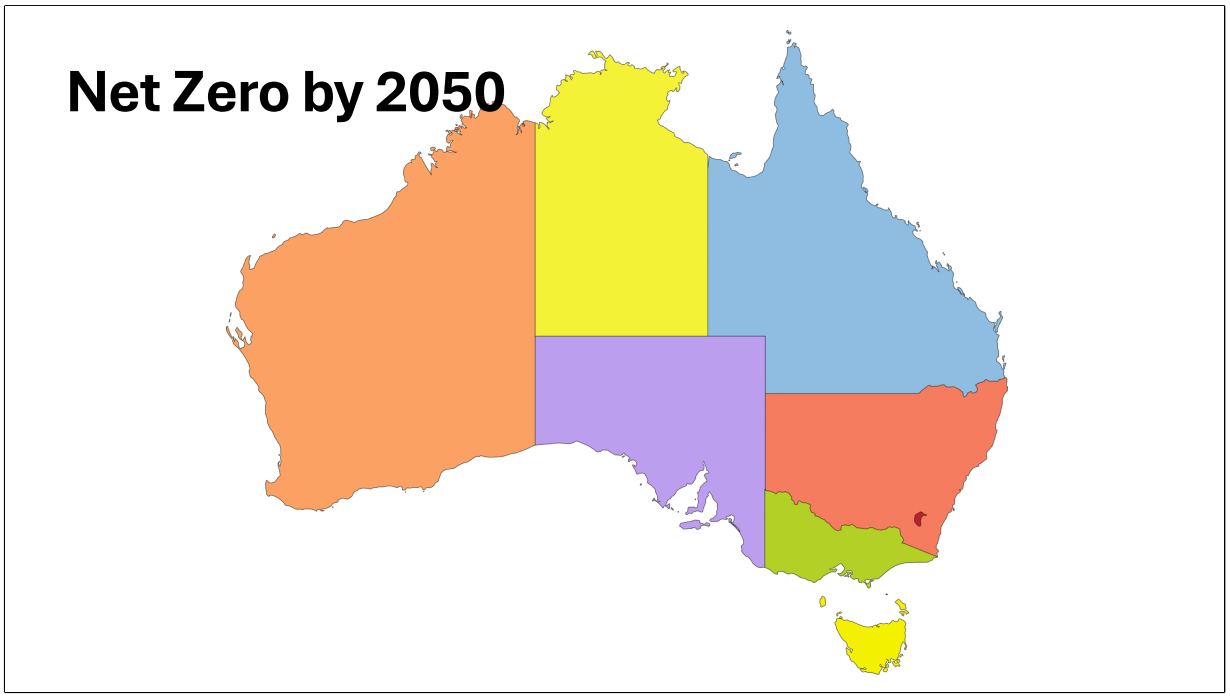


Councillor Sam Ngai grew up in Roseville and was first elected to Council in 2017.

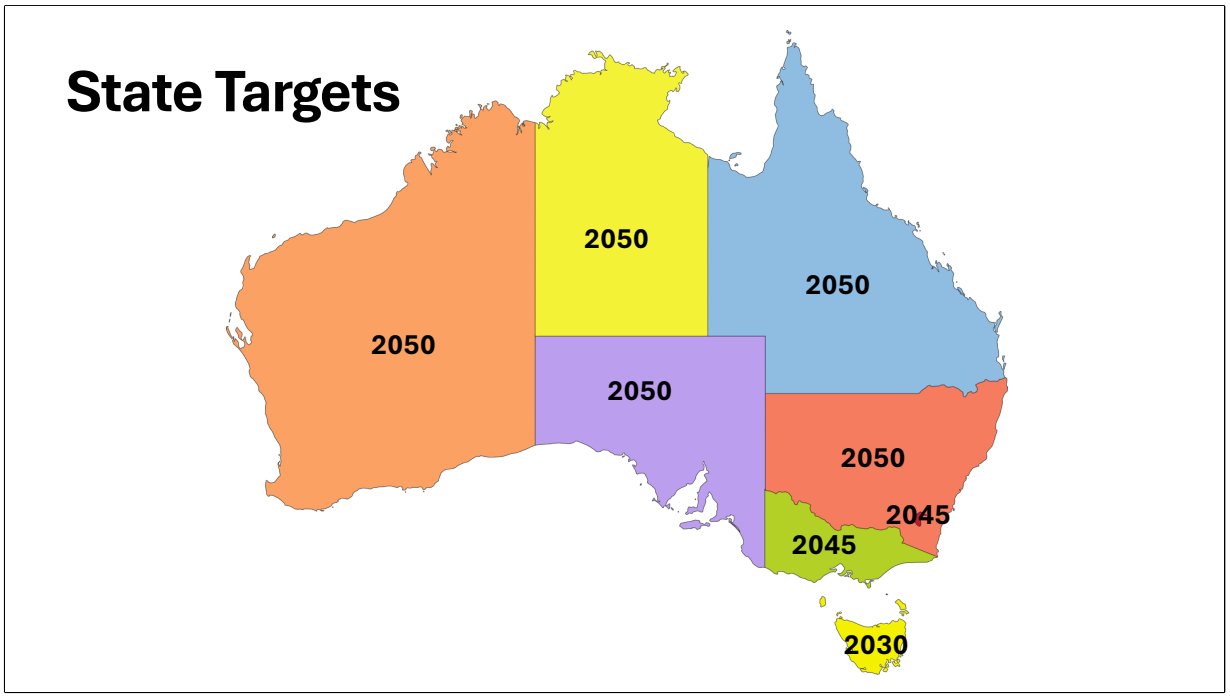
Sam holds degrees in Software Engineering, Accounting, Business Administration and Environmental Law.

