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## 1. Reduce the cost of meeting carbon targets

### 1. What could be done to improve the cost-effectiveness and alignment of policies to reduce emissions across the industrial, electricity and transport sectors?

The most important step is to recognise that emissions-reduction policies are not landing evenly across the country. In rural areas, the foundations that are needed to make those policies work simply aren't in place. That's where the misalignment starts. And it's also where the costs start to blow out.

Right now, rural households and businesses are being encouraged to electrify and reduce emissions, but they're being asked to do it on top of an outdated, underpowered grid. It is not uncommon for homes in small towns to be unable to run a split system and an induction cooktop at the same time. If electric vehicles had high adoption in some streets in small towns then they would cause blackouts on those streets. Even in bigger towns and cities minor voltage fluctuations are enough to shut down the latest high tech modern food processing equipment for days. As it is built for a constant supply of power and that is not occurring. That is not just inconvenient — it's unworkable.

At the same time, incentives and emissions-reduction programs are designed for systems that can already handle the load. If you're in the suburbs and want to put in a battery or switch your vehicle to electric, the grid and the workforce are probably there to support you. If you're in a rural town, you may qualify for the same support on paper, but in practice you're left behind — often by years.

Regional manufacturers and food processors trying to reduce their emissions are being told they need to fund their own substation upgrades just to connect electric equipment. That is not a signal to decarbonise — that's a brick wall. Agriculture is being asked to host generation infrastructure, but has no clear pathway to electrify its own operations, and no tailored programs to help it do so.

So if we are serious about improving the cost-effectiveness and alignment of emissions-reduction policies across sectors, three things need to happen.

First, plan for infrastructure, not just abatement.

You cannot deliver cost-effective emissions reduction in places where the grid cannot cope with the change. Regional distribution networks need urgent investment — not just because it's fair, but because it's the only way to avoid cost blowouts and project delays later. The policy should lead the infrastructure, not follow it.

Second, tailor the transition to the realities of rural businesses.

Food manufacturers, freight operators and processors need support that fits their scale and context. Electrification funding needs to factor in the high cost of grid access in regional locations. Program design needs to shift from a metro mindset to one that

understands seasonal demand, long supply chains and high energy sensitivity.

Third, stop siloing sectors.

You cannot electrify transport in regional areas if the electricity network can't support it. You cannot reduce industrial emissions if the workforce is not there to install or service new tech. And you cannot improve household energy performance if the local housing stock is still fibro and hard to retrofit. The transition has to be coordinated across energy, industry, housing and transport — and it has to be planned regionally, not just sector by sector.

The bottom line is this. The cost of getting to net zero will keep climbing if we keep designing policy that doesn't work for the places doing the heavy lifting. But if we get the alignment right in rural areas — if we build the enabling infrastructure and design policy around real conditions — the whole system benefits.

## 2. Are there gaps in the emissions-reduction policies in the industrial, electricity and transport sectors which should be addressed?

Yes, and those gaps aren't small. They're structural. At the moment, emissions-reduction policies are being rolled out into a system that was never designed to carry them — especially in rural and regional areas. What that means in practice is that some sectors and communities are being set up to succeed, while others are being left behind.

One of the biggest gaps is between policy ambition and infrastructure readiness. Industrial and transport sectors are being encouraged to electrify, but there's very little recognition of what that actually takes on the ground in a regional setting. If a grain processor wants to install new high-tech electric equipment, they often find the local network can't deliver stable enough power to keep it running. What would be a flicker in the city can shut down operations in the country for days. That kind of power quality issue isn't even on the radar in many policy conversations, but it makes or breaks the ability to decarbonise.

Then there's the cost of connection. Rural manufacturers and processors are being told to electrify but when they go to upgrade, they're quoted hundreds of thousands of dollars just to cover the cost of substation or transformer upgrades. That's not a fair or viable policy setting — and it's a gap that hits productivity as well as emissions outcomes.

On the electricity side, there's still no coordinated plan to upgrade the distribution network in a way that matches the decarbonisation task. The big focus has been on generation and transmission, but the local networks that households and small businesses rely on are underpowered and underinvested. Without distribution upgrades, electrification won't work — no matter how many subsidies are on offer.

