

AUTUMN 2022

Sustainable Housing Outlook



Introduction

It gives us great pleasure to present the second edition of RITTERWALD's Sustainable Housing Outlook to coincide with the European Federation for Living (EFL) conference in Glasgow, kindly hosted by the Wheatley Housing Group.

The immediate challenge for social housing providers and its tenants is warm homes this winter. Extremely high energy prices, responsible for approximately 50% of the spurring inflation bring large parts of the population in a cost-of-living crisis. For too many households this winter the question is heat or eat, two necessities of daily life.

ESG also feels the heat. ESG has increasingly faced some challenges from investors and fund managers, most notably from former HSBC's Head of Responsible Investment, Stuart Kirk. Social and affordable housing providers cannot help but notice this criticism and will face questions from their Boards including, 'Will capital markets switch away from ESG/impact investing to how it used to be?' So here are our thoughts on this question. And let us be clear we believe ESG is here to stay, because ESG is about creating long term value in the social housing sector. We will explain why 'capital talks ESG' in social housing.

Stuart Kirk argued in a speech at an FT conference last May that climate change was not a risk to investment because fund managers and business owners had short time horizons, well short of the net zero-time horizons. He famously said in his speech; 'Who cares if Miami is six metres underwater in 100 years? Amsterdam has been six metres underwater for ages, and that's a really nice place. We will cope with it.'

However, views on global warming and climate change are derived from an almost universally accepted science-based analysis. Where views diverge is about predicting the impact of global warming on the earth and humanity. Predictions vary from human extinction to just 'bad' or put simply if Miami is six metres underwater then so will a lot of other places and the cost implications will be enormous for ever as the Dutch can confirm.

It is true that if fund managers and investors take a short term view the impact of climate change can be managed and therefore the risk diminishes. Even some high emission businesses could provide positive returns in the short term and could even score positively on an ESG assessment. However, the financial markets are leading the way, propelled by the Task Force on Climate-related Financial Disclosures (TCFD), the EU taxonomy and the UK Green taxonomy to take a longer-term view on investment to increasing capital flows to sustainable and green activities, and reducing, and even ending, investment in high emission activities. So ESG oriented impact investment will continue to grow, become mainstream and require robust sustainability disclosures.

This is good news for housing providers proactive in transitioning from a carbon-based operating model to a net zero operating model. Social and affordable housing providers want to do the right thing for their tenants in the face of the overwhelming science and the benefit of being businesses that take a long-term view from an investment perspective. The knowledge that they can access and benefit from ever growing ESG mandated funds to meet capital requirements provides some comfort in the transition.

Contents

1	Energy on the heels of Fabric First — 3
2	Energy Management Models for Housing Providers — 4
3	Heat pumps — 9
4	Scotland as global green energy powerhouse? — 10
5	ESG funding after inflation rates 'back to normal' — 12
6	ESG News Housing Providers — 13 ESG Ecosystem — 13 RITTERWALD — 15

In this second edition of the RITTERWALD Sustainable Housing Outlook, we focus on two specific themes that reflect a key policy focus from both an operating and a Scottish perspective:

Energy management models for social housing providers

We explore what role social and affordable housing providers could play from an energy management perspective. But given that social housing providers have a limited exposure to the energy sector, because the relationship is largely between the energy supplier and the tenant, why would a housing provider consider stepping in the energy market? There is one convincing reason, and that is affordability both for the tenant and the social landlord. Social housing tenants are amongst the most vulnerable in society and they feel the impact acutely by the cost-of-living crisis. Moreover, this crisis is also affecting moderate- and middle-income households in affordable rentals and shared ownership homes.

Scotland take the lead in net zero?

We provide an outlook how we believe Scottish housing associations could become frontrunners in identifying and implementing feasible corporate pathways to net zero carbon of the rental housing stock actively supported by Scottish Government. This builds on RITTERWALD's discussion paper *Retrofitting Social Housing Stock in Scotland 'Keep thinking smart and start acting wisely'* published in November 2021 for a COP26 roundtable discussion hosted by Bank of Scotland and Link Group, Edinburgh based social housing provider.

As always, we welcome your comments on this second edition.

1 Energy on the heels of Fabric First

What has been referred to as ‘the first net zero energy crisis’ (Prof Dieter Helm, 2022) as Europe moves from a dependency on energy derived from fossil fuels to renewable sources. This does place an increasing dependency on the energy spot market to address intermittency in supply, when the sun doesn’t shine and the wind doesn’t blow, in the absence of electricity storage capacity. This reliance on the spot market has exposed consumers to a sharp rise in the cost of energy as dependency on renewables has increased, further compounded by Russia’s invasion of Ukraine and the combination of sanctions and reduced supply of gas and oil. Russia has effectively imposed a carbon tax on Europe and demonstrated the unintended consequence of the use of ‘sticks’ to support moves to net zero carbon e.g., gas fields reopening, fracking and public demand for Government subsidies on energy costs.

Figure 1 shows that the price increase of electricity in EPEX¹ countries started in Autumn 2021 and is since then very volatile.

Figure 2 shows that on the European energy market prices of electricity & transport are comparable. The main differences are in taxes & duties.

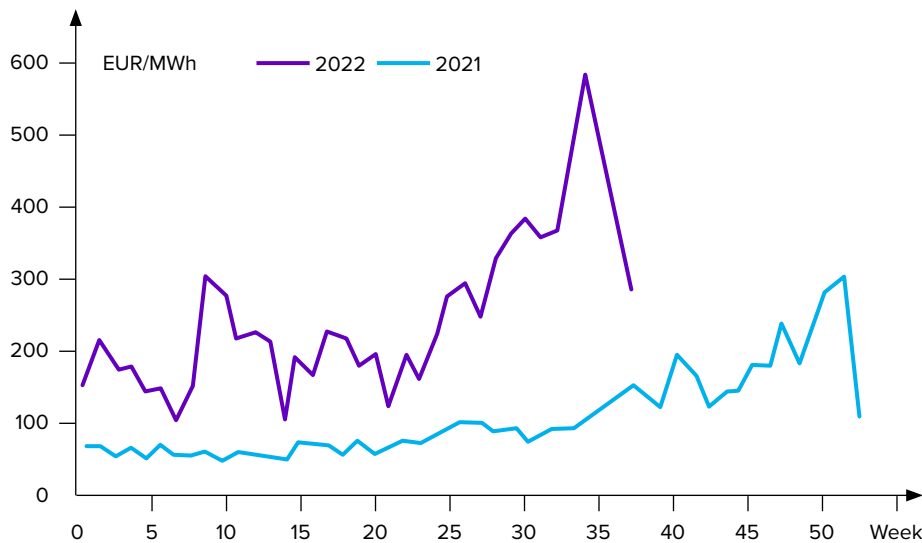


Figure 1: Electricity spot market price development at EPEX (day ahead)
Source: Strom Report 2022

