



**Australian[®]
Nursing &
Midwifery
Federation**
VICTORIAN BRANCH

ANMF (Vic Branch)
535 Elizabeth Street
Melbourne Victoria 3000

Box 12600
A'Beckett Street PO
Melbourne Victoria 8006

anmfvic.asn.au
t 03 9275 9333
f 03 9275 9344
e records@anmfvic.asn.au

ABN 80 571 091 192
RTOID: 22609

Enquiries directed to:
Roslyn Morgan
Environmental Health Officer
rmorgan@anmfvic.asn.au

ANMF (Vic Branch) Submission to the Legislative Council Environment and Planning Committee

Inquiry into Climate Resilience

Samantha Casey
Acting Assistant Secretary
Australia Nursing and
Midwifery Federation
(Victorian Branch)

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About ANMF (Vic Branch)

The ANMF (Victorian Branch) (ANMF) represents more than 100,000 nurses, midwives, and personal care workers. Our members are employed in a wide range of enterprises in metropolitan, regional, rural and community care locations, within the public and private health and aged care sectors.

Our core business is the representation of the industrial, professional, and occupational health and safety interests of our members, and to advocate for and empower our members to maximise their influence – to benefit their professions and the broader community. We participate in the development of policy relating to nursing and midwifery practice, professionalism, regulation, education, training, workforce, and socio-economic welfare, health and aged care, community services, occupational health and safety, industrial relations, social justice, human rights, immigration, foreign affairs, and law reform.

Inquiry Perspective

ANMF (Vic Branch) welcomes the opportunity to contribute to the Legislative Council Environment and Planning Committee *Inquiry into Climate Resilience*.

Our members have expressed deep concern about the impacts of climate change on Victorians, and their determination that the health sector engage in issues of environmental sustainability. Nurses, midwives, and personal care workers are at the forefront of providing care to affected individuals and communities, while often affected themselves. The negative health impacts of climate change and environmental degradation affect the key social determinants of health, and damage social and community structures. These negative health impacts in turn increase pressure on already overburdened health services.

In responding to this inquiry, ANMF (Vic Branch) has incorporated the lived experience of members who are impacted by climate change, both personally and professionally. Responses to the Consultation questions are primarily through a health and healthcare lens, additionally to matters of relevance to unions and advocacy for workers. When discussing infrastructure, we recognise both hard and soft infrastructure - the physical assembly of building, and the critical human capital that maintains economy and delivers and shapes service.

Topic 1: What are the main risks facing Victoria's built environment and infrastructure from climate change and the impact these will have on the people of Victoria.

The Victorian government previously identified six areas of climate impact concern on the health and social services sector. These are contained in the *Health and Human Services Climate Change Adaptation Action Plan 2022-26*, and include:

1. Direct impacts to health and wellbeing from extreme weather events eg: bushfire, flood
2. Indirect impacts to health and wellbeing eg: vector/water/food borne disease
3. Impact on determinants of health and wellbeing such as employment, income, access
4. Disproportionate impacts on different communities
5. Disruption to service delivery
6. Damage to infrastructure eg: hospitals, housing

ANMF (Vic Branch) has conducted member surveys to identify areas of concern. All the above listed areas were identified as being of significant concern, requiring address.

We further identify and discuss the following climate change impact and risk to hospitals and health services. These are:

1. Climate impacts will contribute to surge demands for care at the same time we are shifting to decentralised models of care.

We will need infrastructure flexibility to facilitate variable demands. Adaptable modular capacity can form part of the infrastructure response. At other times, there will be reduced onsite demand, complimented by decentralised services through virtual emergency departments and telehealth service.

Nurses and midwives will increasingly work in community and public health settings. Those already in this speciality of nursing report there is need for more investment in home assessment accompanied by streamlined referrals and responsive strategy.

2. Services diverted to emergency service, such as seen in covid or other impacts, can result in extended waiting lists and exacerbation of disease states. Delayed treatments will require more intensive response which comes with a higher carbon footprint and increased trauma for patients and families.
3. Difficulty accessing care either due to direct impact on the service, or damage to surrounding infrastructure such as road, transport, emergency vehicle availability. This can be through heatwaves (example. power outages, public transport outages, etc), or storm (example. damage to buildings and power lines, flash flooding, falling trees, etc).

