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# Energy-Efficient Retrofitting and Housing in Norway: Policy Limitations and Social Implications

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# Background, purpose and relevance

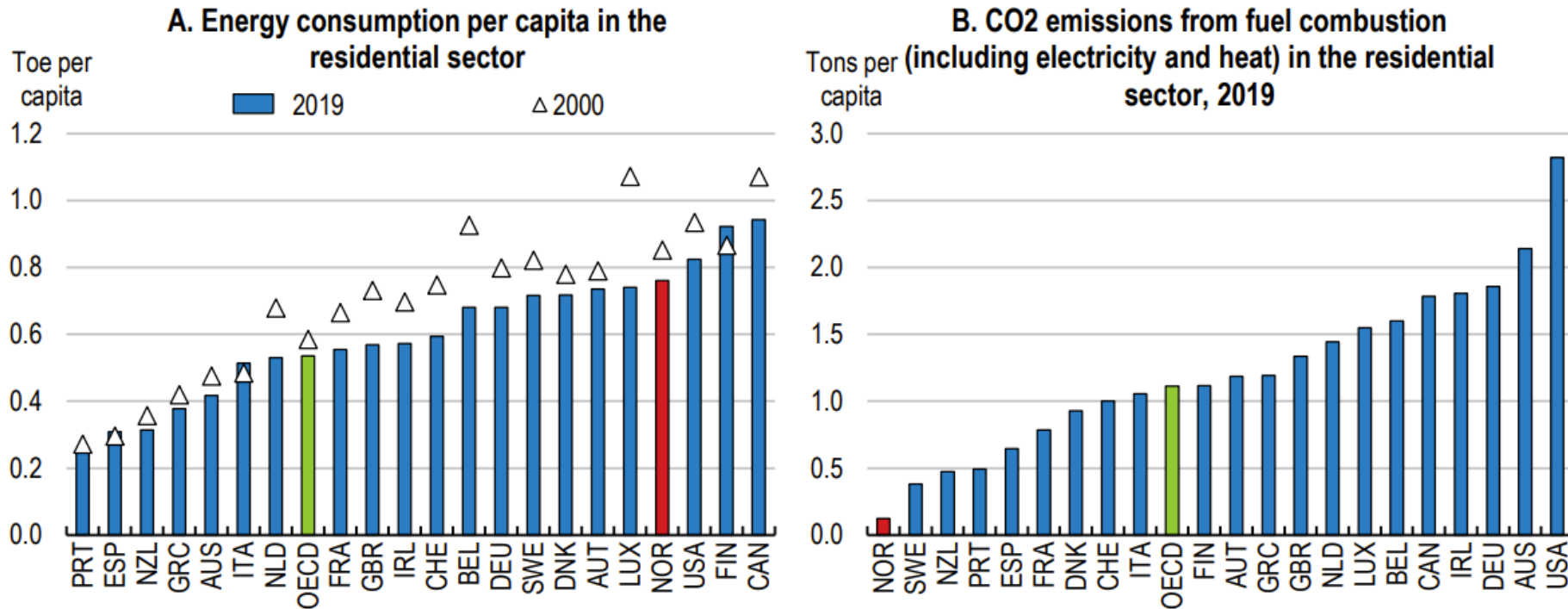
- This study investigates how retrofitting strategies are shaped by the interplay between governance structures and housing system in Norway, and what social implications arise as a result.
- The topic is completely under-researched in the Norwegian context
- Timely in the face of political instability stemming from the contended adoption of European energy directives