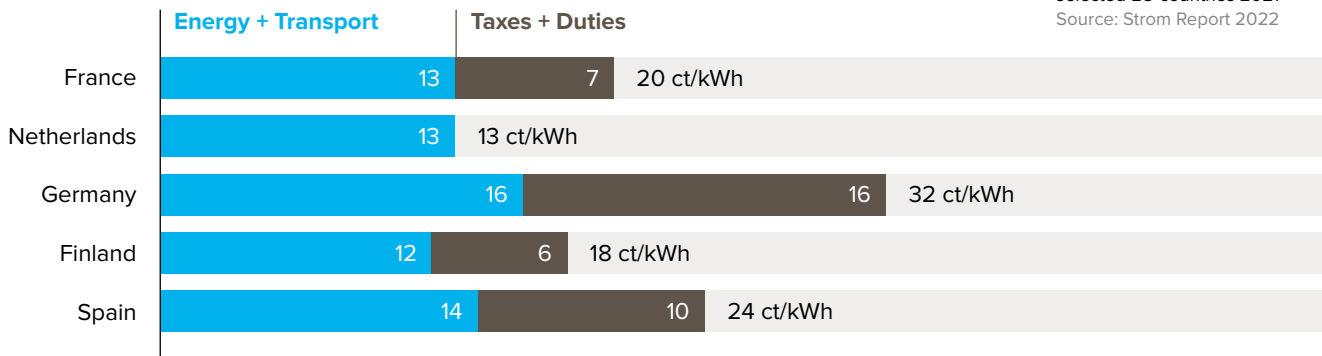


Figure 2: Electricity price components in selected EU countries 2021
Source: Strom Report 2022

¹ EPEX – European Power Exchange operates the organised wholesale market for power trading across 13 European countries.

Outlook

In the short to medium-term, the exceptional high cost of energy and energy security are likely to trump net zero objectives from a policy perspective. In the long-term, an increase in renewable sources is likely to keep the decarbonisation agenda alive and even more relevant than before Russia’s invasion of Ukraine. The renewable energy industry also has an improved business case because they benefit from high energy prices while their marginal cost of production is relatively small.

Europe is now grappling with a cost-of-living crisis, and we have seen weaker energy retail suppliers across Europe either ceasing trading (e.g. UK), or requiring significant government support or (partly) bail outs such as e.g. Uniper (Germany) and EDF (France). Meanwhile energy producers are making super profits and having the price of energy capped with public subsidy to consumers (e.g. Netherlands and UK) or having a cap on price with limited public subsidy and forgoing super profits (e.g. France). Figure 3 shows an overview of recent government interventions in the national energy markets. It is based on information as per early October 2022 for selected countries and does not pretend to be exhaustive.

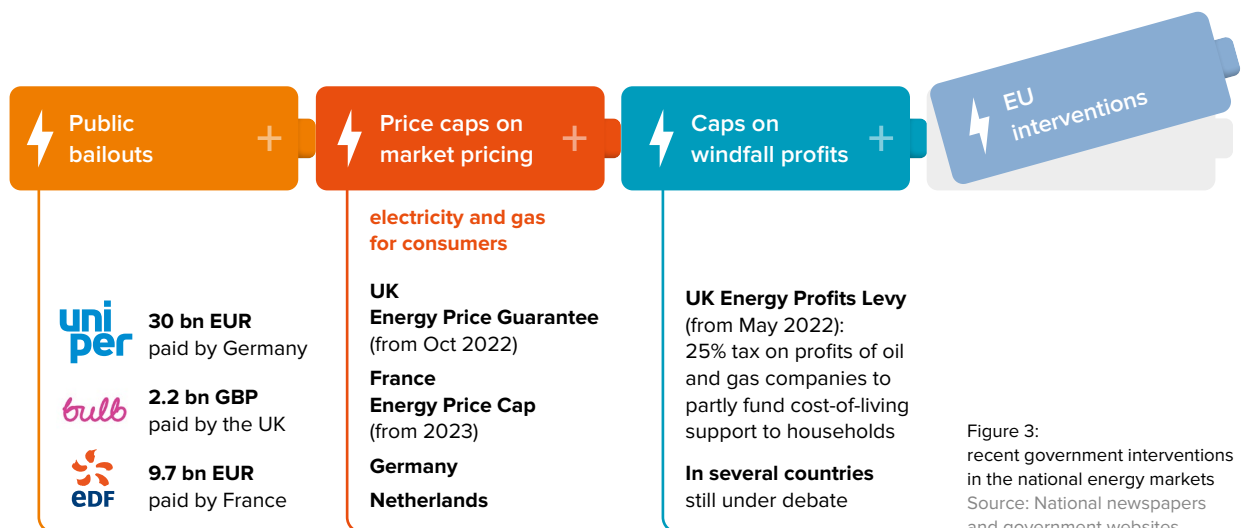


Figure 3: recent government interventions in the national energy markets
Source: National newspapers and government websites

2 Energy Management Models for Housing Providers

We explore the role social and affordable housing providers could play from an energy management perspective. Our starting point is a recognition that social housing providers have a limited exposure to the energy sector because the relationship is largely between the energy supplier and the tenant. So why would a housing provider consider stepping in the volatile energy market? There is one overarching reason, and that is energy affordability both for the tenant and the social landlord. Social housing tenants are amongst the most vulnerable in society and are acutely exposed to the cost-of-living crisis. Moreover, the depth of this crisis is also affecting middle-income households in affordable and shared ownership homes.