Transport policy has similar blind spots. EV rebates and charging programs are skewed toward population centres. That means regional drivers, who often travel more and rely more heavily on their vehicles, have limited access to the infrastructure that would allow them to transition. At the same time, freight and ag sector operators are seeing growing pressure to reduce emissions, but the vehicle supply, servicing networks and refuelling infrastructure are still years away from being fit for purpose outside the cities.

Agriculture is another example. It is not clearly covered by most emissions-reduction

programs, but it is hosting a large part of the infrastructure that's meant to get the rest of the country to net zero. There's a real risk that farming becomes the platform for the transition without having any support to transition itself.

Filling these gaps matters because right now the benefits and burdens are uneven. The places carrying the physical load of the energy shift are not being given an on-ramp to decarbonise. That's not a technology problem — it's a policy alignment problem.

We don't need more targets or more programs. We need the ones we have to make sense in the places that need them most. That means linking emissions-reduction policies to actual infrastructure investment, aligning support with what's realistically achievable in rural areas, and giving every sector — including agriculture — a genuine pathway to participate.

Without that, we're not just slowing the transition. We're making it more expensive and more divisive than it needs to be.

### 3. Are there any duplicative emissions-reduction policies in the industrial, electricity and transport sectors which could be streamlined?

Q4: Are there any duplicative emissions-reduction policies in the industrial, electricity and transport sectors which could be streamlined?

Yes. The problem isn't just duplication — it's fragmentation. The signals aren't necessarily pushing too hard. They're pulling in too many directions at once, without enough support to act on them. That makes it confusing, time-consuming and sometimes impossible for regional businesses and communities to follow through.

In rural and regional areas, where workforce and support systems are thinner, these gaps and overlaps hit harder. People are being asked to respond to emissions signals from different levels of government, different regulators, and different programs — but the rules, funding conditions and reporting expectations don't line up.

So the first priority should be to coordinate the pathways, not just add more pressure.

Near-term priorities

#### 1. Align funding and infrastructure delivery

There is no point offering emissions-reduction incentives in places where the grid cannot support the change. Electrification policy must go hand-in-hand with upgrades to local infrastructure. If the power supply is unreliable or too weak to support new equipment, the emissions signal becomes meaningless. Programs should be rolled out where infrastructure is in place or where upgrades are already funded and scheduled.

At the same time, if a region is ruled out of a program because the infrastructure is not in place, then governments must be upfront about that. They should be required to publicly explain why that community has been excluded, what is being done to address the gap, and how people in that area will be supported to reach the same net zero outcome — even if the path looks different. Otherwise, we just reinforce disadvantage and widen the gap between regions.

#### 2. Create consistent rules across levels of government

At the moment, a business might qualify for a federal program but get blocked by state

planning rules or local infrastructure constraints. Households might be eligible for more than one scheme but find the criteria clash. That kind of friction stops people from acting, especially when they don't have a team of experts behind them.

### 3. Streamline carbon reporting and compliance

Small businesses — especially in food and fibre sectors — are now being asked to report emissions under supply chain standards, industry metrics, and finance conditions. Each comes with its own format or expectation. It's the same work, done three different ways, and it eats up time and resources without adding value.

Examples of how this plays out

Too many signals, not enough delivery

A business trying to shift to electric vehicles may get offered incentives, be required to report emissions, and still be unable to install a charger because of infrastructure delays. That's not duplication — it's poor coordination.

Conflicting eligibility rules

Many regional businesses blur the line between agriculture and manufacturing, but program definitions don't. That means a processing shed might be eligible in one program and blocked in another — just based on which drop-down box gets ticked.

False starts caused by gaps in delivery

Subsidies for batteries or EVs may exist, but if there's no installer or grid capacity, uptake is low and trust drops. People try once, then give up.

Where streamlining should focus

Provide a single entry point for emissions-reduction funding across jurisdictions

Ensure program eligibility is consistent, with clear rules that fit rural realities

Require infrastructure-readiness mapping before rollout

And if an area is excluded, be honest about it and explain how they'll still be supported to reach net zero

Streamlining isn't about simplifying paperwork. It's about removing the structural noise that makes action hard. If we want broad participation and fair outcomes, we have to make emissions-reduction policies work in the regions, not just around them

## 2. Speed up approvals for new energy infrastructure

### 1. Are planning and approvals processes for large energy infrastructure taking too long? If so, what causes the most delay?

