

Labor Senators' additional comments

Introduction

1.1 Labor Senators thank all organisations and individuals that made submissions to this inquiry and gave evidence at hearings, and the Secretariat for their ongoing research and administrative support.

Australia's changing climate and its implications for the built environment

1.2 Labor Senators recognise the challenges and dangers posed by climate change which will require new infrastructure to be built to withstand extreme weather events and strengthened infrastructure will be needed to deal with sea level rises, particularly in built up areas.

1.3 Labor Senators recognise Australia is particularly vulnerable to climate change and as such there is an urgent need to take meaningful action on climate change by reducing greenhouse gas emissions.

1.4 Given Australia's vulnerability, Labor Senators urge federal, state and territory governments ensure that both effective mitigation and adaptation measures are undertaken.

1.5 Accordingly, Labor Senators urge the Australian Government to:

- commit to Australia reaching net zero greenhouse gas emissions by 2050;
- ensure that at least 50 per cent of the nation's electricity is sourced from renewable energy by 2030; and
- enact an emissions reduction target of 45 per cent below 2005 levels by 2030.

Recommendation 1

1.6 Labor Senators recommend that the Australian Government commit to a target of net zero greenhouse gas emissions for Australia by 2050 and the actions necessary to achieve this target.

Understanding risk and informing decisions

1.7 Labor Senators recognise the transition to a low pollution economy will affect workers, communities and businesses.

1.8 To enable workers, communities, business and governments to make informed decisions about climate change adaptation it is of critical importance for up-to-date assessments of climate risks to infrastructure to be available, including estimates of the value of the assets at risk.

1.9 Labor Senators support the view that it is essential to consider extreme risks or worst-case scenarios and recognise that it is better for adaptation measures to be capable of withstanding the gravest scenarios rather than risking that the measures will be insufficient.

1.10 Accordingly, Labor Senators recognise the potential for a National Climate Change Risk Assessment (NCCRA), which could be updated at regular intervals. Labor Senators acknowledge the suggestion that the newly established ARC Centre of Excellence for Climate Extremes could support the development of the risk assessment and that Infrastructure Australia would be well placed to undertake a national audit of at-risk infrastructure.

1.11 Labor Senators support reviewing the allocation of funding provided for climate change research, with a view to providing ongoing support to the National Climate Change Adaptation Research Facility (NCCARF) and other key agencies such as CSIRO and the Climate Change Authority for research into climate extremes and impacts.

Recommendation 2

1.12 Labor Senators recommend that the Australian Government consider funding the preparation of a NCCRA that includes assessments of extreme risks and worst-case scenarios for Australia's built environment.

1.13 Labor Senators recommend that an assessment such as the NCCRA should be updated regularly, such as every five years.

Recommendation 3

1.14 Labor Senators recommend that the Australian Government consider commissioning and funding Infrastructure Australia to lead a national audit of at-risk infrastructure including, but not limited to, the following areas:

- **road and rail networks;**
- **ports and airports;**
- **water, stormwater and irrigation infrastructure;**
- **electricity generation, transmission and distribution infrastructure;**
- **telecommunications infrastructure;**
- **housing and building infrastructure, including the policies and standards underpinning the planning, development and construction of buildings and communities; and**
- **coastal defences.**

Recommendation 4

1.15 Labor Senators recommend that the Australian Government consider providing:

- **ongoing funding to support the National Climate Change Adaptation Research Facility; and**
- **additional funding to CSIRO and other relevant Commonwealth agencies to support further research into climate extremes and impacts.**

Urban and coastal planning

1.16 In considering the evidence received about urban and coastal planning, Labor Senators acknowledge that taking measures to adapt to climate change in the short-term will ultimately be fairer and more cost effective than delaying action.

1.17 Labor Senators acknowledge the evidence received by the committee which strongly supports the development of nationally consistent and authoritative benchmarks, and guidelines regarding key climate change risks, such as sea level rise, rainfall and the management of flood-risk.