In due course, housing providers will need to replace all gas-fired and fossil fuel heating systems in their existing homes, as part of their retrofitting programs. However, not all countries allow an increase in rent to recoup all, or part of this investment and it is unlikely this will change in the current high inflation environment.

Therefore, we argue, on the short-term rent policy is unlikely (although it could) to support the step change in investment required to deliver net zero. A new approach to

heating is, we argue, required by housing providers, and identifying this new approach is urgent. The current high energy prices provide the unique window of opportunity for social landlords to prepare a **strategic energy management plan** that can then be implemented in the years ahead. In recognition that most carbon emissions of housing are post letting and of the indirect nature (scope 3), we explore three energy management models which could be included in their strategic energy management plan. We consider an assessment of the models impact on CAPEX and OPEX from the social landlord’s perspective. What all the models aim to accomplish is retrofitting legacy housing stock in such a way that it is affordable for the tenant and can be financed by the social landlord.

However, first and foremost, energy saving is key for all models. And although energy saving always includes a behavioural challenge for individuals, there is now an urgent and effective price incentive to act. Significant reductions in carbon emissions as well as -marginal extent- in tenants’ energy bills are viable through energy saving programmes which we are aware housing providers are already implementing across Europe. It does not require prior investments in the housing stock. However, while encouraging behavioural changes, for example supported by smart metering, remains a priority for landlords and tenants, it has been overtaken by the importance of keeping homes warm, especially for vulnerable groups such as those with disabilities, health issues and the elderly. Energy savings for healthier households will be important before more capital-intensive measures have to be taken.

	Harnessing Buying Power Pooling tenants’ heat demands to improve supply costs and emissions	Heat-as-a-Service Entering the energy market depending on own risk and competence profile	Energy Service Company Partnering with a service provider for energy (efficiency) solutions
Tenant engagement	high – to keep demand pool above threshold level and expand over time	medium to low – as energy supply hardly affects tenants apart from tariff policy	high – support for retrofitting process and outcome required
Contribution to net zero	high – potential to fully decarbonise heating and largely eliminate scope 3 emissions	high – potential to fully decarbonise heating and radically improve heating technology	high – necessary first step to reduce energy consumption and install more efficient heating technologies
Financial viability	no CAPEX, limited amount of OPEX for supplier negotiations and demand pool maintenance	significant amount of CAPEX and OPEX – depending on chosen model	no CAPEX, amount of OPEX needed depending on the scope of services procured
Feasibility	medium – set-up of demand pool and supplier procurement is resource intensive	hard – significant learning curve required with regards to energy market	medium to hard – prioritisation of stock and retrofitting measure needed plus dedicated project team to support ESCo
Yield	low to medium – new revenue stream when sharing price benefit with tenants	high – proceeds can be redirected to cross-finance retrofit, safety and new built schemes	low – as long as landlord tenant conundrum not solved

Figure 4:
Overview of social housing providers’ operational energy models for heat supply
Source: RITTERWALD

We start by recognising that there are different energy and social housing systems across Europe and that our models will need to be customised for each country. Some models can only come to full fruition if, among others, benefit sharing (legal) and risk sharing (regulatory) are allowed at a national level. We also make some specific assumptions in arriving at our proposed models:

- Electrification of heating is an essential if not most essential pathway to net zero.
- For heat networks in metropolitan areas housing providers are not in the driving seat
- Investment in heating and fabric may only partly supported by increased rent and service charges.
- Aspirational time scales will be fluid unless other broader measures e.g., a tax on carbon impact, are put in place.
- The cost of gas will remain high as the wholesale market restructures global supply chains and will increase to cover intermittency costs: The Russian invasion is a gamechanger, not unlike seventies oil shock, although because of digitalisation, will have a greater impact on society.
- Fossil fuels will remain a significant source of energy until intermittency is resolved through alternative capacity (e.g. Nuclear) or electricity storage innovation (batteries)
- Distribution of costs among consumers, governments and energy suppliers is still to be resolved.
- Technologies already exist to electrify and decarbonise (heat pump is one of them).
- Business and finance now see energy transition as inevitable.

Supplying energy and harnessing buying power: lever for cutting costs and carbon emissions

By pooling heat demand of individual tenants, housing providers can harness their buying power to bargain on their tenant's behalf with energy suppliers to cut cost (move consumer price towards wholesale price) and emissions (switch to renewable sources). Using their gravitas, housing providers can switch large parts of their stock from 'brown' to 'green tariffs' i.e., supplies that are sourced from renewable energy.

With size being the critical determinant for the success of this model, there are two factors worth looking at closer. Firstly, while the buying power model is an obvious option for large housing providers, small- and medium-sized social landlords could benefit from forming **regional procurement consortia**. Secondly, due to consumer protection regulation, tenants cannot be transferred to the landlord's heating scheme but must be attracted through price advantages among others. Moreover, at a minimum tenants will need to be consulted. For most housing providers, this represents a considerable barrier to this model. Therefore, this model is more applicable where 'rent' includes energy and heating use e.g. student accommodation, care homes, and key worker housing.

Heat as a service: The greatest impact on scope 3 emissions

After the successful implementation of Fabric First retrofitting measures, housing providers could actively become engaged in energy management services. One can distinguish value streams of energy management that each require process steps and infrastructure: (1) basic supply and energy consumption, (2) energy data management, (3) energy controlling and monitoring and (4) handling of operation costs. Key questions on (non-)existing competencies, critical size, legal requirements, market opportunities and risks must be discussed to find the most suitable operational model for a housing provider.

Generally, there are three business models with varying risk and competence profiles as figure 5 shows. Size and nature of the stock determine which option is suitable for a housing provider.

