

Draft Net Zero Roadmap

2024-2030

March 2024

Net Zero Roadmap 2024 - 2030 - Climate risk and net zero (nsw.gov.au)



Contents

- Acknowledgement of Country3
- Why we need a Roadmap4
- Guiding principles.....5
- Enablers.....5
- Priority areas.....5
- Healthcare.....6
- Land & building design8
- Energy & water11
- Supply chain..... 14
- Travel & transport 17
- Food services20
- Have your say and further information 22

Acknowledgement of Country



©Mid North Coast Local Health District, Macksville District Hospital on Gumbaynggirr Country

NSW Health acknowledges the traditional custodians of the lands and waters across NSW. We acknowledge the many Aboriginal nations, their Elders both past and present, and offer our respect to all Aboriginal people.

We acknowledge that Aboriginal people are remarkable stewards of this Land and have been for more than 60,000 years. The principles of stewardship and caring for Country will be critical in developing an environmentally sustainable, climate resilient health system.

We acknowledge that Aboriginal and Torres Strait Islander-led initiatives in climate change adaptation and mitigation strengthens community wellbeing. To that end, all our work seeks to uphold the idea that if we care for Country, it will care for us.

We commit to listening to and learning from Aboriginal people in NSW about how we can better reflect First Nations ways of being and knowing in our net zero transition.

The Roadmap will build on a strong partnership approach with the Aboriginal community, aligned with the strategic direction of the new Aboriginal Health Plan, as well as Closing the Gap Priority Reforms, including what evidence tells us.

We acknowledge that:

- climate change has a significant impact on people's health and wellbeing, including their physical health, social, emotional, and spiritual wellbeing;¹
- climate change is disrupting cultural and spiritual connections to Country that are central to health and wellbeing;¹ and
- that all climate and health policy must be informed by First Nations leadership, knowledge, and experience.²

Why we need a Roadmap



The Net Zero Roadmap 2024-2030 will set the direction and priority areas for NSW Health for the next 6 years (from 2024-2030), providing a blueprint for achieving NSW Government's net zero targets.

The NSW Government's Climate Change (Net Zero Future) Act 2023 legislates net zero greenhouse gas (GHG) emissions by 2050, including a 50 per cent reduction by 2030, and a 70 per cent reduction by 2035 (based on 2005 GHG emissions).³

We welcome all feedback and are committed to developing a Roadmap that is informed by genuine and broad consultation across all stakeholders, communities, patients, consumers, carers and health staff. Your feedback will help us to ensure the Net Zero Roadmap meets the needs of the future.

What this Roadmap will do

The Roadmap will set out where we're at, what we've done and our direction for the next 6 years. It will outline the current state of carbon footprinting across NSW Health, identify our carbon hotspots, highlight some leading programs and case studies, and set out the priority areas to meet the NSW Government targets. The pace of change in decarbonisation, and the shift to low-carbon and circular economies is progressing rapidly and we expect this Roadmap to be revised over time as our climate risk response matures.

The Roadmap's vision is that NSW Health becomes *'a leading modern, low carbon, low waste, climate resilient health system by focusing on quality, value, innovation and equity'*.

Guiding principles

The Roadmap is informed by these four interlinked principles:

- **First Nations leadership:** Grounded by deep Indigenous knowledge about caring for Country and working in partnership with Aboriginal colleagues and communities on climate and health policy.
- **Health equity approach:** Climate change disproportionately impacts the most vulnerable groups in our society, the same groups which also often have least capacity to adapt. Our climate risk response must take account of existing health disparities and optimise the health benefits of climate actions.
- **Evidence-informed:** Commitment to apply the best available evidence, data and research about climate change and the scale and pace of the transition that is required to achieve a net zero, climate resilient health system.
- **Partnerships:** The transition will require collaboration and partnerships with a range of internal and external partners including our staff, patients, families, community, all levels of government, non-government organisations, academia, research, industry, the private sector, and peak bodies, to ensure a healthy future.

