



EASTERN ALLIANCE FOR
GREENHOUSE ACTION

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Committee Secretary
Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
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15 August 2017

Dear Sir/Madam,

Re: Current and future impacts of climate change on housing, buildings and infrastructure

The Eastern Alliance for Greenhouse Action (EAGA) is pleased to take this opportunity to submit a response to the Federal Inquiry into the current and future impacts of climate change on housing, buildings and infrastructure.

EAGA is a formal Alliance of eight councils in Melbourne's East, including:

- City of Boroondara
- Glen Eira Council
- Knox City Council
- Maroondah City Council
- City of Monash
- City of Stonnington
- City of Whitehorse
- Yarra Ranges Council

EAGA is committed to delivering mitigation and adaptation projects and advocating for initiatives that support sustainable, low carbon communities. This submission focuses on a number of areas where council are experiencing the impacts of climate change as well as opportunities for adaptation.

Impacts of climate change on local government operations and service delivery

Local governments are on the frontline when dealing with the risks and impacts of climate change. The impacts of climate change are already taking their toll on local governments ability to deliver critical services to their community. Climate change acts as a risk multiplier, where existing risks are exacerbated by more frequent and extreme weather events, and hotter and drier conditions. An example of the cumulative impacts of climate change on council operations and services is detailed [here](#).

Across the EAGA region, councils are already undertaking a range of actions to address projected climate change impacts and risks, either through defined climate change adaptation strategies, complementary issue-specific strategies (e.g. health and wellbeing or integrated water management) or via projects jointly delivered with Victorian Government funding.

EAGA has recently completed a substantial regional climate change risk assessment and action plan called *A Climate Change Adaptation Roadmap*.¹ The roadmap identifies key risks across the region and priority actions over the next five to ten years.

There are many important reasons why adaptation is a key consideration in the decision making of our council members today:

- Rising insurance premiums and liability issues for local government
- Financial sustainability; small investments today will avoid larger costs in the future
- Duty of care
- Strong community expectation that local governments are preparing for climate change
- The multiple benefits of adaptation responses such as improved health and wellbeing, lower energy bills, lower maintenance costs.
- Existing climate impacts are already more frequent and more intense than previous decades

Infrastructure and climate change

EAGA strongly supports an infrastructure resilience assessment test for new major capital works at the federal level, but emphasise that this test should be as comprehensive as possible. This could be achieved by adopting the Australian Standard "*Climate change adaptation for settlements and infrastructure*" as part of the approval process. This could be a standalone requirement or incorporated into environmental impact assessments. This would allow for major projects to be independently assessed for consideration of climate change impacts and transparent and open to public scrutiny.

In addition, EAGA also recommends that resilience assessments be undertaken for non-major capital works and existing infrastructure. EAGA and the Northern Alliance for Greenhouse Action (NAGA) have been developing and trialling a regional building vulnerability assessment tool that could be supported and extended to non-council buildings. Local governments have also identified a priority need to incorporate climate change risks into asset management planning more broadly to include roads, street trees, footpaths, drains etc.

Diversifying and decentralising water supply

Many of the risks and vulnerabilities identified in EAGA's *Climate Change Adaptation Roadmap* relate to projections of reduced water availability for the region as well as an increased intensity of rainfall events. It is important that the region can maximise opportunities for alternative water sourcing and plan for flexibility as rainfall patterns change by diversifying our water supply, improving water use efficiency and redirecting storm water overflow. This will be increasingly important as the population in the region is expected to increase in the coming decades.

In the EAGA region, the majority of bulk water is provided through the Yarra Valley Catchment which in turn supplies a number of suburban service reservoirs, many of which are within Bushfire Prone Areas. As climate change increases bushfire activity, this water infrastructure faces increased risks. Runoff following a bushfire

¹ eaga.com.au/projects/climate-change-adaptation-roadmap/

can wash ash and sediment into reservoirs, impacting the ability to provide suitable drinking water for up to several months until water quality improves.