Yes, approvals are taking too long — but not always for the reasons people think. A lot of the focus tends to be on regulatory duplication or environmental assessment timelines. While those areas can definitely be streamlined, most of the serious delays we see actually happen later in the process. They're caused when early engagement has been rushed, when risks haven't been properly identified, or when the infrastructure design doesn't fit the region's capacity to absorb it — socially, environmentally, or economically. In our region, the projects that stall aren't always the ones with the most

red tape. They're the ones where local communities feel like decisions were made without them, and where landholders or neighbours are being asked to carry the risk without clear mitigation or long-term planning. That includes issues like unclear insurance and liability settings, emergency access problems, and proposals that don't align with the realities of local infrastructure or land use. But it's not just social risk — it's business risk. A major cause of delay that rarely gets acknowledged is how these projects intersect with established, productive farming businesses. Most of the farms being asked to host infrastructure — whether it's transmission lines, substations or other assets — are not passive landholders. They're multi-generational family businesses that have grown in scale, built resilience, and made careful investments over time. They operate across multiple properties, manage seasonal demands, and rely on internal systems — fencing, laneways, water infrastructure, machinery movement — that don't show up on a map. Too often, energy companies and project proponents arrive with no real understanding of what they're stepping into. They don't have a process to assess what business risk they're creating. They can't explain how they'll mitigate disruption. And they rarely offer anything beyond compensation — which assumes that the issue is money, not continuity. But for most of these businesses, the core question is not "how much am I being paid?" It's "will I still be able to farm properly with this infrastructure here?" That is not a minor detail. If those questions go unanswered, the project slows down — either because people resist, or because the risks come back during later design, construction or operational phases. Neighbouring landholders face similar issues. When a proposed project interferes with local access, drainage, or service delivery, people dig in — not because they're opposed to change, but because they weren't respected or included. There's also a growing pattern of projects being designed without a clear understanding of local workforce availability or grid capacity. Those gaps aren't discovered until late in the game, forcing proponents to redesign, pause or re-consult. That chews up months. What we've found is that the fastest-moving projects are the ones that treat approvals not as a regulatory gate, but as a relationship — a negotiation that depends on trust, clarity and shared expectations. When proponents come in early, are honest about what's negotiable and what's not, and are willing to engage on risk — not just offer benefits — the process goes smoother. If governments are serious about speeding up approvals, then the system needs to change to support: Early identification of both social and business risks, especially those affecting farming operations, supply chains and land use continuity Meaningful engagement with landholders as businesses, not just as recipients of compensation Transparent explanation of how community and landholder feedback has shaped the proposal before formal assessment begins Use of shared tools like Commitments Registers, so that what's promised during consultation is made visible and trackable over time Early coordination with councils, RDAs and infrastructure providers, to make sure project plans don't clash with known local constraints or future priorities Delays in the approvals process are often a symptom, not the root cause. If you deal with the real risks up front — the ones that actually matter to people, businesses and regions — the approvals move faster. And more importantly, the project lands better.

## 2. How can planning and approvals processes be sped up without unduly compromising regulatory standards?

We absolutely can speed things up — but only if we stop blaming regulation itself and start fixing the way projects are designed, sequenced, and assessed. Delays are rarely just about environmental laws or tick-a-box planning. They often come from poor project design, rushed community engagement, and a failure to understand how these

proposals land in real places — especially working farm businesses. At the moment, developers are entering landscapes they don't understand, assuming that a bit of compensation will smooth the way. But for many landholders, that infrastructure could change the way their business operates for decades. Speed comes when you reduce risk up front — not just social risk, but business risk, operational disruption, and long-term conflict. That's what the best international examples show. Denmark, for example, speeds up wind approvals by requiring local ownership — 20% of a project must be offered to residents living nearby. That doesn't weaken regulation. It strengthens consent. Iowa mandates staged decommissioning guarantees to ensure landholders aren't left with a mess at the end. It's baked into the approval process, which creates confidence without long back-and-forth. Spain has introduced a repowering framework that enables infrastructure upgrades within defined zones. This keeps impact contained while still enabling scale. France's agrisolar tenders don't just rank projects by cost — they require agricultural endorsement to ensure energy development is compatible with productive land use. That creates clarity and speeds up decisions because farming value is recognised as part of the planning lens. What can we learn from these? That approvals speed up when you: Give communities a real stake in the outcomes Plan for lifecycle risk early, including decommissioning Build zoning and regional planning tools that reflect land use reality, not just grid overlays Treat farm business continuity as essential infrastructure, not a side issue Embed independent evidence — including Agricultural Impact Assessments — into planning assessments If we want speed, we need confidence. And confidence doesn't come from cutting corners. It comes from early clarity, risk-literate design, and showing regional communities they're not just being asked to host — they're being invited to help shape the outcome.

