POLICY EVIDENCE SUMMARY June 2023

Informing a strategy for circular economy housing in Australia

Based on AHURI Final Report No. 403: Informing a strategy for circular economy housing in Australia

What this research is about

This Inquiry report informs a strategy to facilitate circular economy (CE) housing: from construction, through operation to demolition. It draws on four coordinated research projects:

- **Sustainable housing at a neighbourhood scale:** This project identified opportunities for a CE approach at neighbourhood scale to achieve a transition towards sustainable housing in urban infill and new-build development locations.
- **Delivering sustainable apartment housing:** new build and retrofit: This project examined financial, fiscal, regulatory and policy levers that can facilitate the supply of sustainable apartments in Australia to the wider market.
- **Sustainable social housing retrofit? Circular economy and tenant trade-offs:** This project investigated CE approaches to large-scale retrofits of social housing, and the implications for the broader housing and retrofit industry.
- **Building materials in a circular economy:** This project used CE framing to investigate use and waste in material supply chains, to enable the housing construction sector to reduce, reuse, recycle and recover resources and rely much less on use of virgin materials.

The context of this research

Reducing the environmental footprint of housing goes hand in hand with addressing housing access and affordability and addressing long-term shortages of social housing. Sustainable housing is comfortable for residents as well as resilient and future-proofed against flooding, bushfire and other increasing climate change hazards. At the neighbourhood scale this means thinking more systemically about place, mobility and connectivity between housing and other ecosystem and socio-economic services, and scaling-up retrofit, including of apartment housing.

Addressing climate change, economic stability and social cohesion are major policy challenges that are also shaped by Australia's housing system and urbanised way of life. The CE concept calls for closed-loop material flows for sustainable housing that involves low-emission, recyclable and durable assembly while also meeting sustainable development objectives of social and intergenerational equity, local economic opportunities and resource efficiencies.

The gravity and urgency of the climate emergency and the housing affordability crisis together warrant a significant, coordinated national effort to recalibrate the housing industry and ensure its sustainable future.

The key findings

The barriers to implementing CE for housing

Barriers to implementing CE for housing in Australia include low or unspecified regulated standards; adverse motivations and incentives amongst individuals and businesses operating in the housing space; up-front costs (despite long-term cash benefits) to investors and consumers; as well as a lack of professional awareness and training. The widespread adoption of high quality, durable, low-impact, low-risk materials and maintenance systems designed to extend the life of buildings is held back by additional up-front costs, incomplete markets and insufficient know-how and incentives.

Sections of the housing industry are undercapitalised and lack the resources to be able to unilaterally develop the skills and resources required to lead, experiment with and shoulder the inevitable risks of the CE housing transition. Strategic efforts will be required that minimise these risks, including more accurate property valuations that incorporate CE and EE (embodied energy) certification; CE definitions in investment mandates and planning requirements; clear and consistent regulation; and pathways of reform.

Overview of what should be in a CE strategy

A comprehensive CE strategy will:

- lift sustainability as a priority
- shift market processes
- tilt incentives to attract the appropriate investment
- build capacities towards circular and sustainable outcomes.

An effective CE strategy must include a politically astute vision; robust legal footing; industry-relevant application; and be capable of enforcement. Specialist in-depth investigation of Australian institutional settings, market processes and stakeholder capacities are now required to reflect and propose suitable instruments adapted to local conditions.

Financial institutions need to guide developers towards CE strategies

Since most people commissioning or buying housing will be reliant on debt for the transaction, the policies and practices of financial institutions are influential. In Australia, as well as overseas, there is already firm evidence of rental-building developers being steered towards more energy-efficient specifications by finance providers seeking an outlet for 'green capital' and which are willing to offer preferentially priced debt for projects that comply with defined environmental performance standards.

Understanding the demand for CE in housing has implications for businesses involved in producing different types of housing —such as apartments and social housing retrofit. These businesses are dependent upon existing financing arrangements and notions of product demand.

Energy performance labelling of buildings can help inform dwelling valuations. Such schemes could powerfully and progressively influence building design across all building types.

Five high-level policy development options to inform a CE housing strategy

- **Policy option 1:** Comprehensive intervention. Adopt the quadrant framework, which provides a picture of what needs to change and covers a comprehensive range of necessary interventions:

Reappraising value: value inclusion and prioritisation, market setting, institutional frame

Shaping market practice and processes: regulatory/steering instruments, performance-drivers, market-shapers, etc.