For example, Texas Medical Centre was hailed as a feat of engineering due to successful storm proofing, but during Hurricane Harvey, most patients and emergency vehicles were unable to reach the complex due to surrounding flooding.¹ Risk mitigation is compromised if resilience beyond the facility walls is not addressed.

4. Equipment failure and loss of stock, pathology, inventory, and records. For example:

In the South Australia 2016 storms, a cluster of tornadoes took out the state's mid-north transmission towers, meaning hospitals were suddenly dependent on their generators. Back-up generators failed at Flinders Medical Centre and Port Augusta hospital.² Embryos belonging to 12 families were lost as incubators were compromised.³

In the 2019-20 bushfires, Canberra hospitals were significantly impacted as machinery failed and sterilised equipment was contaminated. Staff reported difficulty breathing and dizziness, and the "virtual unbreathability" of the air in some indoor areas.

5. Forced evacuation comes with inherent risk to patients as well as urgent and timely demand for service redistribution and staff capacity.

¹ Health Care Without Harm, Safe Haven in the Storm: Protecting lives and margins with climate smart healthcare, p. 14

² <https://www.indaily.com.au/news/local/2016/10/11/review-for-sa-hospital-power-back-ups>

³ <https://www.indaily.com.au/news/local/2016/10/11/review-for-sa-hospital-power-back-ups>

In the above example from the 2016 storms in South Australia, seventeen patients from the Flinders Medical Centre had to be transferred, some needing help with manual ventilators/life-support. In the fires of January 2020, ANMF member Sam was involved in evacuating patients and nursing home residents from Orbost Regional Health to Moe and Sale. Sam shared her story in the ANMF publication “On the Record,” where she describes coordinating staff and patients while “surrounded by fire,” and receiving messages about a fireball approaching her own home and family.⁴

6. Increased cost of service delivery and insurance.

Research conducted at the University of Tasmania has conservatively estimated the smoke related health costs of the 2019-20 bushfire season to be \$1.95 billion – a figure nine times higher than the median of the previous 19 bushfire seasons.⁵

A 2023 XDI (eXtensible Data Interchange) Global Hospital Infrastructure Physical Climate Risk Report states that since 1990, global warming has already resulted in a 27% increase in risk of damage to hospital infrastructure,” and “Without a rapid phase out of fossil fuels, up to 1 in 12 hospitals worldwide will be at high risk of total or partial shutdown from extreme weather events by the end of the century.”⁶

Failure to invest in mitigation expenditure now, will come at increased cost later – in lives and money. The Royal Australasian College of Physicians (RACP) released economic analysis calculating the losses associated with bushfires between 2021 and 2030 inclusive. The modelled analysis predicted the loss of 1480 lives, healthcare costs of \$69 million, and a \$10 billion reduction in gross domestic product. This modelling shows that \$1 billion invested to reduce the impact of bushfires on health by 10% would be recouped in a decade.⁷

There is also the risk of wasted capital expenditure by not building future fit hospitals under changing climate scenario. This includes building hospitals today with fossil fuel dependency.

7. Increased vulnerability to climate change related litigation. The Victorian *Directors’ duties with respect to climate risk* specifies that in discharging the duty of care, diligence, and skill, consideration of risk of harm is required to be extended to consideration of climate change related risks.⁸

8. Supply chain disruption.

Climate change not only impacts directly on healthcare infrastructure, but also on underpinning industries. Disruption brings additional challenge to secure supply. Changed materials, pharmaceuticals or equipment requires staff education so they understand the replacement stock and observe changed formula or usage requirements.

⁴ <https://stories.anmfvic.asn.au/nursing-at-the-firefront/index.html>

⁵ [https://www.menzies.utas.edu.au/news-and-events/media-releases/2020/smoke-related-health-costs-of-2019-20-bushfires-estimated-at-\\$1.95-billion](https://www.menzies.utas.edu.au/news-and-events/media-releases/2020/smoke-related-health-costs-of-2019-20-bushfires-estimated-at-$1.95-billion)

⁶ <https://xdi.systems/news/2023-xdi-global-hospital-infrastructure-physical-climate-risk-report>

⁷ [RACP Climate change and Australia’s Healthcare Systems; A review of Literature, Policy and Practice.](#)

⁸ <https://www.boards.vic.gov.au/directors-duties-respect-climate-risk#how-your-duty-of-care-diligence-and-skill-extends-to-considering-climate-related-risks>

Risks for Staff

1. Inadequate thermal insulation in homes when staff conduct domiciliary health care such as Hospital in the Home, home birthing, district nursing, etc.
2. OHS implications.