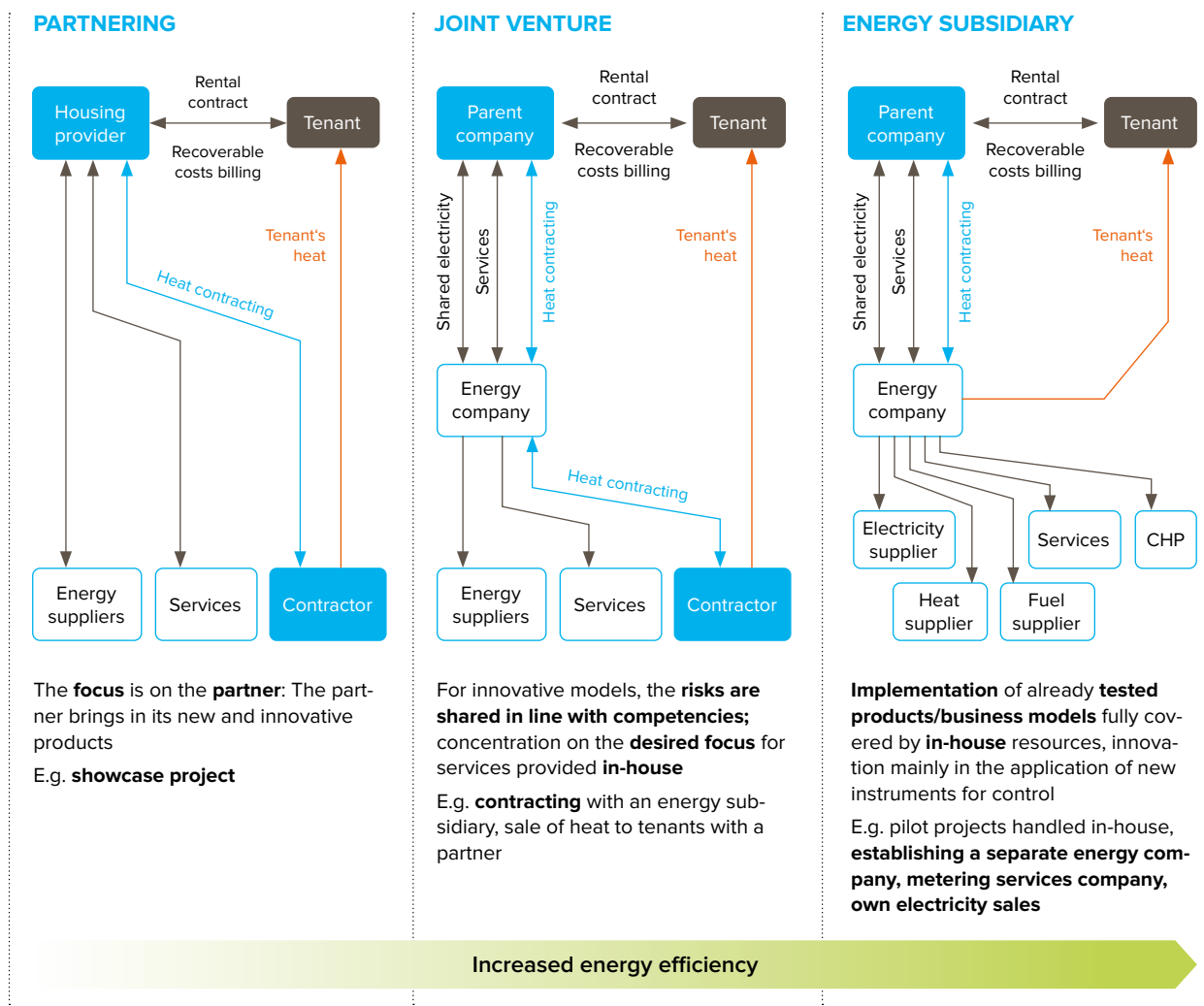


Figure 5: Different business models are conceivable and have already been implemented in the market
Source: RITTERWALD

First, if the number of homes is small (approx. 5,000–15,000) partnering with an energy contractor (ESCO) is a recommended course of action.

Secondly, for housing providers with a stock of approx. 15,000 to 30,000 homes, a joint venture with an **energy retailer** is an option. Through the joint venture, housing providers can join the energy supply market without bearing the full risks.


Third, a full-owned **energy supply subsidiary company** is a viable option for housing providers with more than approx. 30,000 homes: required resources and competencies should exist within the company. An energy supply subsidiary provides heat (and potentially electricity) services to tenants. It offers a portfolio of contracting services including optimisation and modernisation of heating systems as well as local power-to-heat generation. Thereby, the housing provider gains full control over their energy sources, heating assets, and tenants' energy bills. The housing provider also participates in the financial results of the energy subsidiary which allows them to redirect proceeds towards other priorities. This model involves more risk and will need to set an appropriate return to reflect this risk. It has been successfully applied by large and medium sized housing providers in Germany as a critical component in their social and climate strategies.

**Strategic energy service companies (escos):
tackling the energy revolution fabric first**

Energy service companies (ESCO's) are special entities offering energy solutions. The scope of services depends on the ESCo's purpose, and size, and include energy planning, implementation of 'turnkey' retrofitting projects, arranging project financing, procuring, installing heating equipment, monitoring energy savings, and developing local energy networks. Some housing providers will already work with or have established ESCo's. Typical measure undertaking in retrofitting projects are illustrated in the case studies of Dutch social housing provider Woonstad Rotterdam and Danish housing association Bo-Vest.

For housing providers strategic partnerships ESCo's can present an opportunity to tap into high-volume retrofitting without overstressing lending capacity. ESCo's can offer lease-based finance moving funding for retrofitting from CAPEX to OPEX and off-balance sheet. Additionally, housing providers can continue to access funding from government programs.