Tilting investment flows: finance, capital and tax incentives

Building capacity: skills, knowledge, and training

The following policy development options show how change might occur:

- **Policy option 2:** Engage stakeholders. A strategy can only be successful if it attracts buy-in from diverse stakeholders. Therefore, a key action is to leverage the findings through a design-implementation process that involves a wide spectrum of industry and policy stakeholders. A Commonwealth Task Force should be set up to undertake this work.

  Such a process will involve multiple industry sectors; engagement with and across the capacities of all three tiers of government; pilot programs to develop and test new business models; and agreement on the adoption and procurement of platform technologies—such as approved online applications to source, check, trade and transfer second-hand building materials.

  The categories to be considered by the Task Force are sustainable housing at a neighbourhood scale; delivering sustainable apartments (new and retrofit); sustainable social housing; CE building materials; and the roles of Commonwealth, State and Territory and local governments, the private sector, society and education institutions.

- **Policy option 3:** Establish roles and goals. Confirm the high-level goals and roles for organisations and corporate entities involved in implementing CE and use these as inputs into Commonwealth Task Force deliberations and consultations.
- **Policy option 4:** Provide tools and frameworks. Establish tools that can be applied to different housing subsectors. These tools are strategic frameworks that guide: overall action; knowledge development; collaboration platforms for different stakeholders; business support schemes; regulatory frameworks for materials, processes and actors; and procurement policies that will strengthen demand.
- **Policy option 5:** Support with robust action plans. 'The Policy Framework: Actions towards Circular Economy housing in Australia' is an agenda for integrated action to inform and guide conversations about the transition to CE housing in Australia. Policy option 5 is targeted at testing and utilising this material in order to facilitate engagement, discussion and agency in the CE housing strategy.

What this research means for policy makers

Strategic efforts will be required that minimise risks associated with implementing a CE strategy including:

- more accurate property valuations that incorporate CE and EE certification
- CE definitions in investment mandates and planning requirements
- clear and consistent regulation
- pathways of reform.

Effective change requires measures that actively shift perceptions of value and priority-framing in decision-making to those that favour CE housing outcomes. Housing industry organisations cannot meet this challenge without purposeful public intervention and stakeholder cooperation. This is not to absolve the housing industry from a key role in the transition.

Regulation, clear CE targets and performance standards required

Regulation is essential to shape housing markets to reinforce CE approaches, from the micro level of building materials to construction and ongoing maintenance, to the macro level involving precinct-level spatial planning. Alongside legislative reform, clear targets and performance standards need to be enforced by monitoring, as well as being made accountable using reporting systems that sustain improving practice. These include energy efficiency and zero-waste policies; better data tracking and regulations on material flows; upscaling technological improvements; and CE conditions in contractual arrangements.

To tilt circular investment flows to promote sustainable housing relevant to Australia, public sponsorship of industry best practice will be an essential instrument to showcase and raise standards. Accredited training and professional awareness-raising on the practice and advantages of CE housing could shift practices and attract additional investment flows. Furthermore, grants, incentives and subsidies have the potential to lever resources of investors, building providers, local communities and residents. Procurement policies (especially by governments) will be an essential tool to shift commissioning practices and support major CE retrofit programs and foster CE market development. In addition, regulation of carbon and pricing can help with redirecting investment flows and de-risking CE housing investment.

CE needs a skilled workforce

To support effective implementation, professional and skilled work is required, as well as digital systems, monitoring and enforcement. The transition to a low-carbon construction sector will require a higher-skilled, reskilled and more diversely skilled workforce, and may imply the embrace of new or different business models. To build capacity for a just transition towards CE housing, training and education is vital for key stakeholders, including policy makers and administrators, as well as private-sector actors across a range of trades and professions, from carpentry to finance to urban planning.

CE requires strong action and partnerships between governments, industry and communities

The scale of change required is significant. Specific industries, such as local government planning and the construction demolition industries are singled out for tailored capacity-building to catalyse reform, such as the development and use of building/material passports and preparation and application of precinct design guidelines to promote steps towards circular forms of development.

New partnerships between governments, private developers and local communities with suitable governance approaches will be required.

The key next phase is to translate this research Inquiry into a delivery phase, where a national strategy can be established and implemented. This will involve wide consultation and coordination.

Methodology

This research consists of document and data analyses of national datasets, including a review of international good practice documentation, and focus groups with key practitioners and experts.

To cite the AHURI research, please refer to:

Horne, R., Dorignon, L., Lawson, J., Easthope, H., Dühr, S., Moore, T., Baker, E., Dalton, T., Pawson, H. and Fairbrother, P. (2023) *Informing a strategy for circular economy housing in Australia,* AHURI Final Report No. 403, Australian Housing and Urban Research Institute Limited, Melbourne.

Available from the AHURI website at ahuri.edu.au/research/final-reports/403

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