The [Climate Impacts at Work](#) project noted OHS risks to workers. The following were reported by those surveyed: access to PPE in times of increased demand by multiple services, the wearing of full PPE for prolonged periods in heat, travelling in high risk settings during heat/bushfire risk, increased exposure to patients and family in states of agitation or psychological distress.

Other OHS risks derive from fatigue, strain, and stress. Healthcare staff not only respond to the impacts of climate change, but they are vulnerable themselves.

Personal accounts from our members include:

Nurse Sandi, in the 2019-20 fires, was attending to fire fighters with burns while her husband was sending texts showing the fire impacting on her own property. It took three days before Sandi knew whether her husband was alive or home still standing⁹.

In the same fires, ANMF (Vic Branch) sent a relief team to Corryong, as hospital staff had been at the hospital for five days since bushfire closed in on the town on New Years Eve. Some had lost properties and had partners fighting fires. They needed to get home to check in with their families and friends and to get some rest.¹⁰

Sam, nursing in East Gippsland received garbled text messages, telling her that her elderly parents had been evacuated. She recounts: "it still brings tears to my eyes. I thought oh gosh, this is really bad, but I couldn't do anything about home. I was probably better off at work doing what I do best." Sam's parents lost 400 acres of farmland and two hospital staff members lost their home that night.¹¹

Nurse/Midwife Anne lost her home to the bushfire on the night of 30 December (2019). Anne spoke of seeing her clients that were evacuated, and trying to contact those on the vulnerable persons list as best she could.¹²

Risks in energy transition

1. Jobs and skills.

If Australia does not act with urgency, other countries will position themselves in renewable energy markets and we will lose State, Territory, and national opportunities for jobs in emergent industry. [The Sunshot Report](#)¹³ found that 400,000 new jobs could be created by 2040 in clean exports alone. We need workforce planning. Jobs and Skills

⁹ <https://otr.anmfvic.asn.au/articles/meet-sandi-grieve-ceo-nurse-practitioner-and-lately-short-order-cook/>

¹⁰ <https://otr.anmfvic.asn.au/articles/hundreds-of-anmf-members-volunteer-for-bushfire-relief>

¹¹ <https://stories.anmfvic.asn.au/nursing-at-the-firefront/index.html>

¹² <https://otr.anmfvic.asn.au/articles/meet-bush-nurse-anne-brewer>

¹³ https://www.acf.org.au/factsheet_sunshot_report

Australia identifies 38 critical occupations, finding that demand for essential clean energy occupations will grow by the hundreds of thousands in the coming decade.¹⁴

2. A transition that is not just.

a. Worker Justice. We cannot assume transition will be just. It requires planning, intention, consultation, and strategy. This is one of the reasons ANMF (Vic Branch) advocated in support of the Net Zero Economy Authority.

A related issue of concern is abuse within the international solar supply chain and the need to develop solar panel supply chains free of forced labour. One solution is to pursue the development of solar panel manufacturing in Australia such as the recently announced Albanese investment in the *Solar SunShot* program¹⁵. This must also be accompanied by strengthened product stewardship and ensuring resources remain circular, particularly given the massive forecasts for growth in the solar panel waste stream.¹⁶

b. Ecological justice. The development of new technologies and renewable energy can impact ecological corridors and biodiversity habitat. It can contribute to pollution from noise, waste and chemicals. There is need to identify areas requiring statutory protection as a conservation tool, both to mitigate climate change, and to halt the loss of biodiversity. Where a trade-off cannot be avoided, the choice must be for the least possible impact.

c. First Nations justice. Aboriginal & Torres Strait Islander communities, along with Indigenous communities globally, are severely impacted communities when it comes to climate change. The views of relevant Traditional Owners needs to be fully considered with respect to new energy projects and consideration given as to how there will be participation in consultation, consent, and shared benefit.

Topic 2: How the Victorian Government is preparing for and mitigating the impacts of climate change on our built environment and infrastructure.