# Energy Retrofitting and Housing Inequalities

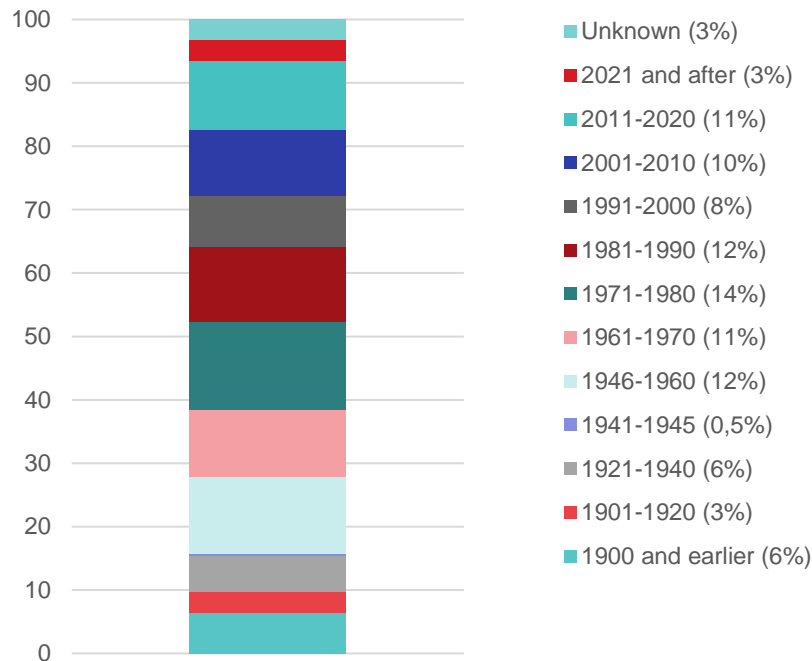
Positive Implications	Negative Implications
<p><b>Lower Energy Costs &amp; Energy Poverty Reduction</b></p> <p><b>Better Heating &amp; Cooling</b></p> <p><b>Enhanced Living Quality</b></p> <p><b>Increased property</b> value for homeowners</p>	<p><b>Three Key Dimensions of Inequality:</b></p> <ul style="list-style-type: none"><li>• <b>Financial Accessibility:</b> Upfront costs disproportionately affect low-income households and tenants. → “<i>Landlord-tenant dilemma</i>” discourages investment (Copiello, 2015; Seebauer et al., 2019). → Low-income households less likely to invest (Schleich, 2019).</li><li>• <b>Post-Retrofit Affordability:</b> Retrofitting can trigger rent increases and displacement, especially in deregulated markets. → Real estate speculation and gentrification risks (Grossmann &amp; Huning, 2015; Power, 2010). → Energy savings often fail to offset rent hikes (Broers et al., 2022; Schneider, 2003).</li><li>• <b>Energy Poverty &amp; Health:</b> Financial barriers to upgrades can trap vulnerable groups in poor-quality, unhealthy homes. → Links to respiratory issues and mental health problems (Seebauer et al., 2019).</li></ul>

# Context #1: Energy consumption and emissions from the residential sector



Source: IEA (2020), Energy Efficiency Indicators (database).

# Context #2: Energy use from the building sector and national goals



Age of the Housing Stock, Norway.

Source: compiled by author, data from: Statistics Norway 2022

Buildings stand for more than a third of the total energy use in Norway and more than 50% of electricity use. This means that energy efficiency measures in buildings will have a great impact.

The current political goal in Norway is to save 10 TWh by 2030 relative to 2015 levels, only from buildings (SINTEF). **How ever no obligation and poor incentives are in place**