Figure 6: Retrofit case study
Woonstad Rotterdam (Netherlands)
Source: Woonstad Rotterdam



BEST PRACTICE

- Sustainability strategy implemented in 2015
- Key areas include energy transition, circular economy in building and climate change action
- 1.5% renovation rate per annum
- 20% of the portfolio is heated with renewable energies
- Average EPC rating of B across the portfolio

€ €7.00 / sqm average rent

⚡ 173 kWh / sqm

🔧 > m€30 investments in energy efficiency improvements


Renovation project 2021–2022

Renovation measures

- Improvement goal: from energy label F/G to A/B
- Façade insulation, new windows
- Implementation of district heating
- Creation of six new flats for handicapped tenants
- Larger balconies and more galleries



Renovation project Princess Flats:
495 housing units,
ca. bn€ 49.5 renovation budget



Best practice

- Sustainability Strategy linked to the SDGs
- Solar panels in Silergården
- For >90 leases and common areas
- Provide tenants with 100% renewable energy on the same price level
- Resident gardens in Shelf Damper
- No use of pesticides
- Wild Danish forest floor plants
- Green roof that absorbs 50% of precipitation

€ KR 120 (€ 16) / sqm average rent


🔧 bn€ 1.2 investments in energy efficiency improvements planned

📊 Yearly evaluation of sustainability measures

Renovation project 2022–2025

Renovation measures

- LCA analysis showed CO2 reduction through renovation is greater than through re-construction
- Façade insulation, new windows and roofs including extra layer of insulation to cut energy consumption in half
- Full sanitation from PCB, Asbestos and mould
- Sustainable energy supply infrastructure including ventilation with heat recovery



Renovation project Galgebakken:
600 housing units,
bnKR 1.55 (k€ 202) renovation budget

Figure 7: Retrofit case study Bo-Vest (Denmark)
Source: BO-VEST

Outlook

The main driver and benefit of the different energy business models are to substantially lower the investment for decarbonisation the legacy housing portfolio. Examples from Germany show a reduction of more than 50% on the cost of benefiting from economies of scale.

Our experience from Germany suggests that heat as a service utilising an energy subsidiary model could become an additional revenue stream for the social housing sector while at the same time benefitting tenants. However, as previously mentioned, the relevance and impact of the model will depend on the operating jurisdiction and the way the national energy market is structured.

3 Heat pumps

Heat pumps are often seen as the holy grail in the pathway to net zero carbon. Heat pumps are key. However, progress is still slow because of cost, performance, property archetype, and market capacity issues.

Current barriers to increasing demand of heat pumps include the dominance of gas boilers (esp. in UK, Germany, and Netherlands), high electricity prices compared to natural gas, and the high cost of heat pumps. High cost does not only relate to purchase price, also to unit price: heat pumps provide lower flow temperature of the heating system. Therefore, they would need bigger radiators. Heat pumps work better with under-floor heating. In all cases it is important that homes are comprehensively insulated because otherwise expensive gas bills are replaced by expensive electricity bills.

Increasing the use of solar energy (e.g. on roofs of apartment buildings) could provide the electricity to power the heat pumps. Moreover, this local energy source can be controlled and managed by the housing provider. And we expect that financing of solar panels will be less of a challenge as are its availability.

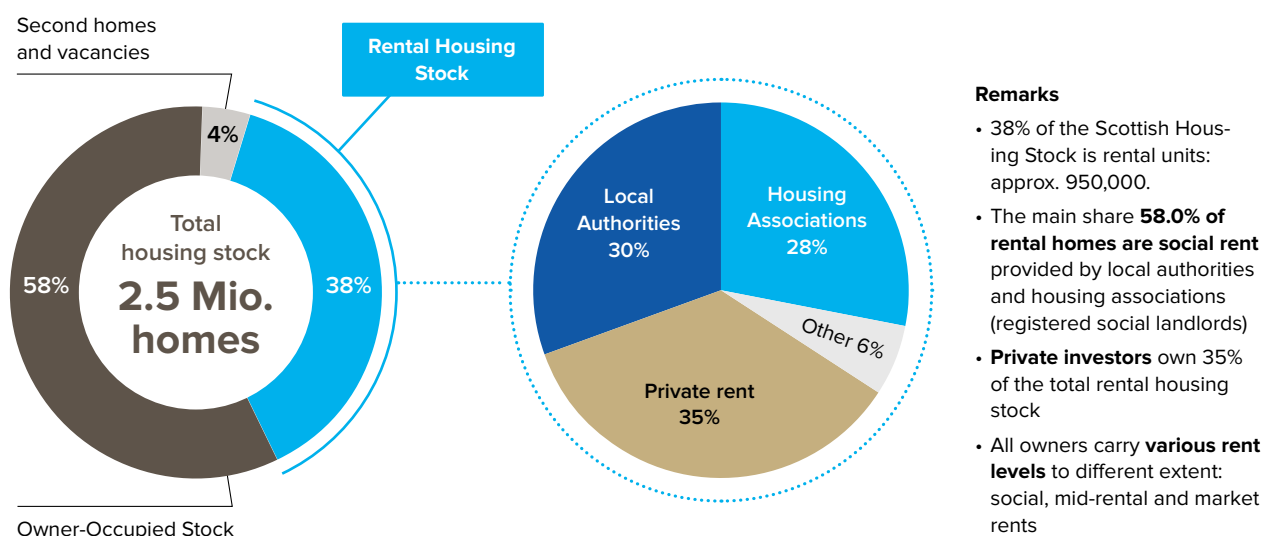
- Recent market developments and optimistic results of different pilots all favour more and faster roll-out of heat pumps (although caution is still required):
- Heat pumps could become an option for all property types, including older ones.
- Soaring gas prices have altered the calculation over cost-effectiveness, bringing electric options closer to par with gas.
- New -pioneering- models of heat pumps can provide temperatures equivalent to a gas boiler although we must be aware that these are higher-priced pioneers.

Outlook

In the short-term, heat pumps will not pay for themselves and particularly in old houses. However, for the foreseeable future, heat pumps are a technical solution key to bring about electrification of the power grid.

4 Scotland as global green energy powerhouse?

Last year during COP26 in Glasgow, the eyes of the world were on Scotland. Whilst it further highlighted the need for a net zero future. European countries have been pre-occupied with the consequences of the war in Ukraine, and the need to address high inflation and the cost-of-living crisis, mainly caused by high energy prices resulting from the restricted supply of natural gas from Russia and strong competition in the world energy market.