1.18 Furthermore, Labor Senators acknowledge that regional variations will be required and nationally consistent guidance should not impede effective local responses. However, key stakeholders did present a compelling argument that a more consistent approach to these issues would encourage more effective planning and adaptation.

1.19 Labor Senators also note there is some concern with current climate change assumptions used in planning and recognise that for climate change adaptation to be effective there is a need for governments and other decision-makers to plan for extreme or worst case scenarios.

Recommendation 5

1.20 Labor Senators recommend that the Australian Government lead the development of nationally consistent benchmarks and guidelines on climate risks, particularly sea level rise, for use as part of state and local government planning decisions. The benchmarks and guidelines should be based on comprehensive scientific assessments and include consideration of worst-case scenarios and climate extremes.

Recommendation 6

1.21 Labor Senators recommend that an overarching objective regarding the need to effectively plan for climate change be included in all state and territory planning legislation.

Recommendation 7

1.22 Labor Senators recommend that the Australian Government consider commissioning research to enhance the information available to policymakers regarding the full range of social and economic costs associated with heat stress.

1.23 Labor Senators also recommend that the Australian Government consider commissioning research to estimate the potential health system savings and other economic benefits that could be realised by taking measures to reduce the severity of the urban heat island effect.

Recommendation 8

1.24 Labor Senators recommend that the Australian Government request state and territory governments ensure effective coastal retreat strategies are developed in their jurisdictions. To inform the development of these strategies, the Australian Government should ensure that the state and territory governments have ready access to expert advice from relevant Australian Government departments and agencies.

Insurance and property finance

1.25 Labor Senators note that numerous reviews have considered the issue of insurance affordability and coverage in areas at heightened risk of extreme weather events. Labor Senators also note the ACCC is currently conducting an inquiry into insurance in northern Australia which will provide valuable guidance on this issue in the future.

1.26 Labor Senators note that the Government has indicated support for consumer education campaigns and efforts to improve transparency in the insurance sector. These efforts are welcome; however, they likely will be insufficient to deal with the issues the insurance market will face due to climate change.

Residential and commercial building design

1.27 Labor Senators note that while minimum building requirements have been enhanced at various times for new buildings, it is clear that the majority of dwellings in Australia could be more resilient to climate change risks.

Recommendation 9

1.28 Labor Senators recommend that the Australian Government request that the Australian Building Codes Board develop minimum requirements for the National Construction Code that are specifically designed to address heat stress risks associated with internal temperatures.

1.29 To facilitate the development of amendments to the National Construction Code, Labor Senators further recommend that the Australian Government consider providing funding for research into:

- **how overheating in highly rated energy efficient dwellings can be created where there can be inadequate ventilation; and**
- **the behaviour of building occupants during heatwave periods.**

Recommendation 10

1.30 Labor Senators recommend that estimates be developed of the potential health system savings and other benefits that could be realised through enhanced building standards. In particular, the research should consider the benefits associated with retrofitting low efficiency dwellings to keep internal temperatures within safe ranges during extreme heat events.

1.31 Labor Senators also consider that governments have a key role in ensuring adequate information is available to assist informed decision-making by homeowners and tenants. This includes developing programs to encourage retrofitting of existing dwellings. For the jurisdictions that already have such programs, given the scale of the challenge climate change presents for Australia's dwelling stock, further work could be undertaken to encourage greater participation in them.

1.32 In addition, governments should ensure that prospective owners of dwelling and tenants are provided with information to assist them to understand and compare the energy efficiency of different buildings.

Recommendation 11

1.33 Labor Senators recommend that all state and territory governments develop educational resources and introduce or expand existing financial incentive programs designed to encourage homeowners to undertake cost-effective retrofitting of existing dwellings.

Recommendation 12

1.34 Labor Senators recommend that all state and territory governments legislate to require that an energy rating measuring passive energy performance must be disclosed to prospective buyers and tenants when a residential property is offered for sale or is available to rent.