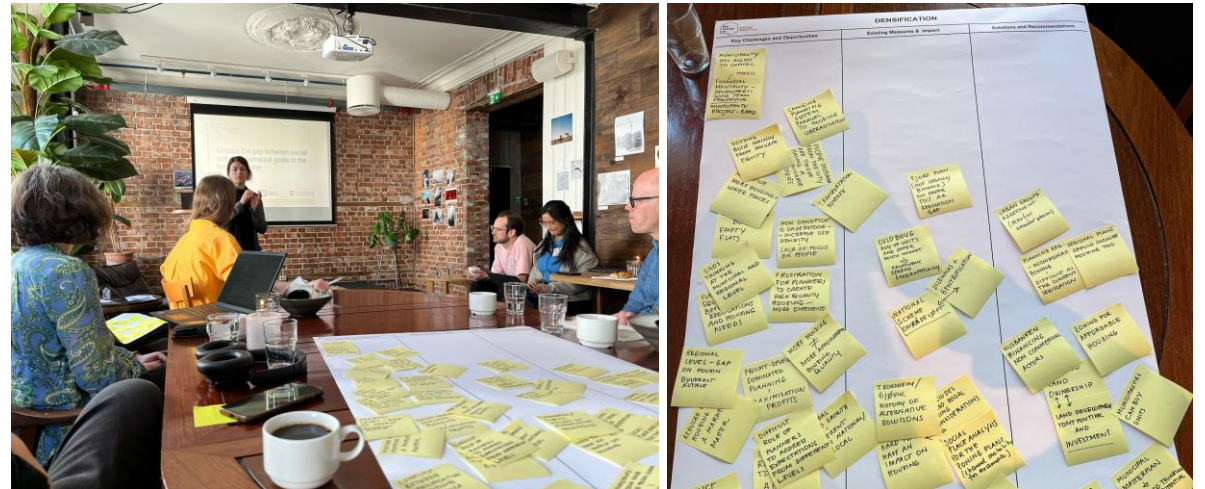


# Methods

Qualitative mixed method approach:

Policy document analysis, a policy lab and stakeholder interviews

- Document analysis focused on regulatory texts (e.g., Planning and Building Act, TEK17), strategies (e.g., 2023 Energy Efficiency Action Plan), and tools.
- Interviews with national policymakers, municipal actors, housing organizations, and energy agencies.
- Policy lab with local and national stakeholders for co-identification of barriers and solutions in retrofitting policy.