- Remarks**
- 38% of the Scottish Housing Stock is rental units: approx. 950,000.
 - The main share **58.0% of rental homes are social rent** provided by local authorities and housing associations (registered social landlords)
 - **Private investors** own 35% of the total rental housing stock
 - All owners carry **various rent levels** to different extent: social, mid-rental and market rents

Figure 8: Overview Ownership Structure Scottish Housing Stock
Sources: Dpi 2020, CBS 2021, IVBN 2021

In the Programme for Government 2022-2023, the Scottish Government is aligning short term measures enabling its residents to get through the next winter (by announcing rent free until March 2023), with the long-term goal of a strong economy in a fair society. The Scottish Government is still committed to keeping Scotland on track to meet the target of net zero carbon by 2045 by clearly defined plans and policies. The Scottish Government is preparing an updated Climate Change Plan and is reviewing the Energy Efficiency Standard for Social Housing post 2020 (ESSH2). A key element in Scotland's future energy plan is to generate more power from Scotland's own renewable resources: in addition to offshore wind it is exploring wave and tidal energy.

According to the national Government, Scotland has the potential to become a global green energy powerhouse for Europe and beyond. This is also key for Scotland's economy and should be viewed with the ambition of the current Scottish Cabinet to become an independent country. Scotland's vast potential for renewable energy generation opens opportunities for exporting electricity and green hydrogen and attracting energy intensive industries.

A green power grid is also key in achieving net zero in heating Scotland's housing stock; the energy efficiency of all UK housing stock is currently lagging the European average. The Scottish House Condition Survey (2019) provides us with a good understanding of the challenge and the base position. The average modelled carbon emissions for all homes in Scotland is 73kg/m² (down from 80kg/m² in 2014). In the social rented sector 56% has EPC rating of C or above (against 40% for private rented sector).

The main source of heating in rental homes is natural gas. The high energy prices are exacerbating fuel poverty: Approximately one million Scottish households (40% of

all households) are in fuel poverty, of which the large majority (approx. 930,000) will be in extreme fuel poverty. Since 2019 the number of households facing fuel poverty has increased by 35%. This indicates the need for a **just transition**: Beyond economic and environmental aspects, the transition to net zero carbon needs to meet popular sentiment and protect vulnerable citizens. And this is where the housing associations in Scotland (Registered Social Landlords) can step up to the plate.

Scottish housing associations can play a key role in changing the supply chain to implement new technology by creating economies of scale (as buyer of new technology) and as a consequence can lower the cost (by using purchasing power): this is what housing associations are already doing with the fabric first approach and could expand to energy management by considering applying one of the energy management models we explain in this outlook.

Outlook

It seems that Scottish Government is willing to take a pro-active approach in contributing to solutions to the cost-of-living crisis and partner with likeminded organisations. That should enable housing associations not only to think out of the box, but also act unconventionally. And even more important, housing associations can work in collaborative partnerships to create the required economies of scale. For the few larger housing associations operating in Scotland there comes extra responsibility to pave the way to net zero in the social housing sector and do some heavy lifting where needed.

In summary, RITTERWALD believes that housing associations in Scotland are well positioned to take on a frontrunner role in identifying and implementing feasible pathways to net zero for the rental housing stock (25% of the Scottish housing stock) because:

- Housing associations and Local Authorities stock is geographically concentrated in communities with a manageable number of house archetypes. This enables them working in partnership with single retrofitting streams that will reduce cost (procurement conditions) and enables better tenant engagement.
- Housing associations are used to work in a regulatory environment which is an asset for long term partnerships with ESG oriented lenders to access private capital.
- Housing Associations have a record of accomplishment when it comes to delivering publicly funded programmes.

In other words, Scotland is small and special enough to apply a dedicated decarbonisation approach by social landlords.

5 ESG Funding after inflation returns ‘back to normal’

Although it is hard to imagine when reading the current daily headlines, any forecast, and we cannot read tarot cards, we expect that within 1-2 years the energy market will have regained its ‘balance’ in global supply and demand. In this scenario annual inflation rate will be back to 2-3% assuming successful monetary policies of ECB and the Bank of England.

However, about 2 years from now the funding challenges for social housing providers across Europe will have increased: cost of capital has become more expensive (higher interest rates) and government funding for retrofitting is unlikely to have kept pace with funding demand although pressure to use the government balance sheets will continue. Countries ‘who did not waste this crisis’ may have an advantage, particularly the ones who have been able to green their power grid: Scotland has a good starting position in this respect.

There will be even more need and urgency to re-allocate capital, also because most housing companies/associations will have to absorb -mandatory or voluntary- caps on annual rent increases and even -temporary- rent freezes. This will negatively affect their debt capacity. And as in every business, one can only pull two levers to improve business outcomes and social impact: efficiency improvements (doing more with less) and revenue improvement (this is where the energy management models outlined above come in).

Data-driven efficiency enhancement could include digitisation of operations, supply chain efficiencies, and value-oriented procurement of material and services. On the capital cost side, ESG finance is increasingly likely to attract interest discounts related to company performance on social and environmental impact and/or favourable covenants.

Revenue improvements include warm rents, linking the energy performance of a home to the social rent formula. Another consideration is conditional sale of properties with substandard EPC ratings, although this could be classed as scope 3 emissions and may require a restricted covenant in the disposal to bring up to say EPC C. This would reduce value but at least get liability off the balance sheet and out of OPEX while maintaining some environmental skin in the game. Both issues are the subject of considerable debate amongst dedicated professionals in the social housing sector, but most likely unavoidable.

Incentives possible in carbon offset: trade of CO₂ certificates depending on regulatory frameworks. This becomes effective when ‘voluntary’ frameworks and ambitions do not generate sufficient and timely results.

And there is one other thing. Currently housing associations are reluctant to increase their debt capacity due to volatile market environment: increasing interest rates and longer maturity. However, if we expect interest rates to also going ‘back to normal’ (and no this does not include negative rates) it is better to raise funds more frequently with smaller tickets than wait until your refinancing deadline is imminent and capital is more expensive in debt capital markets.