### 3. Should clean energy projects be treated differently to other projects for the purpose of environmental and other approvals? If so, how?

Clean energy projects are different — in purpose, scale and urgency. But that doesn't mean they should be given a free pass. If anything, their long-term role in reshaping regional landscapes makes thoughtful, inclusive planning more important, not less. The impacts of energy infrastructure are not evenly spread. Rural communities are hosting the vast majority of it — often on and around productive farmland. These are the same places that support our food systems, freight corridors, and intergenerational family businesses. So we need a planning system that recognises both the urgency of climate action and the value of the regions being asked to carry it. Yes, clean energy projects can and should be treated differently — but that difference should lie in better early engagement, smarter integration with local land use, and more transparent, locally accountable processes — not less scrutiny. If we want to speed things up while doing it properly, then planning and approvals should include: 1. Treat farm operations as strategic infrastructure Approvals processes need to go beyond land footprint and zoning categories. They should recognise that most clean energy projects in regional areas intersect with active, productive businesses. These farms are systems — with internal roads, livestock movement, drainage, spraying patterns, labour routines and planning cycles. Ignoring that in the design phase just stores up problems for later. Fast-track planning should be earned by showing how continuity of farming will be protected — not disrupted. 2. Support regionally led, transparent Commitments Registers Communities don't just want to be consulted — they want to be able to track what was promised and whether it was delivered. That's where Commitments Registers can play a role. But for them to work, they need to be held at a regional level — managed by trusted community organisations, not government or developers. They should be



transparent, updated regularly, and report on whether the commitments are being met. Some commitments will be measurable. Others may be qualitative or aspirational. Not all will be enforceable, and we shouldn't pretend they are — but visibility and accountability matter. It's about trust and long-term relationships, not compliance mechanisms. 3. Develop a more informed approach to agricultural impact We don't need to fall into the trap of saying clean energy harms food security. Most projects — if planned well — won't reduce output and may actually improve business resilience by giving farmers a new income stream to manage climate and market shocks. But right now, there is no consistent process to assess how projects interact with regional food systems, land use patterns or business continuity. If we want confidence, we need better evidence. A regional agricultural impact process could help surface both risks and opportunities — including how energy security contributes to food system resilience. 4. Prioritise projects in zones where communities have shaped the plan Clean energy approvals can be faster where the groundwork has been done properly — where regions have been given a say in how zones are mapped, where infrastructure goes, and how benefits are shared. Fast-tracking only makes sense when local knowledge has shaped the project's location and design. That means actual involvement — not just glossy maps at the end of the process. 5. Connect project approvals to infrastructure readiness Approving a project that relies on a grid connection that doesn't exist yet just builds frustration. Clean energy projects should be assessed with a full view of whether the supporting infrastructure — powerlines, roads, workforce, services — can deliver. If not, it should be made clear what upgrades are planned and when. Clean energy does need a different approach — not by cutting corners, but by recognising what it takes to make these projects land well. Rural communities are central to delivering net zero. If we treat them with that level of respect in the planning system, approvals won't just go faster — they'll go further.