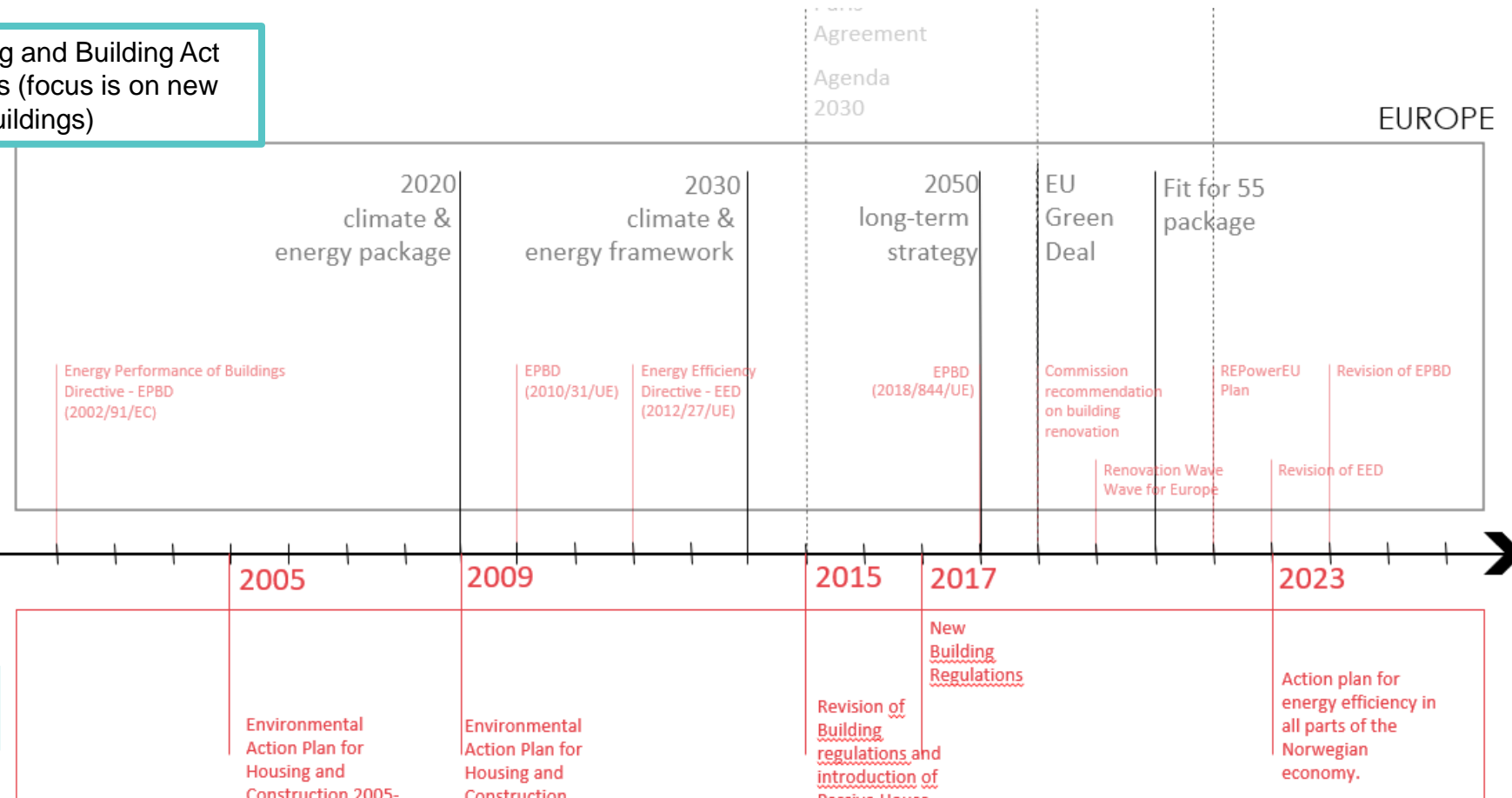


# Policy framework for retrofitting in Norway

Legislative basis: National Planning and Building Act and National Technical Regulations (focus is on new construction and not on existing buildings)

2 National actors responsible for financial tools: Enova (under the Ministry of Climate and Environment) and Husbanken. Subsidies for both privates and cooperatives