Enablers

To enable action across the 6 priority areas, five cross-cutting 'enablers' have been identified:

- Workforce, leadership and training
- Procurement
- Assets and infrastructure (including digital infrastructure)
- Research, innovation and offsetting
- Communications and engagement

Priority areas

The Roadmap outlines six priority areas to achieve a net zero, climate resilient healthcare system. These priorities include:

- **Healthcare:** transitioning to modern, high quality, low carbon models of care for our patients, guided by the principles of sustainable healthcare.
- **Land & building design:** supporting healthy people and places by decarbonising the design, construction, use and disposal of our buildings; and being stewards of our land and waters.
- **Energy & water:** improving air quality and health by using our natural resources (energy and water) in sustainable ways, including transitioning to clean renewable energy.
- **Supply chain:** reducing the environmental and financial costs of our supply chains, including the way we purchase goods and services, engage with our suppliers and drive circularity.
- **Travel & transport:** improving air quality and health by reducing emissions from staff, patient and visitor travel. This includes shifting towards active modes of transport, electrifying our fleet (including ambulances), and exploring innovative ways to deliver care remotely.
- **Food services:** the sustainable sourcing, production and provision of high quality, healthy food for patient healing and wellbeing, whilst minimising food waste.

The six priority areas are outlined in further detail in the following section.



©Mid North Coast Local Health District, Dr Brian O'Connell, Net Zero ED Lead

Healthcare

Transitioning to modern, high quality, low carbon models of care for our patients, guided by the principles of sustainable healthcare

Clinical care - providing high quality healthcare to our patients - is at the heart of NSW Health. Our clinicians – nurses, doctors, and allied health professionals – will all play a crucial role in developing modern high quality, low carbon models of care to support our transition to net zero.

National and international research demonstrates that more than half of healthcare's carbon footprint is supply chain emissions from clinical care (pharmaceuticals, medical devices, equipment etc).⁴ Therefore, NSW Health is now also focusing on ways to reduce emissions from clinical care. The evidence – and increasingly our own experience in NSW Health – demonstrates that we can improve health outcomes and patient experience, whilst reducing waste and carbon emissions.

Principles of sustainable healthcare

Three principles of sustainable healthcare guide our approach to reducing emissions:

1. **Keep people healthy and well.** People who are healthy, well and independent in their homes and communities have high health and social outcomes and less reliance on carbon-intensive areas of the health system. The delivery of public and population health services that reduce the onset and burden of disease, improve air quality, enable and support active travel and promote healthy diets and lifestyles, simultaneously reduce our greenhouse gas emissions.^{2,4}
2. **Focus on Value-based healthcare.** Focusing on value-based healthcare reduces the harms,

risks and costs (financial and environmental) of low-value care (unnecessary investigations, procedures and medicines). This includes tackling unwarranted variation, reducing overdiagnosis, overtreatment, unnecessary imaging and pathology testing by promoting a value based healthcare approach.² This improves health outcomes that matter to patients and provide a better experience for staff.

3. **Decarbonise evidence-based care.** Where there is effective, evidence-based care, deliver it in low-carbon ways. This includes prioritising appropriate healthcare delivery and decarbonising known emissions hotspots across clinical specialties.

These principles are being embedded into existing programs across NSW Health, including the Agency for Clinical Innovation's Graduate Certificate in Healthcare Redesign.

Case studies

Results from the 2023 NSW People Matter Employee Survey demonstrate that 80 percent of staff support NSW Health taking action to improve environmental sustainability. A broad range of programs, initiatives and activities are underway - this section showcases some of them.

Northern Sydney Local Health District's Net Zero Leads Program

NSLHD has established an Australian-first Net Zero Leads Program which supports clinicians to lead a project to reduce emissions in their specialty or service.

Twelve clinicians from anaesthetics and surgery, endocrinology, respiratory medicine, paediatrics, nursing, pharmacy and physiotherapy are supported half to one day/week by the NORTH Foundation, to research and deliver a net zero project.



©Northern Sydney Local Health District, showcasing some of the NSLHD Net Zero Leads

Ministry of Health Net Zero Leads program

To support NSW Local Health Districts and Specialty Health Networks, the Climate Risk & Net Zero Unit is piloting (to June 2024) a Net Zero Leads program. 10 clinicians across nursing, medicine and allied health disciplines are supported 0.2FTE each to lead on a net zero project in their service or specialty and embed net zero carbon principles into the delivery of care. Of note, more than half of the Net Zero Leads work in regional LHDs. Leads are addressing known carbon hotspots in anaesthetics, critical care, theatres, and pharmacy.