1.35 Labor Senators note the committee's consideration of whether governments should identify a target date by which all existing dwellings would be required to be of a suitable standard for addressing any significant heat risks associated with their local climate.

1.36 Labor Senators accept that given the projections available about the increased frequency of heatwave events in Australia's major urban centres, such a response

would be appropriate for ensuring adaptation efforts keep pace with the changing climate.

1.37 Labor Senators note the preceding recommendations about building standards, research and education should be implemented as a starting point. As a next step, policymakers should then identify an appropriate measurement of heat stress in residential buildings and how comparisons about heat stress can easily be made, either through existing building rating systems or as part of a new system. Following this, an appropriate deadline for building owners and the building industry to reach an identified minimum rating could be developed, with exemptions potentially available for certain types of buildings such as heritage buildings.

Recommendation 13

1.38 Labor Senators recommend that state and territory governments consider whether to set a deadline by which all residential properties for sale or rent in their jurisdiction must meet a prescribed energy rating.

1.39 Labor Senators note that governments can contribute to climate change adaptation through procurement decisions, such as by requiring new office space to meet higher standards than the minimum required under the National Built Environment Rating System and that other buildings managed by the government should also be retrofitted to make them more resilient to climate risks.

1.40 However, Labor Senators support emphasis being placed on supporting people in public housing who rely on governments to provide safe living conditions.

Recommendation 14

1.41 Labor Senators recommend that the Australian, state and territory governments require that new office space used in the public sector meet high standards of climate resilience and sustainability, including higher energy efficiency standards than the minimum required under the National Built Environment Rating System.

Recommendation 15

1.42 Labor Senators recommend that state and territory governments invest in measures to improve energy efficiency and to reduce heat stress risk in public housing.

Transport and utilities

1.43 Labor Senators note that decisions about transportation and utilities infrastructure involve all levels of government and that given the long economic lives intended for transport and utility assets these decisions should be taken with care, following best practice approaches and informed by the most up-to-date scientific information available about climate change projections.

1.44 As such Labor Senators recognise a key role for the Australian Government is ensuring that reliable information about climate risks is available to inform decision-making. However, Labor Senators considers that the Australian Government could also perform a leadership role in promoting a best practice approach to infrastructure projects and engage with key organisations in the built environment sector to encourage effective post-project reviews to be conducted in order to learn from decisions made about climate-related risks.

Recommendation 16

1.45 Labor Senators recommend that the Australian Government work with organisations representing the built environment sector to identify options for ensuring that robust post-project reviews of infrastructure projects are conducted.

1.46 Given the significant amounts of funding provided by the Australian Government for transportation projects, Labor Senators also support recommendations that the Australian Government develop a national transportation plan to guide a transition to net zero emissions transportation.

1.47 Labor Senators note that generally the evidence received during this inquiry suggests that climate risks are generally not well accounted for as part of transportation projects.

Recommendation 17

1.48 Labor Senators recommend that the Australian Government develop a national plan for passenger and freight transport that:

- **outlines a transition to net zero emissions transport; and**
- **ensures decision-making and planning processes for transportation infrastructure projects are appropriate in the face of climate change.**

1.49 Labor Senators acknowledge that state and territory governments have given attention to the need to secure climate resilient water supplies. It is also recognised that water infrastructure in Australia generally provides a reliable and suitable service however climate change will present further challenges that state and territory governments will need to address.

1.50 Labor Senators note that growing urban populations and the expectation of more intense rainfall events due to climate change will require a different approach to planning water infrastructure assets and systems.

1.51 Labor Senators also urge state and territory governments to ensure state-owned water corporations and local governments have the resources necessary to undertake effective maintenance of existing water, sewage and stormwater assets. In addition, state governments should develop an overarching plan to ensure that adequate renewal of these assets occurs.