The Victorian government has led the way in Australia, by setting ambitious emission reduction and renewable energy targets. They are restoring government owned renewable energy through restoration of the State Electricity Commission and driving new clean manufacturing and production facilities. The energy needs of public hospitals will be met from renewable sources, and new hospital builds in Victoria will be gas free. The Victorian Energy Upgrades program has enabled households and businesses to cut their power bills, rebates have financed the installation of solar panels to households, and stronger energy efficiency standards means all new homes will meet a minimum 7-star rating. ANMF (Vic Branch) also welcome the improved minimum standards for rental and rooming houses.

ANMF (Vic Branch) recognise initiatives of the Victorian government, while including further recommendations.

Our recommendations encompass two parts -

¹⁴ <https://www.jobsandskills.gov.au/studies/clean-energy-capacity-study>

¹⁵ <https://www.pm.gov.au/media/solar-sunshot-our-regions>

¹⁶ <https://www.pv-magazine.com/2024/03/29/solar-waste-in-australia-may-reach-1-2-gw-annually/>

Topic 2, Part 1: Health Services

a. Mandatory reporting

Victoria has taken a leadership position by mandating public health services report their energy, water, waste and emissions into the Environmental Data Management System (EDMS), develop Environmental Management Plans, and report into the [Financial Reporting Direction](#) (FRD) 24.

The National Health and Climate Strategy indicates that all State and Territory Ministers have agreed to data collection. This commitment is welcome as it will assist Australia in baseline carbon inventory. However, data collection is not enough.

Further recommendation: Integration of data into improvement pathways and response strategies.

While FRD24 reporting includes trends and action, there needs to be greater accountability for KPIs and outputs. Environmental Management Plans must continue to be implemented with annual and public reporting. Outcomes must be demonstrable - qualitatively and quantitatively. Increased employment of dedicated Sustainability Officers who report directly to Executive, would assist with the identification of local opportunity for mitigation, adaptation, and resilience building. Our members must be rostered with protected time for environment portfolio work.

b. National Standards

The Australian Commission of Safety and Quality in Healthcare (ACSQHC) has released a new [Draft Environmental Sustainability and Climate Resilience Healthcare Module \(ESCRHM\)](#). This framework treats healthcare emission reduction and environmentally protective action and models, as part of a safety and quality metric.

Recommendation: ANMF (Vic Branch) urges the Victorian government to take an active role in participating and promoting the ACSQHC Module with a view to it becoming a mandatory Standard. Climate Health Victoria should engage with those health services that are participating in ESCRHM, with specific focus to identify barriers and opportunities to comprehensive and inclusive implementation of the model as part of accreditation.

c. The establishment of Climate Health Victoria (CHV) is welcomed by ANMF (Vic Branch). We have joined with Doctors for the Environment Australia (DEA), Australian Medical Association Victoria (AMAV) and the Committee of Chairs of the Victorian public hospital Senior Medical Staff Associations in cosigned request and recommendation for CHV outputs of:

1. Conduct baseline carbon foot printing (scope 1-3 emissions).
2. Develop a roadmap for healthcare to reach Victorian Government net zero emissions targets (across scopes 1-3 emissions).
3. Develop accountability mechanisms, including sustainability Key Performance Indicators across the Victorian Health Service and departmental agencies, Safer Care Victoria and Health Share Victoria.
4. Work with Health Share Victoria to further embed environmental sustainability metrics into all procurement contracts.
5. Resource Clinical Leaders within senior leadership of Climate Health Victoria to support and enhance clinician engagement.
6. Resource a Clinical Fellowship program to drive engagement and changemaking across the Victorian health sector.
7. Develop sustainable healthcare and climate change adaptation education as part of staff onboarding in all Victorian public hospitals.

8. Collaborate with the Environmental Protection Agency to ensure pharmaceutical waste bins are provided in all areas generating pharmaceutical waste by the end of 2024. Include onsite inspection as part of safety, quality, and verification.
9. Ensure health sector sustainability targets are evidence-informed with health workers and experts from a broad selection of organisations co-developing implementation pathways.
10. Establish an external advisory committee with clinician and consumer members to support Climate Health Victoria.

d. Renewable energy for hospitals

The shift to 100% renewable energy for Victorian hospitals, creates the opportunity to reprocess and reuse items, without the carbon footprint of coal. This can contribute to reduced emissions and resource preservation. Life Cycle Assessment has shown substantial reduction in the carbon footprint of various reusable items such as anaesthetic equipment¹⁷, CVC trays¹⁸, and metal instruments¹⁹ when sterilised with renewable energy rather than brown coal energy. This cannot be implemented however, if there is not adequate space for both sterilisers and staff.