Sustainable Futures Innovation Fund



©Mid North Coast Local Health District, Grow and Play

Frontline NSW Health staff often have the best ideas about how to improve care whilst reducing waste and emissions. In recognition of this, the NSW Health Sustainable Futures Innovation Fund, is an initiative that supports high impact innovation projects from frontline staff that improve health outcomes and reduce our environmental footprint (either in emissions or waste).

In 2023, following a comprehensive review process, the Fund Review Panel selected 17 projects. Fund recipients represent an equitable mix of metropolitan and regional LHDs, pillars and health organisations.



©Northern Sydney Local Health District, NSLHD staff enjoying the green space at the Royal North Shore Hospital campus

Land & building design

Supporting healthy people and places by decarbonising the design, construction, use and disposal of our buildings; and being stewards of our land and waters.

The Australian health system produces 7 percent of the country's carbon emissions with the construction of infrastructure being a major contributor. Embodied carbon in buildings made up 16 percent of Australia's built environment emissions in 2019. Without action, construction-related emissions (embodied emissions) from infrastructure are projected to account for the majority of infrastructure emissions.

NSW Health and Health Infrastructure are committed to taking decisive steps to lower carbon emissions across the health asset base. NSW Health buildings are designed to be places that heal. They enhance clinical service delivery and patient wellbeing, create supportive environments for workers and visitors, and provide public space and connectivity. As we move forward, health buildings must be designed in ways that support a reduction in operational energy and waste, as well as reduce the size and impact of carbon within the building materials.

Health Infrastructure has taken steps towards tackling this challenge as outlined in its [Sustainability Commitment 2022](#).⁵ In implementing the strategy, Health Infrastructure undertook a whole-of-life carbon analysis of the Ryde Hospital Redevelopment. It found embodied carbon was responsible for almost two thirds of the carbon emissions of the building. It clarified that, for almost all new hospitals and other facilities, the key opportunity for reducing upfront and embodied carbon is via structural design, with additional opportunities in interiors and building services.

In 2023, Health Infrastructure released updated guidance and minimum sustainability requirements for all capital projects. Requirements call for:

- Project-specific sustainability plans as part of master plans, business cases and construction.
- Energy efficiency and renewable energy targets and solutions.
- Full electrification of new builds, and preparation for electrification of existing buildings, noting Health Infrastructure and its Local Health District partners are already progressing in this space.
- Climate risk assessments conducted early in project planning and via consistent methodology.

With new legislation coming into effect by 2026, these requirements will increase over time.

In 2023, Health Infrastructure, in partnership with Government Architect NSW, developed the Design Guide for Health: Spaces, Places and Precincts.⁶ The Design Guide confirms the importance of good design, master planning, site selection, and careful specification of systems and materials in reducing embodied and operational carbon in health infrastructure.

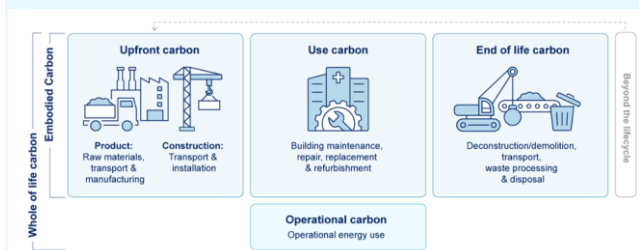
Health Infrastructure is currently expanding its carbon data collection, analysis and reporting systems, to ensure carbon considerations inform building design and engineering decisions at the outset of projects, where they have maximum impact.

Health Infrastructure is also working closely with health, government and industry stakeholders to stay across developments and innovation and ensure that the building decarbonisation approach adopted by NSW Health and Health Infrastructure continues to align with government-wide and industry practices and provides consistency of approach for delivery partners.

Case studies

This section showcases some building and land design initiatives.

Ryde Hospital Redevelopment whole-of life carbon study



©Health Infrastructure, Whole of Life Carbon diagram highlighting upfront and embodied carbon

In 2023, Health Infrastructure partnered with NSW Office of Energy and Climate Change (now the Department of Climate Change, Energy, the Environment and Water), Northern Sydney Local Health District and Arup to analyse the carbon footprint of the Ryde Hospital Redevelopment and suggest decarbonisation opportunities for future capital projects. It found the project's carbon emissions were made up of 29 percent upfront carbon; 57 percent embodied; and 43 percent operational.