1.52 To support state governments to achieve better outcomes in the water sector, Labor Senators accept there is a role for the Australian Government, through agencies such as CSIRO and the Bureau of Meteorology, to ensure state governments and entities designing water sector assets have access to reliable climate-related information to inform infrastructure design.

Recommendation 18

1.53 Labor Senators recommend that state and territory governments:

- **require the design of new water supply, sewerage, sewage treatment and stormwater assets to be informed by reliable climate projections as well as historical data; and**
- **ensure state-owned water corporations and local governments have the resources and support necessary to undertake effective maintenance of water supply, sewerage, sewage treatment and stormwater assets.**

Recommendation 19

1.54 Labor Senators recommend that the Australian Government support state governments to ensure that water sector assets are climate resilient by offering ongoing access to advice from Commonwealth scientific agencies on relevant climate risks.

1.55 With regards to the energy market, it is clear climate change has significant implications for the sector and that a transformation has been underway for some time with the growth of renewable energy.

1.56 It is clear that the electricity sector is undergoing fundamental change through the growth of renewable energy generation. This growth is aided by the introduction of supporting technologies such as large-scale energy storage.

1.57 Labor Senators note that a more decentralised electricity network would help overcome many of the climate change-related risks to existing electricity infrastructure, such as how extreme weather events can damage key transmission or distribution assets and cause widespread outages.

1.58 Labor Senators note the National Electricity Objective contained in the National Electricity Law currently focuses on the long-term interests of electricity consumers regarding price, quality, safety, reliability and security of supply. However, it is in the long-term interests of energy consumers that the electricity sector responds effectively to climate change in a way that guarantees a secure and affordable supply of electricity.

1.59 Labor Senators note that amending the National Electricity Objective would provide a clear statement of the Australian, state and territory governments' intentions for the electricity sector to support the reduction of Australia's emissions. This would

provide the sector with the long-term certainty needed to inform business investment decisions.

1.60 Labor Senators consider that an overarching national transition plan for Australia's electricity system is also urgently required. Labor Senators recommend that the Government prioritise the development of a national transition plan, which would include consideration of innovative approaches to support renewable and other low carbon energy, energy storage and the decentralisation of the electricity networks, such as local energy trading.

Recommendation 20

1.61 Labor Senators recommend that the Australian Government pursue, through the Council of Australian Governments Energy Council, amending the National Electricity Objective to include decarbonisation of the electricity sector.

Recommendation 21

1.62 Labor Senators recommend that the Australian Government develop a comprehensive energy transition plan that includes:

- **reform of the National Electricity Market rules to support the growth of renewable energy, new energy technologies, and ensure networks are prepared to efficiently respond to changes in the energy market;**
- **a mandated notice period for the retirement of coal fired power stations as well as a detailed plan for a just transition for coal fired power station workers and their communities; and**
- **innovative approaches to enable peer-to-peer energy trading as well as other innovative models such as community renewable projects.**

Recommendation 22

1.63 Labor Senators recommend that the Australian Government:

- **implement a national electricity investment mechanism that supports the continued transition to renewable energy, consistent with expert advice on the electricity decarbonisation needed to meet Australia's obligations under the Paris Accords;**
- **adopt policies to support investment in electricity storage to support continued growth in renewable energy;**
- **ensure regulatory arrangements support the continuing deployment of grid level battery storage and household solar and battery storage technologies; and**
- **commit to not providing any direct funding, subsidies or other support for the construction of new coal fired power stations in Australia.**

Health, education, social services, recreation and tourism

1.64 Labor Senators acknowledge there is a need for an overarching national strategy for managing the implications of climate change for human health and note that that Labor has already committed to developing a climate change health strategy. The strategy should support planning to enable the health system to adapt and meet the increasing demands it will face due to climate change. As part of this strategy, particular consideration should be given to ensuring that health services are resilient to extreme events, and to the resources the health care sector will require to cope with extreme heat events.

Recommendation 23

1.65 Labor Senators recommend that the Australian Government work with the state and territory governments to develop a national climate change and health strategy.