#### 4. What can be done to build local community support for new energy infrastructure projects?

The short answer is this: stop designing projects for communities, and start designing them with communities. Real support comes from trust, not transactions. The idea that we can “buy” social licence with benefit-sharing misses the point. Rural communities are being asked to host long-term infrastructure that will change how they live, farm, and grow — they want to be part of the vision, not just compensated for the inconvenience. There's no one-size-fits-all model. But there are a few things that consistently matter: 1. Start early, and start honestly Support doesn't come after the approvals — it starts before the first map is drawn. The most effective projects we've seen are the ones that begin with listening, not announcement. That means mapping local constraints, land use realities, and business impacts up front — and being transparent about what's negotiable and what's not. Anything less feels like theatre. 2. Shift from benefit-sharing to opportunity-sharing Most current benefit-sharing models still focus on what the company is giving back, rather than what the community is building forward. Instead of offering small grants or one-off payments, regions should be helped to create shared value through things like: equity stakes or long-term revenue sharing regional reinvestment in infrastructure that supports both the project and the host community (e.g. roads, microgrids, housing, workforce hubs) skills, training, and local enterprise procurement linked to the long-term energy transition When you treat the region as a partner — not a cost centre — support follows. 3. Build and maintain Commitments Registers at the regional level Communities have long memories. They've seen projects come and go. What's needed now is a public, transparent way to track what's been

promised and what's being delivered. A regionally held Commitments Register — maintained by a local trusted organisation, not government or the company — can help communities follow through on what was agreed. These commitments should be practical, visible, and updated regularly. Not everything will be enforceable, but they can still be accountable. 4. Connect benefit-sharing to what matters in the region Generic packages rarely land well. A town that is trying to hold on to its local workforce may value co-investment in housing, health services or childcare more than a cash handout. In farming areas, strategic investment in distribution networks, digital connectivity or road access may matter more. The best outcomes come when benefit-sharing is negotiated around local priorities — not dropped in from above. 5. Recognise that not all communities are starting from the same place Some regions are already hosting multiple projects. Others are being asked to absorb transmission lines before they see any benefit. Some have strong civic infrastructure and skilled local councils. Others have been worn down by years of underinvestment. Benefit-sharing needs to reflect that. We should not treat a community hosting its fifth project the same as one seeing its first. It's not just about fairness — it's about feasibility. In the end, support comes from inclusion. Communities want to be part of the energy transition — but not on the sidelines. The regions hosting this infrastructure are not just locations. They're partners in delivery. If we treat them like that from the beginning, most will walk with you.

#### 5. Please outline any evidence showing the productivity benefits of faster approvals for energy projects.

The productivity benefits of faster approvals are real — but only when they come from better planning, not from skipping over people or risks. We've seen firsthand that when energy projects are delayed, it's rarely just a paperwork issue. It's a cost issue, a timing issue, and a trust issue. Every delay adds uncertainty to capital investment, ties up workforce and equipment, and pushes back the connection of new capacity to the grid — all of which ultimately raises the cost of energy. In our region, where transmission and generation infrastructure is being rolled out at scale, we see three key ways that improved approvals processes could lift productivity: 1. Reduced project risk means cheaper capital and faster delivery Delays in approvals mean delays in financial close. When a project has unresolved landholder opposition, unplanned rerouting, or a contested social licence, investors price that in. The capital becomes more expensive, and the delivery timeframe gets padded out. That adds cost, both to the project and to the system operator trying to model when new capacity will come online. If approvals are streamlined through good early planning, clear landholder processes, and fit-for-purpose regional engagement, those risks reduce — and with them, financing costs. 2. Tighter project timelines mean better workforce productivity Skilled workers are in short supply, especially in regional Australia . When a project is approved on time, built on time, and able to link into the grid as planned, labour costs are contained. But when approvals get stuck or renegotiated halfway through, the workforce either sits idle or has to be redeployed — then brought back later at higher cost. That creates bottlenecks and inefficiencies across the pipeline. It also makes it harder for local workers and contractors to participate, because the schedule keeps shifting. 3. Avoiding last-minute redesigns and re-consultation saves millions One of the biggest hidden costs in current approvals systems is the redesign of project plans after consultation has already started. That includes re-routing lines to avoid landholder conflict, shifting infrastructure that wasn't aligned with farming operations, or changing access points due to local emergency service constraints. These changes blow out budgets and timelines. But when those risks are mapped early — with local input — they can be resolved in pre-



design, not post-approval. That's productivity in the truest sense: doing things once, not three times. 4. Faster, fairer project delivery reduces system costs for consumers Every delay in getting new, lower-cost generation onto the grid means the system relies longer on legacy capacity — which is often higher cost. Transmission delays, in particular, force system operators to hold back generation in areas that are ready, leading to curtailment and inefficiencies. The result is higher wholesale prices that flow through to consumer bills. Approvals reform that unlocks well-designed, community-supported projects sooner will reduce this system drag — and bring consumer prices down faster. To be clear, speed is not the goal — certainty is. When landholders, communities and proponents are all clear on what's required and what's fair, projects move faster, cost less, and deliver more.