The study demonstrated that:

- The biggest reductions in upfront and embodied carbon will come from

structural design initiatives, such as:

- material efficiency: using less material, i.e. shorter spans for beams and more columns with lower thicknesses.
- material substitution: using different materials, i.e. low carbon concrete, timber, etc.
- Development of low carbon concrete and material substitution is essential, and NSW Health and Health Infrastructure will need to work with industry to support innovation in these technologies.
- Electrification, energy efficiency and renewable energy initiatives will also be required to achieve the net zero goal.
- Defining an upfront whole of life carbon target based on alignment between NSW Health, Health Infrastructure and Local Health Districts and an aspiration to be net-zero ready in operation is optimal.



©Health Infrastructure, Ryde Hospital schematic designs

(CSSD). Electrification of back-up generators (currently diesel) will be considered further in the future.

All major building projects have access to an Environmentally Sustainable Design (ESD) specialist who can advise on electrification options for each site, and additional guidance and cost-benefit analysis tools are being developed at present. More sophisticated information on electric and non-electric assets will be available in future as this guidance is developed.



©Health Infrastructure, Shoalhaven Hospital schematic design

Shoalhaven Hospital Redevelopment 30-year lifecycle electrification analysis

In 2022, the Shoalhaven Hospital Redevelopment undertook a 30-year lifecycle cost analysis on four different electrification scenarios involving heating and hot water to establish emissions and costs.

The study helped inform design of the redevelopment. It considered transitional arrangements using gas over different time horizons but ultimately found that both carbon emissions and operational running costs were lowest for a full electrification option over a 30-year period. The hospital's new acute services building is now being electrified in terms of domestic hot water and HVAC heating.

Since November 2023 all major health building projects have been required to be either fully electric, or, where highly constrained, to prepare for electrification in the future. Electrification can apply to natural gas cooking, mechanical heating and cooling, domestic hot water and steam boilers for Central Sterilising Services Departments



©South Western Sydney Local Health District, SWSLHD engineering staff showcasing Fairfield Hospital's new solar panels

Energy & water

Improving air quality and health by using our natural resources (energy and water) in sustainable ways, including transitioning to clean renewable energy.

Energy

The NSW Government has committed to delivering a reliable, affordable, and sustainable electricity system and using its purchasing power to leverage more large-scale storage energy projects, driving investment in infrastructure, and supporting more renewable energy to enter the grid.^{7,8} The transformation of NSW's electricity system to solar and other technologies will deliver substantial emission reductions and air quality improvements across New South Wales.⁹

The NSW Government has increased its solar on government buildings target to achieve 126,000 MWh a year of solar generation by 2024. NSW Health has installed over 20MW of rooftop solar generation capacity across our public hospitals.¹⁰

NSW Health's Solar for Hospitals campaign has delivered:

- more than 60,000 tonnes of CO₂-e reduction and energy savings, equivalent to removing around 30,000 SUVs from the road
- 114 new resource efficiency projects and major energy-use upgrades
- 6.8 percent electricity generation potential from roof-top solar power
- enough roof-top solar to power about 9,700 Australian houses for a year

Port Macquarie Hospital hosts Australia’s first large-scale battery system at a hospital. The solar energy storage system allows the hospital to switch to stored energy during peak periods and send electricity back to the grid, generating revenue.

NSW Health aims to have nearly all lights converted to LED lights by 2030. LEDs are energy-efficient alternatives using at least 75 percent less energy than conventional light bulbs.¹⁰

In situations where energy efficiency and solar opportunities have been maximised, energy contracts could be used to increase the availability of renewable energy and to purchase green power where necessary.

Water

NSW is already experiencing the impacts of climate change, including increasing droughts and extreme temperatures leading to water scarcity and unseasonal rainfall leading to flooding.^{2,11}

These climate impacts affect water quality, access, and sanitation, and are felt by our communities. Water is an extremely precious and valuable resource. The NSW Government has taken action to improve water sharing, management and use across the state focusing on improving the security, reliability, quality, and resilience of NSW’s water resources over the long term.¹²

NSW Health is already making significant investments in water resource management and water and sanitation programs to improve the security, reliability, quality, and resilience of the natural resource.¹² NSW Health’s Environmental Health Branch works in collaboration with the Health Protection Network and Public Health Units across metropolitan and regional NSW to address the physical, chemical, and biological factors external to a person and the related factors that can potentially affect health.¹³ This includes the provision of safe drinking water supplies, recreational use of water, sewage management, public swimming pools, toxicology, microbial control, skin penetration industries, funeral industries, mosquito vector management, air quality, heatwaves, waste management, and basic hygiene.