Recommendation: Capital works should accommodate the footprint for sterilisers and staff required for tracking and storage. HealthShare Victoria should show preference for safely reusable items when establishing tender and contract.

e. Other Capital works considerations:

In Victoria, we have embarked on the biggest hospital project in Australia's history.²⁰ Hospitals and healthcare services represent both a large capital investment and infrastructure that we will probably still be using in 2050. They must be future-fit and not rely on technology and function that is rapidly becoming obsolete.

Recommendations:

1. No schools or hospitals should be built dependent on gas. The transitional arrangements should include all public buildings that are already in tender phase.
2. Develop a pilot project on an existing health facility with gas energy, to identify learnings that can be upscaled for other facilities to transition off gas. Ensure regular review so that technology advancements can be implemented to retrofit existing hospitals so they can transition off gas as soon as practicable.
3. New hospitals should not include piped nitrous oxide.
Recently, hospitals on three separate continents independently discovered that most of their nitrous oxide (between 75% and 95%) leaks out through central piping manifolds *prior to use*, wasting money and polluting the atmosphere.²¹ The Prince Charles Hospital (TPCH) is Queensland's first hospital, and the first large tertiary hospital in Australia, to decommission its use of reticulated nitrous oxide anaesthetic gas to reduce potent greenhouse gas emissions that leak from piped infrastructure. Where it is needed for specialty such as paediatrics and maternity, it can be provided in cannister. The addition of scavenging systems will further reduce nitrous leakage to the environment.

¹⁷ <https://academic.oup.com/bja/article/118/6/862/3828038>

¹⁸ https://www.researchgate.net/publication/223973614_A_Life_Cycle_Assessment_of_Reusable_and_Single-Use_Central_Venous_Catheter_Insertion_Kits

¹⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9085686/>

²⁰ <https://www.premier.vic.gov.au/building-world-class-hospitals-victorians-can-rely>

²¹ <https://pubs.asahq.org/monitor/article/88/2/33/139724/It-s-Time-Hospitals-Abandon-Nitrous-Oxide-Pipes>

4. Healthcare services, should be integrated into the broader community, wherever safe and possible, as part of promoting accessibility and reducing transport emissions.
5. Include adequate facility for resource segregation and recycling in utility rooms and docks.
6. Include adequate facility for sterilisers taking advantage of renewable energy so items can be appropriately processed for safe reuse.
7. Include on site laundry capacity to reduce dependency on single use linen and gowns, without the transport footprint.
8. Provide after trip facilities to support less car dependency.
9. Incorporate biophilic design with green spaces for horticultural therapy, staff rejuvenation, and countering the heat island effect. These should be watered by grey water sourced from dialysis and rooftops. No new build should have dialysis water going down the drain. Composting facilities should be utilised in these spaces where appropriate, to divert unsalvageable food waste from landfill.
10. Consult with those who will use the space when designing, especially nurses and midwives.
11. Optimise telemedicine. This can reduce demand in outpatient areas, reduce travel emissions and reduce resource consumption and chemical cleaning between patients.
12. Install behind the meter renewable energy sources, such as solar.
13. Take advantage of microgrid models to protect critical infrastructure such as hospitals.
14. Building materials should be low emissions wherever possible with preference for local procurement and include minimum percentages of recycled content.
15. Foster a high-quality internal environment through access to nature and natural lighting.

Topic 2, Part 2: Victoria's community and housing stock.

Heatwaves and hot weather cause more deaths in Australia than any other natural hazard, and they have increased in frequency and intensity in recent decades.²² This reflects in hospital presentation, adding to workload and resource intensity.

Our members also provide service in client and patient homes. ANMF (Vic Branch) has been specifically approached by members delivering care in community settings, who express concern that people are falling through the gap of existing services and government actions to date. They tell harrowing stories of people they meet in the course of their work with no heating or cooling, and mould throughout the house. We are told of clients who spend cold days sitting in front of their open oven, trying to get warm. We are told of a patient who wanted to return home for end of life, but there was a heat wave and no cooling in the house. Some of these clients are pensioners trying to stay in their own home, others are in public housing. Aged, indigenous and those with mental health challenges are particularly identified as at risk.

