
- About 62 % are owner-occupied, little over 20 % are privately rented, and about 12 % are state-subsidized social housing. Although state-subsidized housing is regularly built every year, the number of these housing units is still decreasing. This is due to the expiring restrictions on the older apartments hence turning them into private rental or owner-occupied apartments.
- Other types of housing include 1.8 % right of occupancy, whereby the buyer purchases an up-front payment corresponding to 15 % of the value of the dwelling and pay a monthly charge.

General housing trends

Real estate sales decreased due to the corona situation. However, the housing trade soon began to recover strongly during 2021. The high demand for apartments has also increased the prices of new apartments. However, the increase in the prices of old apartments slowed down in spring 2022 as economic uncertainty increased, and transaction volumes also remained at a lower level than the previous year. The rapid increase in the cost of building materials that started in 2021 have affected the number of new constructions starts. The rise in interest rates and accelerated inflation significantly complicate the situation in the construction industry, and the outlook is uncertain. Building permits for newbuilding were granted in March to May 2022 for a total of 10 million cubic metres which was nearly one third lower than in the corresponding period one year ago.

Finland

Housing production subsidized by the state has also run into difficulties due to rising costs, as a result of which the State Housing Finance and Development Center (ARA) has approved the inclusion of an index condition in construction contracts. It is hoped that this will facilitate the bidding of contractors and reduce the risk for the contractor.

Political and societal trends and challenges

The main providers of social housing in Finland are municipal housing companies and other nonprofit companies. The sector is relatively large and is characterized by a high level of diversity. The increase in costs has also made it difficult to produce affordable rental apartments. It is especially challenging in areas that are not growing, but where, for example, new accessible apartments would be needed.

The effects of the war in Ukraine are felt in many ways in Finland as well. Although gas is little used in Finland compared to, for example, Central European countries, the decrease in gas and oil imports from Russia have significantly increased energy prices in Finland as well. The government supports giving up oil and gas heating with subsidies and tax deductions. Farms and companies are also supported in purchasing solar electricity. Currently, the problem is that, for example, the prices of heat pumps and solar panels have risen significantly, and there is also a shortage of installers throughout the country. By July 2022, more than 34 thousand refugees

from the war in Ukraine have applied for temporary protection in Finland.

Inflation of 7.8 % was measured in Finland in June 2022, the number has risen like the rest of Europe every month. The increase in energy and repair costs has the biggest impact on the acceleration of inflation. According to a survey conducted in July, consumer confidence in the economy in Finland was at the lowest level in the history of the survey.

Energy and climate politics – challenges and potentials

As part of the goals of carbon neutrality and the principles of sustainable development, we also want to radically reduce housing emissions through many different means. We want to develop residential buildings that are even more energy efficient and smarter, and we also want to significantly increase the amount of renewable energy.

Abandoning fossil heating methods is one of the ongoing projects, which affects not only small houses but also municipalities and parishes, etc. However, often changing the heating method to, for example, a heat pump or geothermal heating also requires other repairs. In older buildings, the costs can therefore become high, and not everyone can afford such extensive repairs. The state also supports the construction of charging points for electric cars, for example, in housing associations. Although using an electric

As part of the goals of carbon neutrality and the principles of sustainable development, we want to radically reduce housing emissions through many different means.

car is much cheaper than using a regular car, their popularity is slowed down by the expensive purchase price of electric cars. Electricity has remained cheap in Finland for a long time, but during 2021 electricity became significantly more expensive in Finland as well, which may also affect purchasing decisions at the moment.

Russia stopped exporting gas to Finland in May. However, the share of gas in Finland's total energy consumption is only a few percent, so imported gas can be replaced with gas imported from elsewhere. However, the multiplied market price of gas has caused great difficulties for those single-family houses and property owners dependent on gas heating.

More than a third of the energy consumption for housing in Finland is electricity, and it is the single largest form of energy used. There are an estimated 600,000 small houses with electric heating in Finland, where about two million people live. The high price of electricity worries citizens, and they are especially worried about the coming winter, when electricity is expected to be even more expensive. Finland is not self-sufficient in electricity production, so the coming winters electricity shortage is also possible.

There has been a public debate about the necessity of regulating the price of electricity. The concern is that ordinary people cannot afford to pay their future energy bills.

The Ministry of Labor and Employment has prepared an energy saving campaign during the summer. Citizens will be informed about its content at the end of August. The campaign consists of saving tips related to daily energy use, which citizens are expected to implement.