Our system is partnering with stakeholders to investigate water efficiency, quality, and security strategies across our health care facilities. This includes trialling new sustainable technologies that reduce the impact on our waterways, marine life and reduce landfill. Together we are supporting the NSW Government’s commitment to ensure that communities in regional and metropolitan NSW have the water they need to thrive, grow and enjoy – now and for future generations.¹²

Case studies

This section showcases some energy and water initiatives.

John Hunter Hospital’s rooftop solar installation



©Hunter New England Local Health District, John Hunter Hospital rooftop solar panels

In 2021, John Hunter Hospital in Newcastle had 5,000 solar panels installed, covering an area of about 12,000 sqm. The panels generate enough electricity each year to

power 1,400 homes. It is the largest rooftop solar energy system on a hospital in the world. This installation is part of the NSW Health’s Solar for Hospitals campaign and led by the Ministry’s Financial Services and Asset Management division.

Replacing harsh chemicals in our kitchens with environmentally friendly electrolysed water



©HealthShare NSW, eWater

In an Australian first, HealthShare NSW has partnered with eWater Systems to supply onsite generators in kitchens that produce sanitising and cleaning solutions using electrolysed water technology.

This is an environmentally friendly and safe replacement for synthetic chemical-based cleaning and sanitising products which will be introduced in more than 160 public hospitals across NSW over the next three years.

The onsite generation technology uses just salt, water, and electricity to produce sustainable cleaning, sanitising, and disinfecting solutions that are suitable for many purposes.

The disinfectant is the only one of its kind registered with the Therapeutic Goods Administration (TGA) as a hospital grade disinfectant and the sanitiser is HACCP certified as food safe. Both products are Organic Certified.



©HealthShare NSW, Dr Carly Hollier and the ResMed team

Supply chain

Reducing the environmental and financial costs of our supply chains, including the way we purchase goods and services, engage with our suppliers and drive circularity.

Greening our supply chain

Around 70 percent of the health system's global emissions footprint is derived from the supply chain, including but not limited to the production, transport, and disposal of health-related goods such as medicines.² Supply chain emissions can materially impact the health, safety and wellbeing of communities.² Therefore, supply chain resilience is a precondition of a climate resilient health system.² This presents significant opportunities for NSW Health to collaborate with key stakeholders to reduce emissions in procurement and decarbonise our supply chain. Procurement policy is an important mechanism to support decarbonisation of health system supply chains.

By leveraging the purchasing power from the goods and services we buy from our partners and suppliers, we can influence emissions performance outside of our direct control. To achieve this goal, we will engage with our suppliers to improve and report on environmental performance, and the emissions footprint of products we purchase. Other jurisdictions, including the National Health Service in the UK, have developed roadmaps to support supply chain decarbonisation and supplier alignment with their net zero ambitions, supported by government procurement policies.¹⁴

To deliver against the NSW Government’s net zero targets, we need to partner closely with suppliers, industry, government, regulators, and international partners to build sustainable and resilient supply chains that will help the NSW economy achieve a 50 percent reduction in emissions by 2030.³

Sustainable resource use

Single use plastic is a substantial issue in our economy and an acute issue in our healthcare system (NSW Circular, 2023).¹⁵ Legislation like the Plastics and Circular Economy Act 2021 which supports the phase out single-use plastics, facilitates the reduction of problematic single-use plastic items, optimising our plastic resources and improving our understanding of the future of plastics.^{16,17} Several NSW Health organisations, including HealthShare NSW, are already shifting away from single-use products and embedding sustainability in procurement decisions.

New South Wales is already transitioning to a circular economy which involves minimising what we throw away and using and reusing our resources efficiently.¹⁷ We are partnering with our consumers, partners, industry, and other government agencies to make the circular economy a reality by investing in circular innovations, products, services, and systems that reduce waste, environmental harm, and our emissions for future generations.

Case studies

This section showcases some of circularity and innovation initiatives.