Contributing factors include inability to navigate a complex system to access assistance, or inability to afford even subsidised appliances for heating or cooling. Nurses report delivering service over and above their role as they attempt to navigate the system for their patients or contact charities to try and obtain some kind of heating or cooling.

²² <https://www.nma.gov.au/defining-moments/resources/heatwaves>; <https://riskfrontiers.com/insights/heatwave-fatalities-in-australia-a-new-analysis/>

Recommendations:

1. Improve the thermal capacity of homes.

Lack of awareness in healthy indoor temperatures, or the inability to access appliances, contributes to risk. The thermal capability of housing will become more important as extreme temperatures increase. Sustainability Victoria report that already, over half of all Victorians in public housing were too hot last summer or too cold last winter, with the result that 45% had to leave their home.²³

The Victorian government has taken a proactive stance. From 1 May 2024, new homes will be required to achieve 7-stars and a whole-of-home rating not less than 60 under the NatHERS option²⁴. Over 2 million Australians have already accessed the Victorian Energy Upgrades Program which includes heating, cooling, and various appliances. Rental standards have been revised and upgraded. However, there remain many existing homes that require retrospective thermal adaptation due to inefficiencies. A report by the ClimateWorks Centre shows most Australians could save thousands each year by upgrading the thermal efficiency of their homes.²⁵

Members who have approached ANMF (Vic Branch) have made the following suggestions.

a. There needs to be facility in Home Care Packages and NDIS packages for home assessment and upgrade.

b. Public and social housing should be subject to the minimum standards being implemented in rental properties. Government should conduct a comprehensive review of these homes, including assessment, recommendation, and improvement of identified deficiencies.

c. Nurses and midwives require a clear referral pathway to ensure needs they identify can be addressed. Working in patient homes, they see gaps that others may miss. Facilitators or “care navigators” should be available to assist with administrative process – computer access, form completion, identification uploads. The administrative process itself should be simplified. Nurses have told us that there is a process for patients in public housing to apply for heating and cooling but it is complex, with difficult to meet criterion. For example, if you have multiple sclerosis, you may be eligible, but heat stress or cold due to absence of a heater or cooler, is insufficient.

2. Update flood maps and geographical forecasting.

The Central Victorian Greenhouse Alliance, Retrofitting for Resilience, points out that new development still occurs in high risk areas, such as flood zones, due to the use of out-of-date flood maps that largely reflect historical data rather than future climate projections.

3. Provide cool refuge: While we work on improving the thermal insulation of our homes, we also recognise there are many who are experiencing homelessness. This means there will need to be places of community refuge. Guidelines around how these will operate need to be developed. It doesn't necessarily mean expensive new facilities. Councils can identify suitable venues that could potentially be enlisted with consideration for subsidies and grants. Such a scheme is being explored in Blacktown City Council with the example of an

²³ [Health impacts of climate change | Sustainability Victoria](#)

²⁴ [Energy efficiency requirements | Victorian Building Authority \(vba.vic.gov.au\)](#)

²⁵ <https://www.climateworkscentre.org/news/renovating-australian-home-can-reduce-emissions-and-energy-costs-savings-in-your-state-or-territory/>

air-conditioned church and hall being offered as a venue that would become go-to places on high heat days for the local community to gather at — with toilets, comfortable seating, and cold water close by.²⁶ The “Winter Night Shelter Initiative” in Shepparton provides shelter and overnight sleeping accommodation for the those experiencing homelessness.²⁷

4. Cultivate and plan for urban greening to reduce heat island effects. This includes developing urban green cover goals, public parks, city and rooftop gardens, urban food gardens, and reducing dependency on cars. When people do need to travel, bus, tram and train stops should be covered.

Topic 3: Barriers facing Victoria in upgrading infrastructure to become more resilient to the impacts of climate change, including barriers in rebuilding or retrofitting infrastructure.

1. Hospital gas retrofits

Argument is made that retrofitting hospitals away from gas is too expensive. To tackle the very real engineering challenges, expert technical advice will be required. Recognised issues include space constrained basements and getting electrical supply to main switchboards. Equipment upgrades may incur significant conversion cost. However, it was not long ago we were also told that building all electric hospitals was unachievable due to expense and technology availability. We now see that all electric hospitals will be stock standard.