1.66 Labor Senators support the recommendations for state and territory governments to require that new health and education facilities not be built in at-risk areas and that the new buildings are highly resilient to climate risks such as extreme temperatures. Similarly, when existing facilities in at-risk areas require replacement, they should be relocated.

1.67 Labor Senators also support recommendations that state and territory governments should develop dedicated programs to ensure that vulnerable populations with specific health needs live in dwellings that can provide safe internal temperatures. In addition to supporting better health outcomes for residents, such programs could reduce the costs incurred in the health system.

Recommendation 24

1.68 Labor Senators recommend that state and territory governments require proposals for new health and education facilities to be subject to rigorous assessment of climate-related risks, including the risks associated with the proposed location and building design.

1.69 Labor Senators also recommend that state and territory governments commence planning to ensure that facilities in high-risk locations that are nearing the end of their useful life are replaced with new facilities in more suitable locations.

Recommendation 25

1.70 Labor Senators recommend that the Victorian Government's Healthy Homes Program be expanded to cover all of Victoria.

1.71 Labor Senators further recommend that other state governments introduce programs similar to the Healthy Homes Program to reduce the

climate-related health risks faced by low-income individuals with complex healthcare needs.

1.72 Labor Senators recognise there are measures that readily can be taken to improve the climate resilience of recreation areas, such as the increased use of alternative water sources to maintain parks and sporting fields.

Recommendation 26

1.73 Labor Senators recommend that state and territory governments work with local governments and water authorities to increase the use of rainwater, stormwater, recycled water and other water sources to maintain the green infrastructure used for public recreation.

Commonwealth, state and territory climate change policies

1.74 Labor Senators commend the state and territory governments that have developed comprehensive responses to climate change through legislation, strategies, planning policies and grants programs however there is more work to be done.

1.75 The approach taken at the Commonwealth level has clearly been inadequate for meeting the challenge that climate change presents. The repeal of the price on carbon pollution and the abolition of the independent Climate Commission by the Abbott Government are standout examples of the Australian Government failing to secure a safe, clean future for future generations.

1.76 There is an urgent need for the Australian Government to provide strong, consistent leadership on climate change mitigation and adaptation. Actions by state and local governments, business and communities are impeded by the lack of a comprehensive national response.

1.77 In particular, the Australian Government can provide much-needed leadership by replacing the ineffective National Climate Resilience and Adaptation Strategy with a comprehensive and ambitious national strategy.

1.78 Labor Senators support the notion that national leadership and coordinated action on climate change across all areas of government policy and the economy can be facilitated by establishing a COAG Council on climate change. A permanent multijurisdictional body is needed to coordinate action by all Australian governments. As climate change is an issue of critical national importance, it is appropriate for this body to be part of the COAG framework.

Recommendation 27

1.79 Labor Senators recommend that the Australian Government replace the National Climate Resilience and Adaptation Strategy with a comprehensive national climate change mitigation and adaptation strategy.

1.80 This whole-of-government strategy should contain sector-based national targets and timeframes for emissions reductions against which performance can be measured.

Recommendation 28

1.81 Labor Senators recommend that the Australian, state and territory governments review all environmental legislation to ensure that adequate consideration of the effects of climate change is expressly required as part of future assessment and decision-making processes.

Recommendation 29

1.82 Labor Senators recommend that the Australian Government investigate the creation of a COAG Climate Change Council.

Recommendation 30

1.83 Labor Senators recommend that the Australian Government's National Resilience Taskforce develop recommendations for the Government to consider that would facilitate more frequent betterment of assets that need to be reconstructed or repaired following natural hazards.

Local government

1.84 Labor Senators are grateful to the local governments that participated in this inquiry for the valuable evidence they provided. This evidence has greatly informed Labor Senator's recommendations and emphasises the need for all governments to ensure climate risks to buildings and infrastructure are managed appropriately.