Onelink team delivers emissions savings



©HealthShare NSW, Onelink team

How thinking differently about supply chain led to more sustainable outcomes

HealthShare NSW’s Strategic Procurement Services team are securing significant financial and sustainability savings by transforming the supply chain journey for our medical consumables. This team supports the

Supply Chain Operations team who manage Onelink, our medical consumable warehouse.

Onelink delivers around 40 per cent of all medical consumables for NSW Health, and our distribution network sees many deliveries occur daily, depending on the customer. By buying in bulk, we are able to secure savings for our local health district customers, but the scale and scope of the process means there are a lot of steps in the supply chain journey. It was here that Tom Simpson, Contract Manager in Strategic Procurement Services, and his team saw an opportunity for change.

“We’re talking about bulky high volume medical consumables – gloves, masks and wipes – single-use products that have historically been purchased locally on pallets,” said Tom.

“There were quite a few steps in the process, and we realised by minimising the steps we had the chance to achieve significant commercial savings, but also create massive sustainability savings as well.”

Creating more efficient processes

We removed steps in the logistics journey, so that the product would be shipped straight from the dock, in the ocean freight container, to our Onelink warehouse. In doing so, multiple benefits were realised.

“We cut the supplier warehouse unloading, packing, loading and transport steps out of the journey, and were also able to fit more

product onto the truck as the product is loose loaded into a container with no pallets required,” said Tom.

This means that we can transport around 65 pallets of stock on a truck that previously would only carry 44 pallets. Onelink staff then unload the container in-house. This revised process delivers new financial savings and efficiencies, but also positively contributes to greenhouse gases emissions abatement.

At the time of writing, the team have started receiving three container deliveries a month, which saves more than 10 tonnes of greenhouse gases emissions a year. That is equivalent to all HealthShare NSW staff charging their smartphones for five and a half months. The Onelink team are aiming to embed these efficiencies further.

“We have received 19 containers so far since July and aim to receive a minimum of eight containers a month in 2024, which means eight journeys per month cut out of the supply chain process with potential to scale the process,” said Tom.

The process is not only more efficient, it gives us more supply chain resilience and reduces the risk of running out of stock. The process also provides more financial savings that HealthShare NSW can pass on to our customers. With more plans for future efficiencies, the team will continue to innovate in this space to deliver better and more sustainable services.

The Going Circular Project

HealthShare NSW’s Going Circular pilot project is led by Dr Carly Hollier and focuses on a circular economy for home respiratory equipment to reduce waste and carbon emissions. The project team partnered with the Clinical Excellence Commission and clinical experts from Sydney Local Health District and South Western Sydney Local Health District, to develop and implement best-practice procedures and quality standards to clean and refurbish returned respiratory devices.



©Northern Sydney Local Health District

Travel & transport

Improving air quality and health by reducing emissions from staff, patient and visitor travel. This includes shifting towards active modes of transport, electrifying our fleet (including ambulances), and exploring innovative ways to deliver care remotely.

Extensive international health research shows that long-term exposure to fine particle pollution shortens lives and hastens the development of cardiovascular and respiratory disease.⁹ High levels of air pollution can cause severe acute health conditions, and even low levels of pollution that meet air quality standards can be harmful if people are exposed over the long term. Vulnerable people, including the elderly, children and those with chronic health conditions are at highest risk.

Fleet, staff, patient and visitor travel are significant contributors to our carbon footprint. Continued action to accelerate fleet electrification and sustainable travel strategies will reduce our emissions, improving air quality and associated public health benefits.⁹

Electrification of our fleet

The NSW Government's [Electric Vehicle Strategy](#) accelerates the uptake of electric vehicles (EVs) and commits to electrifying NSW Government passenger vehicle fleet.¹⁸ The Strategy sets a target of electrifying all Government passenger feet procurement by 2030, with an interim target of 50 percent EV procurement by 2026.

The transition to low-emission or zero-emission vehicles requires comprehensive charging infrastructure across our health care facilities. NSW Health is supporting the NSW Government targets by retrofitting existing facilities, installing EV charging infrastructure at new facilities, and fitting EVs with technology that allows staff to schedule or book its use.¹⁰ NSW Health will need to

partner with facility owners to build EV charging infrastructure at leased facilities.