EAGA therefore considers diversifying and decentralising water supply to be an important strategy for building climate change resilience in the region. We see government efforts should seek to address water waste on a system level, which will require working across multiple policy areas of federal, state and local government.

Food security

Climate change will affect regional food security through prolonged droughts and sudden extreme events including bushfires, on top of existing pressures of urban growth and population pressures and rising energy costs. An analysis of Victoria's food supply chain found that there are significant food security risks in the region for the future, in particular to the provision of critical and non-exchangeable foods such as fruit and vegetables. A key part of building resilience to these future food security risks is to strengthen and diversify the regional food economy - food that is grown and processed locally and sold primarily for local or regional markets. Urban and peri-urban food production facilitates opportunities for local management of harvested rainwater, waste water and nutrient waste. Also, promoting local food reduces energy and transport demand, builds community and social cohesion, creates local employment and can also help to reduce other climate change risks such as heatwaves and flooding.

EAGA's Climate Change Adaptation Roadmap commits our councils to engaging with the community, food producers and food businesses to understand the issues and key barriers to building a stronger local food economy in the East. EAGA advocates for better recognition and support of urban food production at the state and federal level.

Climate impacts on electricity infrastructure

Many of the risks from heatwaves, bushfires and storm events are exacerbated by power failures. These risks have been realised in recent extreme weather events and act to further threaten vulnerable members of the community and disrupt council business continuity.

The Energy Networks Association have estimated that the cost to energy networks from climate change to be \$2.5bn over the next 5 years. They estimated that the largest proportion of this cost arises from the requirement to augment networks to accommodate the increase in peak demand largely associated with air-conditioning use. This is likely to be a conservative estimate as the past few years has seen increased bushfire activity, increased intensity of storm events, and hotter and drier conditions.

As much of Victoria's electricity infrastructure is approaching the end of its lifecycle in the next 10 years, now is an important time for the policy settings to help drive this transition in a least cost, equitable way. EAGA considers that Victoria has an enormous opportunity to strategically upgrade its grids to ensure a decentralised and decarbonised energy system going forward, and one that is resilient to the impacts of climate change.

Furthermore, low income households are particularly vulnerable to climate change, with high power prices and outages during heatwave events and other extreme events leading to higher morbidity and mortality risks, particularly for the aged. There is mounting evidence to demonstrate that the installation of solar PV supports greater capacity for cooling in households where energy costs represent a large proportion of ongoing living costs. The ability of the technology to provide low cost energy throughout the day means these householders can cool their homes without fear of 'price shock'. EAGA is currently leading a program across 21 councils and four Victorian Greenhouse Alliances to deliver solar PV for low income households. The landmark initiative will assist vulnerable households to reduce dependency on centralised electricity.

We understand that the Energy Networks Association has developed an industry methodology and tools to support members in managing climate risk and resilience across core network business activities and to ensure consistency in factoring climate change risk in future network investment decisions. It is not clear to us if any of the networks have used the manual to develop their own climate change risk assessments, and also how this will orientate their business decisions towards distributed generation.

We recommend the COAG Energy Council request that climate change risk assessments and adaptation plans be undertaken by every electricity network in Australia. This could be an annually updated process that is transparent and published as an appendix to the Annual Network Planning reports. It should also seek to identify actions that can be undertaken in partnership with other stakeholders not just rely on traditional network solutions of infrastructure upgrades.

Please contact Scott McKenry (phone: 03 9298 4250 or email scott.mckenry@maroondah.vic.gov.au) if you would like further information or any clarification regarding the issues raised in this letter.

Yours sincerely,



Cr John Mortimore
Executive Committee Chair
Eastern Alliance for Greenhouse Action
Councillor, Knox City Council



This submission has been approved through EAGA's formal governance structure as described in the EAGA Memorandum of Understanding 2017-21. The submission may not have been formally considered by individual member councils.