### 3. Encourage adaptation by addressing barriers to private investment

1. What are the barriers and enablers impacting decisions by owner-occupiers, landlords and developers about how housing is built and updated over time so that it is resilient to the effects of climate change?

The participant did not respond to this question.

2. What information do people need to make decisions about where to live, how to build and how to upgrade their homes to appropriately factor in climate change?

If we want people to invest in climate resilience, we need to start with a realistic view of what decisions they can actually make — especially in rural areas. Most people aren't choosing between new developments. They live where the work is, where the land is, or where there's family connection. New builds are often out of reach. Retrofitting is hard when the housing stock is ageing, local trades are scarce, and the systems meant to support change were built for city conditions. People aren't unwilling. They're navigating poor information, unclear signals, and programs that aren't designed for how they live. What households actually need A clear, household-level picture of climate risk People need to know what risks apply to their home — not just their suburb or shire. That includes flood exposure, fire pathways, heatwave vulnerability and energy supply reliability. The information must be clear, easy to use, and tied to actual decisions. Trusted, tailored advice on what upgrades are possible and worthwhile No two homes are the same — especially in the regions. Advice needs to reflect the real-world conditions of older homes, mixed energy sources, and seasonal pressures. That advice also needs to come from someone trusted — not a sales pitch or a generic online calculator. Clear signals from insurers and lenders People want to know if their investments will reduce insurance premiums or improve finance options. Right now, those signals are inconsistent, hard to access, or missing entirely. What gets in the way now Poor quality housing stock that's expensive to fix In regional Victoria and elsewhere, many homes are fibro, weatherboard or brick veneer, built before modern standards. They're hard to insulate, drafty, and expensive to upgrade. People know where the problems are — they just don't have affordable, staged ways to fix them. Information overload, not tailored advice There's no shortage of websites, grants or pilot programs. But they don't talk to each other. Households get energy ratings, bushfire plans, flood maps, and rebate offers — none of which are coordinated, sequenced, or grounded in place. Insurance and finance are not set up to reward resilience In high-risk areas, premiums are rising, but the actions that might lower those premiums are rarely made clear. And while lenders offer green loans, they often only apply to new builds or narrow product lists — not to staged, practical resilience upgrades for existing homes. Advice

disappears when programs end Too often, funding goes to standalone hubs or short-term trials. When the program ends, the knowledge disappears with it — and households are left where they started. What should be done differently Deliver “resilience hubs” as programs embedded in trusted place-based organisations We don’t need new buildings or layers of bureaucracy. The best approach is to embed climate resilience programs within existing, well-governed organisations that already work with the community. That could include regional development organisations, Aboriginal-led services, local councils, neighbourhood houses, or community energy groups — depending on what’s trusted in the area. These organisations bring continuity and memory. When they’re resourced to deliver advice, coordinate upgrades and link into finance or trades, the information stays put — even after the program cycle ends. Link advice with action — don’t leave households hanging Good advice is only useful if people can act on it. That means connecting risk assessments or upgrade plans to low-cost finance, installation support, and visible insurance or value benefits. Tailor solutions to rural realities Advice must reflect what people are actually living in — not a best-case scenario for a three-year-old home in metro Melbourne . That includes older, edge-of-grid homes, mixed heating sources, and limited local trades. Provide clear feedback loops for households People need to know whether their upgrades will reduce insurance premiums, improve loan conditions or lower their long-term costs. If those signals are made visible and credible, more people will invest. Regional communities want to be prepared. But preparation takes more than pamphlets. It takes trusted advice, place-based systems, and long-term support. If we embed resilience programs where people already go for help, and back them with real pathways to act, the outcomes will stick — for households, for insurers, and for the system.

### 3. What are the most cost-effective retrofitting options for improving the resilience of Australia’s existing housing stock? What are their costs and benefits?