NSW Health will reduce our impact through ongoing improvements in efficiency through logistics, digitisation, and IT. For larger vehicles such as vans, trucks and ambulances, NSW Health will explore a range of technologies (e.g. hybrid vs electric vs hydrogen cell).

Active travel

The health benefits of walking and cycling are clear: improved cognitive function, mental health, sleep quality, weight status, muscular and cardio respiratory fitness as well as bone health. Walking and cycling also reduce mortality, anxiety and depression, cardiovascular mortality, hypertension, hip fractures, type 2 diabetes, some cancers, metabolic syndrome and the risk of dementia. People who walk or cycle also have lower carbon footprints from all daily travel. At the population level, replacing motorised travel with walking or cycling, reduces vehicle exhaust and greenhouse gas emissions. Encouraging optimal travel choices to shift the way that NSW Health staff, patients and visitors travel to and from our health facilities will help improve health outcomes and decarbonise our health system.

The NSW Ministry of Health leads the development, statewide implementation and evaluation of prevention-focused programs and services that improve health and help reduce the burden of chronic disease.¹⁹ The COVID-19 response has accelerated changes to the way we deliver care, including delivering care closer to home, and changing modes of delivery of medicines and medical supplies.

Case studies

This section showcases travel and transport initiatives.

South Western Sydney Local Health District Travel for the future



©South Western Sydney Local Health District, EV parking and charging stations

South Western Sydney Local Health District’s Travel for the Future Strategy aims to create

a more sustainable transport network by exploring the use of Uber for Health, consolidating pool vehicles at shared sites, utilising telematics data to identify opportunities for fleet reductions and installing electric vehicle chargers to support the existing and future electric vehicle pool.

SWSLHD has installed 17 EV chargers at Liverpool Hospital and commenced work on introducing a further 18 chargers at Campbelltown Hospital. These charging sites will create an EV travel corridor between Liverpool and Campbelltown Hospitals whilst providing opportunities to grow the Districts Electric Vehicle fleet pool.

Centre for Population Health’s Active Living program



The NSW Government offers a range of free health services and programs for you and your family that support healthy eating and active living.²⁰

Northern Sydney Local Health District's commitment to net zero



©Northern Sydney Local Health District, NSLHD Chief Executive, Board members and staff showcasing EV charging stations at Macquarie Hospital

Northern Sydney Local Health District is committed to reducing transport emissions and achieving the District's net zero by 2035 target. As part of this commitment, six electric vehicle (EV) charging stations were commissioned at Macquarie Hospital in 2024, and ten EVs have been put into operation with community nursing and Mental Health services at Macquarie.

The EV rollout will continue across the District as part of Northern Sydney Local Health District's ongoing sustainability efforts.



©HealthShare NSW, Project CHEF at Bowral & District Hospital, South Western Sydney Local Health District

Food services

The sustainable sourcing, production and provision of high quality, healthy food for patient healing and wellbeing, whilst minimising food waste.

Food waste is a significant contributor to our carbon footprint. Wasting food, wastes money along with energy, water and other resources that are used to produce food.²³ Preventing food waste is the best outcome for the environment.

By focusing on more sustainable production, transport and disposal of food, and including more nutritious low-carbon foods, we can significantly reduce emissions related to agriculture, transport, storage, and waste.²

Food service reform in NSW

HealthShare NSW provides high-quality shared services to support the delivery of patient care across NSW Health.²⁴ Within NSW, HealthShare NSW's Food and Patient Support Services serve 24 million meals in 155 hospitals across the state.²⁵

HealthShare NSW are demonstrating a strong climate commitment to deliver improved patient experiences around food services, whilst reducing food waste. HealthShare has developed Food Service Design Principles which guide food service improvements and have partnered with several health organisations and key partners to drive food service reform that prioritises patient choice and flexibility.

Case studies

This section showcases some of sustainable food service practices and initiatives.

Project CHEF (Co-Designing Healthy and Enjoyable Food) pilot at Bowral and District Hospital

Project CHEF is a collaborative effort between HealthShare NSW, South Western

Sydney Local Health District, consumers, industry experts and expert advisory groups. Project CHEF was initiated to move towards a more patient-centred model of food services for public hospitals in NSW.²⁶

The model focuses on flexible mealtimes, enabling patients to eat when they're hungry by submitting orders via their mobile device to a dedicated call centre. Patients also have access to a customisable menu where patients can choose individual meal components. In addition to the changes in the kitchen, Customer Service has established a new, dedicated call centre team in the Newcastle Service Centre to process orders from the patients.