1.85 As local governments are at the frontline of responding to climate change, it is essential that they have the resources and knowledge necessary to carry out effective planning and adaptation activities. Labor Senators note that generally local governments do not have the financial resources and ready access to expert evidence needed to address climate risks. They can also face realistic threats of legal action by those dissatisfied with their decisions regarding climate risks. Furthermore, local governments are in the unenviable position of needing to consider the short-term and long-term interests of their current constituents and future residents.

1.86 Many of the recommendations in this report are intended to assist local governments to develop successful climate change adaptation measures. However, questions regarding funding and liability are primarily matters for state governments to address. Labor Senators note that under New South Wales legislation, exemptions for liability exist regarding decisions made by councils in good faith regarding flood liable land, land that might be affected by a coastline hazard and land that is subject to the risk of bushfire. Labor Senators encourage other state governments to consider introducing similar exemptions for their local governments.

1.87 Finally, the provision of sufficient financial resources for local governments to act on climate risks is of vital importance for enabling timely and least-cost adaptation. Local governments face practical and statutory restrictions on the revenue they can raise to pay for their activities. Labor Senators urge state governments to ensure local governments have adequate financial resources to address the threat of climate change.

Recommendation 31

1.88 Labor Senators recommend state governments consider providing local governments with exemption from liability for decisions made in good faith relating to the use of land that is subject to climate change risks, such as flooding, coastal hazards and bushfires.

Recommendation 32

1.89 Labor Senators recommend that the Australian Government consider providing specific purpose payments to the states to assist local governments to improve the resilience of infrastructure assets most at risk to climate change.

Conclusion

1.90 Labor Senators reiterate the acceptance of the science that human activity has increased average global temperatures, leading to climate change and endorses the commitment by the world's nations in Paris in 2015 to keep global warming well below two degrees Celsius as well as a more qualified commitment in the agreement around a 1.5 degree threshold.

1.91 Labor Senators acknowledge the overwhelming advice from scientists that global warming beyond two degrees Celsius will be particularly damaging to economies and ecosystems, and impose a huge burden on future generations.

1.92 Labor Senators emphasize the consequences of refusing to take real action on climate change will be devastating for Australia and our economy as a result of more extreme weather events.

1.93 While it is clear climate change will have increasingly severe consequences in the coming years and decades there are clear examples of increasingly frequent and severe weather events already occurring as a result of climate change.

1.94 Labor Senators acknowledge the inquiry's findings that that climate change is putting substantial numbers of Australia's buildings and infrastructure assets at risk and that damage and/or disruption to these assets will have significant implications for the liveability of our communities and cities, and for our economy.

1.95 Labor Senators acknowledge that many individuals, groups and organisations in the built environment sector, local governments, state and territory governments and civil society have already taken action in response to climate risks however there

is a clear need for the Australian Government to assist these efforts by providing greater leadership on how to adapt to climate change.

1.96 Accordingly, Labor Senators have outlined a range of recommendations focused on how the Australian Government can guide the built environment sector and infrastructure owners to become more climate-resilient, taking into account the various interdependencies that are key features of critical infrastructure systems.

1.97 It is also essential that the Australian Government commit to the Paris Agreement. While mitigation is essential, there are limits to the extent of climate change to which we can adapt, and many natural systems will not be able to evolve or adapt at the rate that would be required.

1.98 Unmitigated climate change will radically alter life in Australia, so it is vital that we prepare effectively and avoid a too-little-too-late response. We must be ambitious in reducing emissions and ensure that our houses, communities, cities and infrastructure are more resilient to climate risks.

1.99 Without strong global action being taken urgently to reduce greenhouse gas emissions, there is an appreciable risk of catastrophic consequences to which we will be unable to adapt.

1.100 Labor Senators support the need for urgent action to tackle the climate change and the need for the Australian government to lead mitigation and adaptation policy.

Senator Anthony Chisholm
Senator for Queensland

Senator the Hon Kristina Keneally
Senator for New South Wales

Senator Anne Urquhart
Senator for Tasmania