6 ESG News

Housing Providers

Peabody

Last June Peabody agreed a £75.0m five-year sustainability-linked revolving credit facility with ABN AMRO Bank UK. The bilateral loan is structured so that the interest due will reduce if Peabody satisfies each of the following ESG objectives:

- Improvement in the environmental performance of existing homes
- Building new social and affordable homes to rent
- Increase the ethnic diversity of Peabody's leadership team.

L&G

L&G Affordable Homes (subsidiary of Legal and General Capital) secured £150m social loan for its development program of 5,500 homes (social and affordable rent and shared ownership). BNP Paribas, HSBC UK and SMBC each committed £50m.

L&Q

Last July Lloyds closed a £525m Sustainability linked bond for L&Q's 8,000 homes development program offering L&Q margin discounts based on two KPIs: an average EPC rating of C on all its homes by April 2024 and half of the 8,000 homes should be affordable.

Highlights ESG Ecosystem

TCFD – Task Force on Climate-related Financial Disclosures (May 2022)

The Financial Stability Board (FSB) created the TCFD to develop recommendations on the types of information that companies should disclose to support investors, lenders, and insurance underwriters in appropriately assessing and pricing a specific set of risks—risks related to climate change. The FSB is an international body that monitors and makes recommendations about the global financial system. It was established after the G20 London summit in April 2009 as a successor to the Financial Stability Forum. In May 2022 TCFD published an Overview document summarising their work and recommendations to date.

ICMA – International Capital Market Association (June 2022)

The Green Bond Principles (GBP), Social Bond Principles (SBP), Sustainability Bond Guidelines (SBG) and Sustainability-Linked Bond Principles (SLBP) -the global standard for a US\$2.4 trillion market- announced new and updated publications including new definitions for green securitisation, updated key performance indicators for Sustainability-Linked Bonds and new resources for climate transition finance.

EU (Green) Taxonomy

Climate change mitigation and adaptation, two of the six environmental objectives in effect now, can only be applied to project finance projects. This is a challenge for housing associations because they mostly raise balance sheet financing. It should not become an issue if investors are okay with this. Moreover, mostly the EU taxonomy could be applied on best effort base.

UK Green Taxonomy

As with the EU taxonomy this is a common framework setting the bar for investments that can be defined as environmentally sustainable. From April 2022 the largest UK-registered companies and financial institutions must disclose climate-related financial information on a mandatory basis in their strategic report. It is likely the taxonomy will adopt the EU's six environmental objectives

PRI – Principles for Responsible Investment

Last August PRI has published review of trends in ESG reporting requirements for investors with some key findings:

- Investment-related ESG reporting requirements are growing but not in all jurisdictions
- A move from “tell me” to “show me” reporting
- ESG issue-specific reporting is growing
- Still long way from global consensus on investment related ESG reporting

CSRD – Corporate Sustainability Reporting Directive

The CSRD determines which companies -in EU- must report on sustainability. To comply as per 2024 or 2025 also an increasing number of housing associations in EU will have to report against the CSRD.



Figure 9: Sustainability Ecosystem
Sources: GRI, Positive Investment Imperial, RITTERWALD