References

BL (2022) Analyse: Den aktuelle situation for det almene boligbyggeri
<https://bl.dk/politik-og-analyser/analyser/2022/3/analyse-den-aktuelle-situation-for-det-almene-boligbyggeri/>

CEB (2017), Housing inequality in Europe, Tackling inequalities in Europe: the role of social investment
https://coebank.org/media/documents/Part_3-Inequality-Housing.pdf

Copenhagen Economics (2014), Den almene sektors bidrag til klimamål og tilgængelighed
<https://copenhageneconomics.com/wp-content/uploads/2021/12/Den-almene-sektors-bidrag-til-klimam%C3%A5l-og-tilg%C3%A6ngelighed.pdf>

Copenhagen Economics (2021) DOES ONE SIZE FIT ALL? Impact of Minimum Energy Performance Standards in the revision of the Energy Performance Building Directive
https://copenhageneconomics.com/wp-content/uploads/2021/12/impact-of-meps-in-revision-epbd_copenhagen-economics_20211004_final-report.pdf

Eurofund (2016), Inadequate housing in Europe: Costs and consequences
https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1604en_0.pdf

European Commission (2021), Press release: EU Annual Budget 2022 https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5942

European Commission (2022), The European Green Deal
<https://www.consilium.europa.eu/en/policies/green-deal/>

European Commission (n.d.), Priorities 2019-2024: A European Green Deal
https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

European Commission (n.d.), The Renewable energy directive
https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en

European Council (2022), Fit for 55
<https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/>

Fagbladet Boligen (2022) Boligaftale med 10 milliarder kroner vedtaget i Folketinget
<https://fagbladetboligen.dk/alle-nyheder/2022/juni/boligaftale-med-10-milliarder-kroner-vedtaget-i-folketinget/>

Fossil Free Sweden (n.d.)
<https://fossilfrittverige.se/en/about-us/>

Indenrigs- og boligministeriet (2021) National strategy for sustainable construction <https://im.dk/Media/637787884257325807/National%20strategi%20for%20b%c3%a6redygtigt%20byggeri-a.pdf>

Nordregio (2020), Building affordable homes: Challenges and solutions in the Nordic Region
<https://nordregio.org/publications/building-affordable-homes-challenges-and-solutions-in-the-nordic-region/>

OECD (2019), Under Pressure: The Squeezed Middle Class
<https://doi.org/10.1787/689afed1-en>

Regeringen (Socialdemokratiet), Dansk Folkeparti, Socialistisk Folkeparti, Enhedslisten og KristenDemokraterne (2021) Fonden for blandede byer – flere billige boliger og en vej ud af hjemløshed
<https://www.regeringen.dk/media/10834/aftaletekst-aftale-om-etablering-af-fonden-for-blandede-byer.pdf>

The report has been prepared by the secretariat of NBO - Housing Nordic.

The individual country sections are written by representatives of the respective member countries.

Title: State of Housing in the Nordic Countries 2022

Frontpage: Brf. Viva, Riksbyggen, photo by Liv Jørgensen

Release year: 2022

Layout: Zoe Sys Vogelius

Trykkeri: Dyro.dk

www.nbo.nu

SBI (2017), Varmebesparelse i eksisterende bygninger
<https://build.dk/Assets/Varmebesparelse-i-eksisterende-bygninger/SBI-2017-16.pdf>

SBI (2020), Beboernes betydning for den realiserede varmesparelse ved renovering af boliger https://vbn.aau.dk/ws/portalfiles/portal/329649012/SBI_2020_05.pdf

Statistics Denmark (July 2022) Stadig højere stigninger i forbrugerpriserne
<https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=39961>

Sveriges Miljömål (2020) The environmental objectives system
<https://www.sverigemiljomal.se/environmental-objectives/>

Udlændingestyrelsen (August 2022) Tal vedrørende fordrevne fra Ukraine
<https://us.dk/media/10491/saerlov-pr-28082022-rettet-dato.pdf>

UNECE (2015), Social Housing in the UNECE region, Models, Trends and Challenges
https://www.unece.org/fileadmin/DAM/hlm/documents/Publications/Social_Housing_in_UNECE_region.pdf

World Bank (2018), Living and Leaving: Housing, Mobility and Welfare in the European Union
<https://thedocs.worldbank.org/en/doc/507021541611553122-0080022018/original/LivingLeavingweb.pdf>

EU legislative material

European Commision (2022), COM(2022) 222 final: Proposal for a directive amending the Renewable Energy, Energy Performance of Buildings and Energy Efficiency directives
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022PC0222&from=EN>

Energy Efficiency Directive
 2012/27/EU:
https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en

COM(2021) 802 final:
https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en

COM(2021) 558 final:
https://eur-lex.europa.eu/resource.html?uri=cellar:a214c850-e574-11eb-a1a5-01aa75ed71a1.0001.02/DOC_1&format=PDF

Energy Performance of Buildings Directive
 2010/31/EU:
https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en

Renewable Energy Directive
 2018/2001/EU:
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG&toc=OJ.L.:2018:328:TOC