In some regions, the most cost-effective retrofit isn’t a retrofit at all. It’s building new, fit-for-purpose housing where none currently exists. That’s the reality in many rural and regional communities. The existing housing stock — often fibro, weatherboard, or poorly built brick veneer — is ageing, thermally inefficient, and hard to upgrade. Retrofitting these homes can be expensive, slow, and difficult to stage due to limited trades and weak underlying structures. It may improve comfort in the short term, but it doesn’t always deliver long-term resilience. Meanwhile, most state and federal housing programs — whether for social, affordable, or climate-resilient housing — are designed to work in high-population centres. They favour scale, uniformity, and large delivery partners. That leaves smaller rural towns out of scope, even when the need is urgent. We need to stop assuming that every home can or should be upgraded. In many regional communities, the better investment is to increase the supply of modern, energy-efficient, climate-ready homes — so people have real housing choices. That means delivering social and affordable builds in small towns, not just the fringe of capital cities. Without that, we risk throwing good money after bad — pushing households to invest in unsuitable homes they didn’t choose, can’t afford to fix properly, and can’t easily leave. Where retrofitting does make sense, here’s what works For households where staying in place is the only option, the most cost-effective retrofits are those that improve comfort, reduce risk, and can be staged: Roof shading and ventilation improvements Helps older homes stay cooler without relying on aircon that the local grid often can’t support. Ember protection and fire sealing Relatively low-cost upgrades like ember mesh, window seals and fire-rated fencing improve bushfire resilience, often using local trades. Improved insulation, draught sealing and basic thermal repairs Still one of the simplest ways to

reduce energy bills, improve health outcomes and lift indoor comfort. Drainage upgrades and backflow protection Prevents water damage during storms and floods — often more effective than major structural works. Ceiling fans, solar prewiring, and passive design tweaks Works well where electrical upgrades aren't feasible yet, but energy performance still matters. The broader benefits of either approach — retrofit or rebuild Health gains from better temperature control and air quality Reduced household energy stress and lower ongoing bills Greater disaster resilience, with fewer people needing emergency shelter or evacuation Improved insurance access, when upgrades are recognised Stronger population retention, when people can actually find a home they want to stay in What needs to change Reframe resilience as both retrofit and replacement Stop assuming retrofit is always the answer. In some places, replacement housing — targeted, affordable, and designed for resilience — is more cost-effective over the long term. Fund housing delivery in rural regions, not just high-density zones Design programs that allow for small-scale builds, mixed-tenure models, and regional delivery partners — not just CBD-based housing providers. Support embedded retrofit services Where upgrades do make sense, fund trusted local organisations — such as regional development bodies, councils or neighbourhood houses — to help households sequence work, access trades, and link into finance or energy programs. Resilience starts with housing choice. Right now, too many people in rural Australia are being asked to retrofit homes they didn't choose, can't afford to fix, and don't want to leave — but have no alternative. If we want cost-effective, lasting outcomes, the conversation has to include new housing stock, not just retrofit band-aids.

#### 4. What role might minimum standards play in ensuring the resilience of Australia's housing stock?

Minimum standards can help — but only if they're matched with planning systems, building programs and support structures that work in regional communities. Otherwise, they risk becoming a compliance tool that slows down housing delivery, prices people out of builds, or forces regional councils to assess risks they don't have the capacity to manage. Setting strong, minimum resilience standards into the National Construction Code is a good step in principle. But the devil is in the detail — and the delivery. Here's what needs to be considered: Resilience standards must reflect different climate risks and housing types The risks facing a household in Darwin , Bendigo or Nhill aren't the same. Neither is the housing stock or building capacity. A blanket standard that doesn't allow for local variation could push people into non-compliance, or make building unviable in smaller towns. Standards need to be strong, but adaptable — with clear pathways for regional implementation. Minimum standards need to be matched with minimum support There's no point setting rules about bushfire risk or flood resilience if homeowners and builders can't afford to meet them. If we want resilience to be a national floor, we need financing tools, design guidance and workforce support to deliver it — especially outside metro areas. Planning systems must support housing in climate-safe, service-ready areas Right now, many rural towns are under pressure because housing is being built in risky, disconnected or underserved locations — simply because the zoning is looser or land is available. Resilience isn't just about the structure of a house. It's about where that house is — how it connects to emergency services, power, water, roads and community support. Local government needs planning tools that don't overburden them Regional councils are already stretched. If we expect them to enforce resilience-based planning overlays, they need resourcing — not just regulatory load. Otherwise, risk gets passed down the chain without the support to manage it. Resilience standards should not block innovation or affordability We've seen too many