The Project CHEF model focuses on sustainable food service practices, with the pilot project decreasing food waste and delivering significant improvements in patient nutritional outcomes. By giving patients more choice around what they ate, and improving the options available to them, the pilot project achieved a 17 percent increase in energy intake, an 18 percent increase in protein intake and a 52 percent reduction in food waste.²⁷ The pilot project's success has helped inform other sustainable food service models including KidsCHEF.

KidsCHEF - Transforming food services for kids and their families

HealthShare NSW partnered with the Sydney Children's Hospitals Network (SCHN) to deliver a better patient experience around food services. The two organisations worked closely to design a specialty paediatric model for deployment across the Network – known as KidsCHEF.²⁷

SCHN and HealthShare NSW engaged with nutrition and dietetics, other clinicians, patients, and food service staff to ensure that KidsCHEF aligned with paediatric patient needs and delivered a range of food service improvements.

This food service reform is embedded in the redevelopment process that is occurring across both SCHN hospitals. SCHN developed a set of principles to guide their redevelopments under the overarching goal of Transforming Kids' Health, with a focus on caring for kids and their families in a holistic

way. The principles sit alongside HealthShare NSW'S Food Service Design Principles and guide the food service improvements.

This investment in food recognises that nutrition can be a vital piece of the puzzle when it comes to therapeutic outcomes. With one in five children at risk of malnutrition, and one in four children above or well above a healthy weight, getting food services right is so important to their overall nutritional and patient outcomes. Implementing improvements at SCHN means that there is a scalable blueprint for paediatric patient food services across the state.

NSW Health diversion and avoidance of food organics in hospitals



©EPA and HealthShare NSW

This partnership project between HealthShare NSW and the Environment Protection Authority assessed five onsite food organics processing technologies across eight metropolitan, regional and rural hospitals. HealthShare NSW's Food and Patient Support Services serve 24 million meals in 155 hospitals across NSW.²⁵

Of the 11,358 tonnes of general waste landfilled in 2016 by these hospitals, over 50 percent was organic. To address this, HealthShare NSW piloted multiple food service reforms and a new service delivery model to reduce food waste to landfill by more than 50 percent. HealthShare NSW trialled five different types of food waste processing technologies including

dehydration, maceration and liquidisation technologies, at eight hospitals across NSW. The project adds to existing food service reform initiatives which aim to reduce food waste and influence the way NSW hospitals dispose of their food waste.

Have your say

We want to hear from you. Your feedback will inform NSW Health's first Net Zero Roadmap.

We invite you to have your say on how we can work together towards a high quality, low-carbon healthcare system.

For more information, please visit:

Website: www.health.nsw.gov.au/netzero

Who's listening

Climate Risk & Net Zero Unit, NSW Ministry of Health

Email: moh-netzero@health.nsw.gov.au

Further information

There are a number of related resources, plans and frameworks that provide more insight into the NSW Government's action on climate change.

National Health and Climate Strategy	
Australia's first National Health and Climate Strategy sets out a plan to decarbonise the Australian health system, and build health system and community resilience to the impacts of climate change on health and wellbeing.	National Health and Climate Strategy Australian Government Department of Health and Aged Care
Net Zero Plan Stage 1: 2020-2030	
The Net Zero Plan Stage 1: 2020–2030 is the foundation for NSW's action on climate change and goal to reduce our emissions by 70% by 2035 and reach net zero emissions by 2050.	Net Zero Plan NSW Climate and Energy Action
The Climate Change (Net Zero Future) Act 2023	
The NSW Government has legislated whole-of-government climate action in the Climate Change (Net Zero Future) Act 2023. This legislation signals the NSW Government's commitment to a resilient, net zero future and sets out a clear path to deliver net zero by 2050.	The Climate Change (Net Zero Future) Act 2023 NSW Climate and Energy Action
NSW Climate Change Adaptation Strategy	
To help achieve the resilience objective in the NSW Climate Change Policy Framework the NSW Government has released the NSW Climate Change Adaptation Strategy.	NSW Climate Change Adaptation Strategy AdaptNSW

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Net Zero Roadmap 2024-2030

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