Homeowners are the main initiators of retrofitting initiatives





# Financial tools

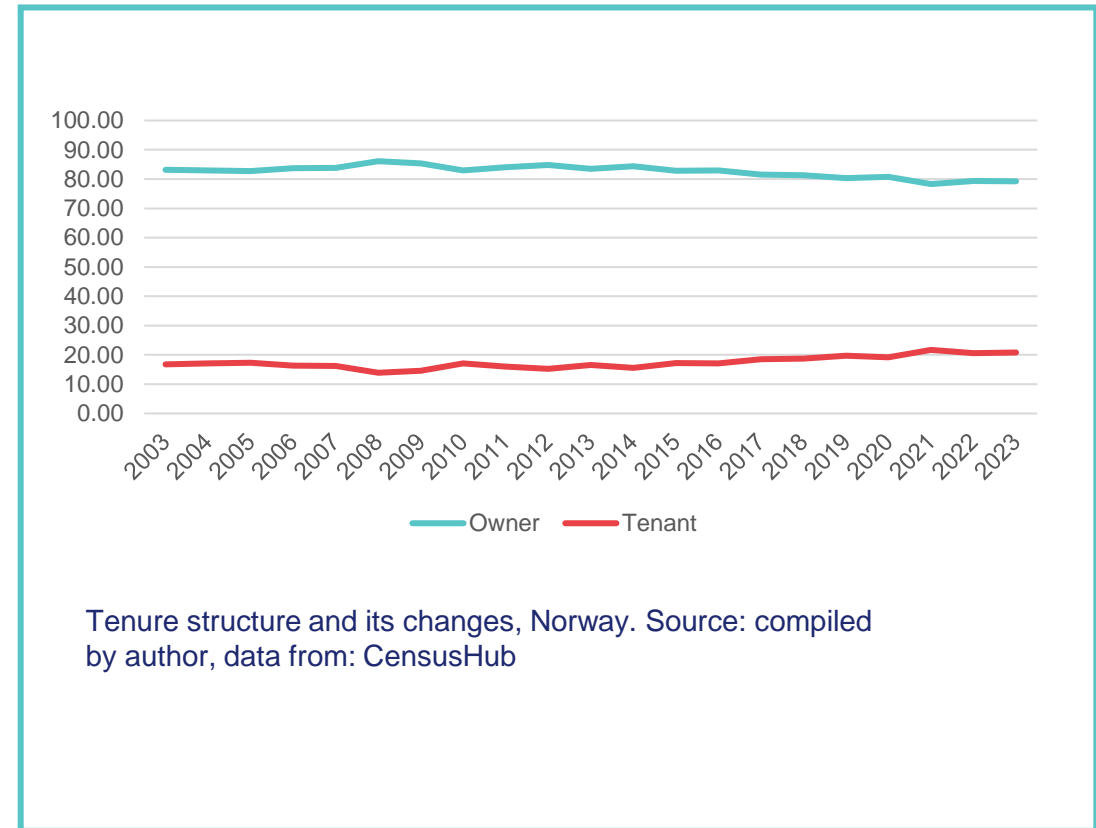
Name	Typology	Actor	Description
Enova Grants	Financial	Enova	Grants for energy-saving measures (e.g., insulation, heating systems); support for pilot projects and new technologies; typically cover about 20% of retrofit costs.
Husbanken Loans and Grants	Financial	Husbanken	Low-interest loans and grants for energy and accessibility upgrades; up to 90% coverage for high-ambition retrofits. <b>Loans are for both privates as well as for municipal housing</b>
Municipal Support (e.g., Oslo)	Financial	Local Municipalities (e.g., Oslo Kommune)	Local schemes for energy improvements, including 20% subsidies for solar panels and window/door replacement in cooperatives.

- Grants are not means-tested and typically cover only around 20% of total retrofit costs.
- Husbanken provides favorable loan schemes to support retrofitting efforts.
- While private banks offer green loans, these are generally geared toward new construction rather than retrofit projects.
- The government line has moved more towards capping energy prices than supporting retrofitting initiatives

# Implications for housing inequalities filtered by a strongly commodified housing system

- Dominated by homeownership (76.5%).
- Rental market is fragmented and unregulated (23,5%).
- Municipal housing = 3% of stock; mainly for disadvantaged groups.
- No strong tenant protections; short leases are common.

(Data from Statistics Norway, 2024)



# Results: Policy Limitations and implications for housing inequalities

## Implications for housing inequalities

### **Vulnerability to energy poverty across different segments of the housing stock**

Rental sector: low standard, limited incentives from landlords to retrofit

Ownership sector: limited grants

Cooperative sector: Shared retrofitting costs increase joint debt and financial vulnerability.

Municipal sector: low standard/ Reluctancy in using loans from the national housing bank

## Policy limitations

### **Weak/no integration between retrofitting tools and housing policy**

- Poor incentives
- Lack of targeted support

# Conclusive remarks: current situation

- **Voluntary & Market-Oriented Model:** Retrofitting policies are fragmented, underfunded, and rely on market incentives.
- **Unequal Access:**  
Benefits concentrate among wealthy homeowners and well-resourced municipalities, while renters, rural communities, and vulnerable groups face exclusion.
- **General disincentive in retrofitting:** low energy prices, also through varied government initiatives (Norgespris)
- **Systemic Tensions:**  
Norway's privatized housing system and weak public rental sector amplify the trade-offs between decarbonization and social inclusion.
- **Uncertain future compliance to EU directive on retrofitting:**

Under current conditions, housing inequalities may worsen (renoviction or vulnerability to energy poverty)





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# Thank you for listening!