Recommendation: Identify a hospital with old infrastructure that could be electrified, as a pilot case. Learnings from this pilot will inform other projects. Available technology should be constantly reviewed to see if this can be adapted to convert existing hospitals from gas to renewable.

2. Short term budgeting

Modelling published in *The Lancet Planetary Health* (2018), found that savings from health benefits alone would compensate for the costs of mitigating the effects of climate change in line with the Paris Agreement.²⁸ When announcing the allocation of one billion dollars for the Disaster Ready Fund, The National Emergency Management Agency said that, “For every dollar spent on disaster risk reduction, there is an estimated \$9.60 return on investment.”²⁹

The World Health Organization estimates that the price for retrofitting non-structural items can cost as little as 1% of the value of a hospital, while possibly protecting up to 90% of the hospital’s assets.³⁰

²⁶ <https://www.abc.net.au/news/2021-01-14/western-sydney-heat-refuge-strategy-needed-for-summer-heatwaves/13026882>

²⁷ <https://others.org.au/news/2020/06/30/churches-unite-to-shelter-sheppartons-homeless/>

²⁸ [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(18\)30029-9/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(18)30029-9/fulltext)

²⁹ <https://www.canberratimes.com.au/story/8225969/1-billion-earmarked-for-disaster-risk-reduction-heres-the-list/>

³⁰ <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/urban-public-health>

Topics 4 and 5: The adequacy of the current Victorian planning system as it relates to its adaptation to, preparation for, and mitigation of climate change impacts.

What more could be done to better prepare Victoria's built environment and infrastructure, and therefore the community, for future climate disaster events?

1. Climate risk assessment and predictive climate modelling.

Poor resilience of critical public infrastructure, including hospitals, can complicate and even prolong disaster response and recovery. Not all facilities face the same risks, but all can be shut down abruptly by disaster. Threats are various and include sea level rise, higher winds, direct/indirect storm damage, flooding, drought, heatwave, wildfire.

Predictive climate models can be used to set structural design criteria for hospitals and other healthcare facilities. Developed criterion should be applied to both new constructions and retrofits. Assessment must be periodically repeated as hospitals last a long time and safety and building codes change. It must consider both acute emergency, and gradual shifts like increasing average temperatures.

Recommendation: In Victoria, update the [Strategic Planning Guidelines for Victorian health services](#) to incorporate climate change and include climate risk planning.

The WHO Hospital Safety Index is being implemented as part of the Queensland Human Health and Wellbeing Climate Change Adaptation Plan.³¹ The Index is a diagnostic tool for assessing the probability of a hospital remaining operational in emergencies and disasters. It helps authorities to determine quickly what actions and measures improve safety and what capacity the hospital has to respond.

Recommendation: There is also a role for government in ensuring that tenders and infrastructure procurement processes consider climate resilience when comparing competing bids. This can be progressed by implementation of tools, such as in the above example.

2. Regional level resource

Health Care Without Harm envisions hospitals and health systems as community anchor institution with responsibility and vested interest in making sure their communities are healthy, safe and climate resilient. Hospitals can be developed to serve as regional-level resource during disaster.³²

For example: the rebuilding of The Southeast Louisiana Veterans Health Centre post Hurricane Katrina.³³ The hospital is prepared to go seven days without any outside support. It stocks supplies for up to 1,000 people and enough diesel fuel to power its generators at full strength. It has an on-site sewage treatment plant to process and hold a week's worth of waste. The rainwater collection system has capacity of more than a million gallons and

³¹ Human Health and Wellbeing Climate Change Adaptation Plan for Queensland, p.11

³² <https://noharm-uscanada.org/sites/default/files/documents-files/7383/Anchored-by-health-care-Strategies-for-health-systems-HCWH.pdf>

³³ <https://ehp.niehs.nih.gov/doi/full/10.1289/EHP3810>

reduces the use of city water for non-potable needs during regular operations while providing a source of emergency water when the normal supply is interrupted. The hospital is designed to survive failure of the city's levees. Ambulances use a dedicated ramp that doubles as a boat launch.

In Victoria, microgrids are already coming on board to add resilience to towns and communities. The Corryong microgrid was recently announced that will provide off grid protection for 900 homes for 5 days³⁴. Microgrid technology can be used to support essential services such as hospitals, as well as their surrounding communities. ANMF Vic Branch recommend consideration and development of this more broadly.