examples where rigid interpretation of planning or building codes delays small-scale, affordable, or climate-smart housing in the regions. Standards must enable better builds — not entrench more red tape. What governments need to do now Embed climate resilience as a core objective in planning policy and zoning decisions, especially around infrastructure corridors, growth towns and risk-prone areas Resource regional councils and planners to apply resilience tools fairly and consistently — not just expect it to happen Ensure Construction Code updates include a regional implementation lens — including phasing, workforce support and product supply issues Treat housing delivery in small towns as a productivity issue, not just a planning question — and fast-track approvals for housing that meets resilience benchmarks in low-risk locations Support integrated planning for housing, infrastructure, energy and emergency access, rather than siloed agency-led decisions Minimum standards have a role to play — but resilience isn't built with rules alone. It's built by helping communities make the right housing choices, in the right places, with the right support. If the system makes that easier, standards will lift outcomes. If it just adds cost and complexity, the risk stays exactly where it is — in the too-hard basket.

5. The impacts of climate change are being factored into the regulation of where and how houses are built in different ways around Australia. What does leading practice look like? Where is there room for improvement? Are there lessons we can learn from other countries?

Right now, most planning and zoning systems across Australia are still playing catch-up on climate. There's been some progress — through bushfire overlays, flood risk maps, and hazard-driven zoning — but that's only part of the picture. What's still missing is a planning system that actively integrates housing, infrastructure, energy and land use — especially in regional areas, where the risks are rising and the capacity to respond is stretched. What does leading practice actually look like? Climate risk is a core part of growth planning, not just hazard avoidance Instead of just mapping where not to build, leading systems proactively guide development toward low-risk, service-ready, and infrastructure-aligned areas. That means assessing climate risks alongside transport, emergency access, jobs, health services, and energy needs — not in isolation. Housing delivery and land use are aligned with emissions and resilience targets It's no use approving 1000 homes in a fringe area if they're car-dependent, exposed to heatwaves, and can't be cooled due to grid constraints. Planning needs to prioritise precincts where homes can be powered, cooled and accessed — not just where land is cheap or zoned. Regional planning reflects real-world capacity — not just policy intent Leading practice means designing tools and rules that smaller councils and communities can actually implement. Many regional councils don't have in-house climate or hazard planners. They need templated overlays, funding to apply them, and access to shared risk tools. Resilience planning is inclusive, not exclusionary Planning for climate shouldn't price people out. We need pathways to build affordable, resilient housing in regional towns without being forced into risky locations due to zoning or cost pressures. That means delivering housing and infrastructure together — not pushing people to the edges. Where is there room for improvement in Australia ? Most zoning and planning still assumes historical climate norms There's a lag between what science is telling us and what's reflected in local planning rules. That leads to approvals in high-risk areas, and blocks in areas better suited to future conditions. Housing, transport and energy planning are still disconnected We're not joining the dots. Homes get built without considering future energy needs, road access in a fire, or workforce access during climate events. This fragmentation leads to poor outcomes. Rural and regional areas are

left out of climate-smart planning Much of the investment in planning reform has gone to high-growth metro areas. Regional communities — which are already hosting most of the energy transition — aren't getting the tools or support to plan well. What can we learn from other countries? The Netherlands integrates water risk and spatial planning at every level of government, with clear national-local coordination and long-term infrastructure sequencing. Risk isn't just managed — it shapes land use from the start. France 's Territoires d'Industrie program supports coordinated planning in industrial regions, where housing, transport, training and infrastructure are linked to strategic jobs and transition goals — especially in smaller towns. New Zealand is moving toward a national spatial planning system with stronger climate integration and Māori land use leadership — placing cultural governance and resilience at the centre. Canada 's regional growth frameworks in some provinces include clear climate impact pathways, funding for local government implementation, and community-based decision-making tools for resilience. What Australia needs now Stronger integration between planning, energy and infrastructure policy Fit-for-region zoning and planning guidance with actual implementation support Mandatory use of future climate data in development approvals, not just historical records Shared planning tools maintained by state governments but adapted locally Housing growth targets linked to resilience goals and service capacity We can't keep separating where we live from how we live. Climate-resilient housing starts with climate-smart planning — and that means giving regional communities the ability to grow well, not just avoid risk. The tools exist. The need is here. What's missing is the connection.