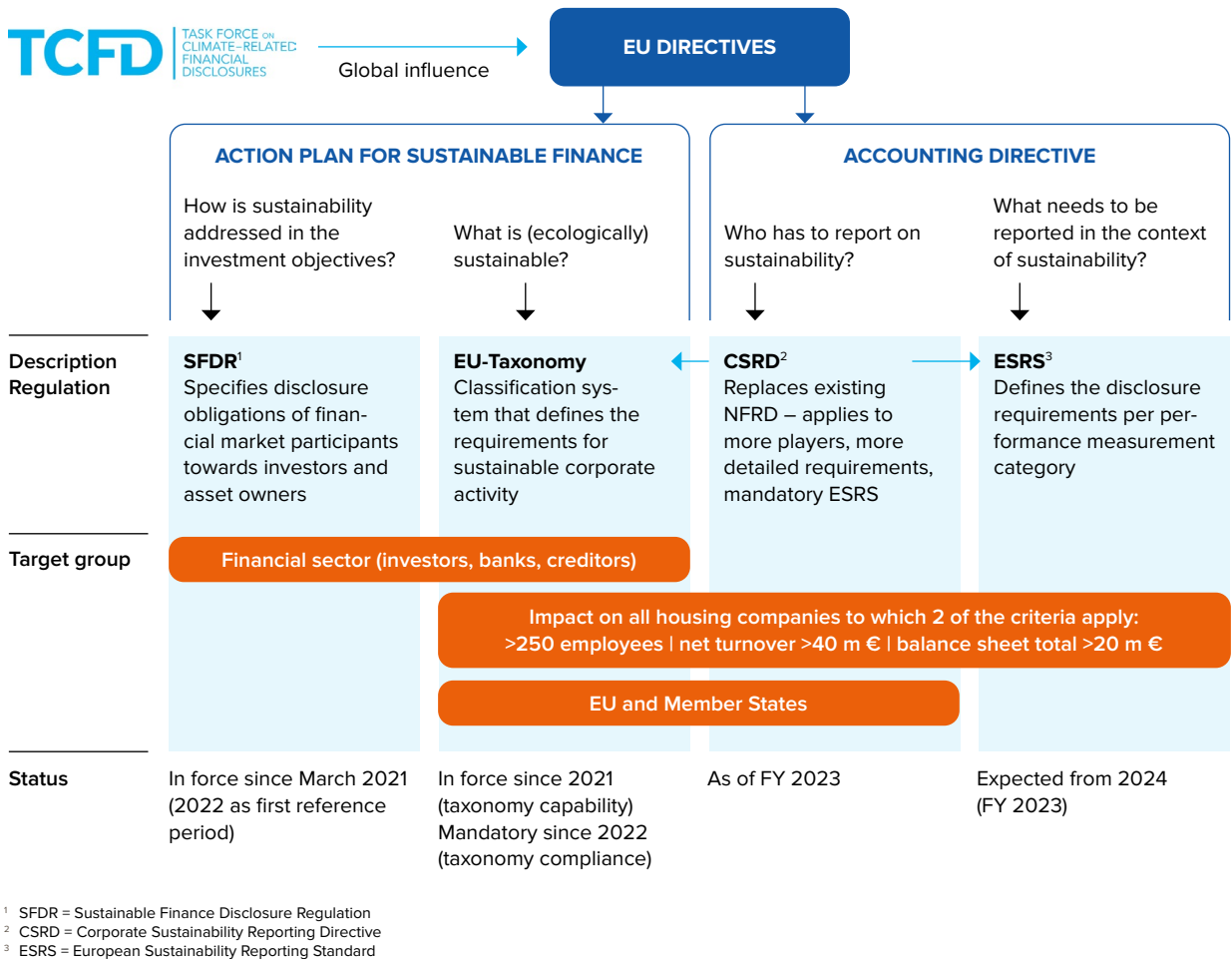


Figure 10: Regulatory Sustainability Framework
Sources: SFDR, EU Taxonomy, CSRD, ESRS, RITTERWALD

From RITTERWALD

Benchmarking

Benchmarking is a core tool to measure performance and learn from industry peers. Throughout the RITTERWALD Certified Sustainable Housing Label process, benchmarking is used to provide structured improvement potential. The label holders are benchmarked against each other in all three ESG dimensions and across all criteria. Rather than sharing the exact scores, three performance levels (above average, average, below average) are assigned to each criterion. Benchmarking has proven especially valuable in the social and governance dimension where quantitative criteria are scarce. Within the group of CSHL holders we experience a first mover bias, as all housing associations included in the benchmark are setting a high focus on sustainability and can be considered leaders within the industry. Thus, an average performance refers to an average performance among frontrunners (see example in figure 11).

Cambridge Symposium

Last July RITTERWALD participated in the exclusive **Cambridge Symposium** Going Green, Staying Social: Who Pays? hosted by The Housing Finance Corporation by sharing best practices on retrofit in Europe.

ESG Reporting Standard for Community Housing in Australia

In September the Community Housing Industry Association (CHIA) and the National Housing Finance Corporation (NHFC) presented the first version of the **ESG Reporting Standard for Community Housing in Australia** at CHIA's annual Development and Investment Summit in Melbourne. RITTERWALD developed this Standard in cooperation with Australian based consultancies SGS and Paxon.

Housemark's Data Summit

Early October RITTERWALD has presented its thoughts on **ESG data management** at Housemark's Data Summit in Birmingham.

Social Housing Conference in London

On December 1 RITTERWALD will explore **the options and implications of housing associations reallocating capital to retrofitting legacy housing stock** at Ocean Media's the Annual Social Housing Conference in London.

Joint venture for the capture and publication of ESG data

RITTERWALD is exploring a joint venture for the capture and publication of ESG data to ultimately support benchmarking.

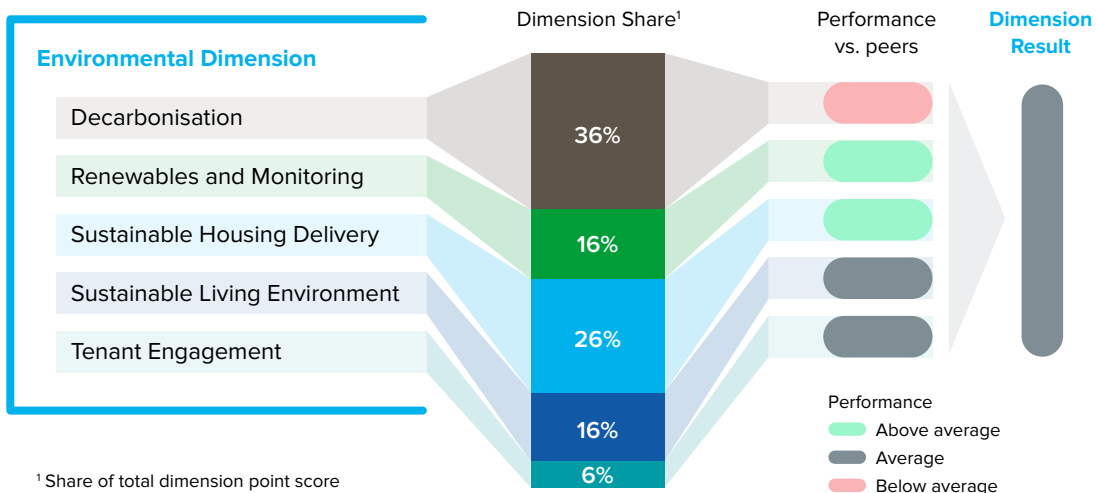


Figure 11: Benchmarking Example Environmental Dimension (2021)
 Source: RITTERWALD

RITTERWALD is a pan-European real estate consultancy, incorporated 11 years ago in Germany. We are committed to supporting the social and affordable housing industry. We are providing sustainability related services to housing providers across Europe, an important one is ESG accreditation through the Certified Sustainable Housing Label (CSHL). The CSHL compliments our wider business consulting services, corporate sustainability strategies, business optimisation, organisational change, corporate growth, and restructuring. RITTERWALD's team combines extensive knowledge of residential real estate and housing, business process re-engineering and corporate strategy.

Since the issuance of the Certified Sustainable Housing Label late 2019, the focus on ESG has grown steadily creating a rising demand for sustainability related services among our clients across Europe. In all cases we enable our clients to demonstrate and enhance their ESG credentials.



In 2019 RITTERWALD launched its Certified Sustainable Housing Label

ESG Accreditation

Certified Sustainable Housing Label and Sustainable Housing Assessment (captured product for aggregators, banks, and funds).

ESG Reporting

Compliant with taxonomies and reporting standards (in UK the Sustainability Reporting Standard).

Sustainability Strategy

Materiality analysis to support priorities and decarbonisation transition plan on the pathway to net zero.

Sustainable Finance

Finance frameworks for preparing issuance of GSS bonds (ICMA compliant) or raising sustainability-linked loans (LMA compliant).

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