3. Supply chain should protect domestic manufacturing and a resilient health sector.

There is a need for further consideration of HealthShare Victoria supporting Australian and Victorian industry and supply chain as part of Victorian Government and procurement contracting.

Example: During the height of Covid19, Med-Con, a PPE maker in Shepparton, ramped up production to help Australia. Unfortunately, once pandemic pressures started to ease, health services rapidly returned to their overseas suppliers.

Supporting domestic manufacture of PPE and other industries, is an essential part of adaptation planning and service continuity. ANMF Vic Branch strongly recommend weighted support for domestic manufacturers when considering tenders and contracts.

4. Community Centre support

Examples of community centre supports have been provided throughout this document, particularly under topic 2. These include cool refuges, and shelter programs. There are community groups who already own adaptable infrastructure and would be willing to participate in further community resilience strategy if provide with guidance and practical support, such as a Community Climate Adaptation Fund.

5. Funding that is designed to support and capture the local expertise of the community.

To illustrate this recommendation, we include the personal account of ANMF member Anne, who sadly lost her home in the East Gippsland fires of Summer 2019-20. Anne observed that in the aftermath, multiple forms of wellbeing services were offered, but it was uncoordinated. Community services that were already in place were displaced "by those that just dropped in and never understood the way it worked here. The few that have taken the time to find out what works and what doesn't have been valuable for both the community and our Bush Nursing Centre."³⁵

Communities know what climate adaptation plans and projects are most needed and relevant for them. Victorian government recognises best outcomes and opportunities come from working together on climate action.³⁶ Building on this, Friends of the Earth have called for the establishment of a permanent Victorian Community Climate Adaptation Fund (VCCAF).³⁷ The fund would be a continuing feature of the Victorian budget, distributing grant money

³⁴ <https://engage.vic.gov.au/project/community-microgrids/page/community-microgrids-corryong>

³⁵ <https://otr.anmfvic.asn.au/articles/meet-bush-nurse-anne-brewer>

³⁶ <https://www.climatechange.vic.gov.au/supporting-local-action-on-climate-change>

³⁷ https://www.melbournefoe.org.au/vic_needs_a_permanent_community_climate_adaptation_fund

annually to community groups that apply to undertake localised adaptation and resilience projects. It would ensure the dispersing of money to local groups that understand the unique needs of their communities, and could be part of the reform that our members have identified in capturing those who are currently “falling through the gap.”

6. Worker Education

Develop a climate health literate workforce who are knowledgeable and prepared for both the physical and mental effects of extreme weather. Include training on climate change in nursing and midwifery undergraduate curriculum and post graduate education.

The need for education and training on climate change adaptation and mitigation is a specific recommendation of the 2022, [Climate Impacts at Work](#)³⁸ research.

The same need was identified by healthcare workers in sector specific survey conducted by the Climate and Health Alliance (CAHA) in the [Real Urgent and Now \(RUN\) survey](#),³⁹ and Sustainability Victoria: [Health impacts of climate change](#).⁴⁰

As with all sectors, healthcare is in transition. Environmental sustainability and climate action needs to be a filter we apply to both home and our working lives. In spite of the many opportunities within healthcare to reduce emissions production and resource consumption, members report inconsistent, or absent, education or orientation in workplaces.

At request of our members, ANMF (Vic Branch) has approached CHV to ensure that climate and environmental sustainability is included in staff orientation in public health services, along with opportunities to participate in mitigation, adaptation and resilience strategies. This should be part of centralized education portal for nurses and midwives that the Victorian government has already committed to, in consultation with ANMF (Vic Branch) and Safer Care Victoria.⁴¹

Summary

The Victorian government has taken a nationally leading position in its renewable energy ambition, and climate change action. In this submission, ANMF (Vic Branch) identifies further opportunities which incorporate member experience and recommendations.

We thank you for the opportunity to respond.

³⁸ <https://cur.org.au/project/climate-impacts-at-work-supporting-a-climate-ready-workforce/>

³⁹ https://www.caha.org.au/caha_reports

⁴⁰ [Health impacts of climate change | Sustainability Victoria](#)

⁴¹ <https://otr.anmfvic.asn.au/articles/have-your-say-education-portal-election-commitment/>