He previously worked for 14 years at an energy company where he supported the acquisition, development and operation of coal, gas, geothermal, hydro, wind, solar and energy storage projects.



We all know about the Paris Agreement and our efforts to limit the increase in global temperatures to 1.5°C above pre-industrial levels. We are aiming for a 43 percent reduction by 2030 to stay on track to Net Zero by 2050.

Australia now has a Net Zero 2050 target. But what about each individual state and territory?



We can see that most states have a Net Zero target of 2050 but why is it that Tasmania, the ACT, and Victoria have more ambitious targets?

Tasmania has the benefit of being a net exporter of hydro energy along with a small population.

Victoria benefits from Tasmania's exports.

The ACT has the benefit of a small population supported by early adoption of a Large Scale Generation Certificate scheme. However its ecological footprint was estimated at 9x their land size, in other words, there's much further to go before they are considered self sustainable on all fronts.

The other states have the disadvantage of supporting larger populations and industry with a mix of renewable and thermal sources. There are also diminishing returns with renewables, that is, wind and solar have been developed at high yield sites located closest to existing transmission networks, whereas powering the rest of the country with renewables alone requires much more investment in our transmission networks and energy storage.



In 2020, Ku-ring-gai Council's staff proposed an ambitious Net Zero target of 2040 or earlier for the entire Local Government Area. The proposed Climate Change Policy and Action Plan 2020 was adopted by Councillors, and aims to achieve:

- 50% emissions reduction by 2030 or earlier [across the LGA]
- 100% emissions reduction (net zero emissions) by 2040 or earlier [across the LGA]
- 100% renewable energy by 2030 [council's operations] [achieved 2022]
- 100% reduction in fleet emissions by 2040 or earlier [council's operations]

Like the smaller states and territories, Ku-ring-gai has the benefit of achieving a target with a smaller population and without the need to support a large industry base.





Council Operations

It is easier for Council to improve its own operations before encouraging all of our residents to reach best practice.

Three areas of focus include:

- Rooftop Solar – We have 579kW of generation at 14 council sites, plus solar hot water.
- Energy Efficiency Initiatives – Upgrades to LED lights for community sites and streetlights, intelligent lighting controls, smart meters, upgrades to HVAC air conditioning, heat pump upgrades, insulation and other energy efficiency upgrades.
- Fleet – We have ten electric vehicles and 1 electric truck so far, as well as a dozen hybrid vehicles. Aiming to electrify the entire fleet by 2040.

In addition, we have collectively worked with other Northern and Southern Sydney Councils to source our energy from Zen Energy, which has provided us with what they say is 100% renewable energy since 2022.



Council's Energy Smart Rebates

When it comes to residents, Ku-ring-gai promotes energy efficiency and electrification initiatives through Energy Smart Rebates that are funded by our Environmental Levy. Under this initiative we offer rebates of $500 if residents install solar or batteries, $500 if they install solar or electric hot water, $500 if they install insulation, and $500 if they install more energy efficient windows. $250 is also available if residents install an appropriate pool pump.

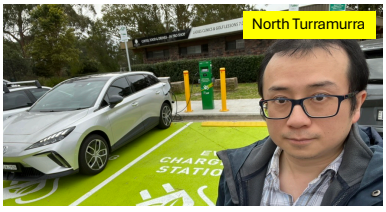
We are looking to update the rebates to include induction cooktops. Since switching to induction, I couldn't go back to gas. Induction is faster, safer, and cheaper.

There are also $4,000 rebates for unit blocks and rebates for schools.

We offer a home assessment service where council officers visit your home and provide advice on how to lower bills and reduce your carbon footprint.

You can also borrow an energy saver kit, including a thermal imaging camera which lets you see where heat is leaking out of your home, and a power meter which helps you understand your appliance's standby power consumption.











Vehicle Electrification

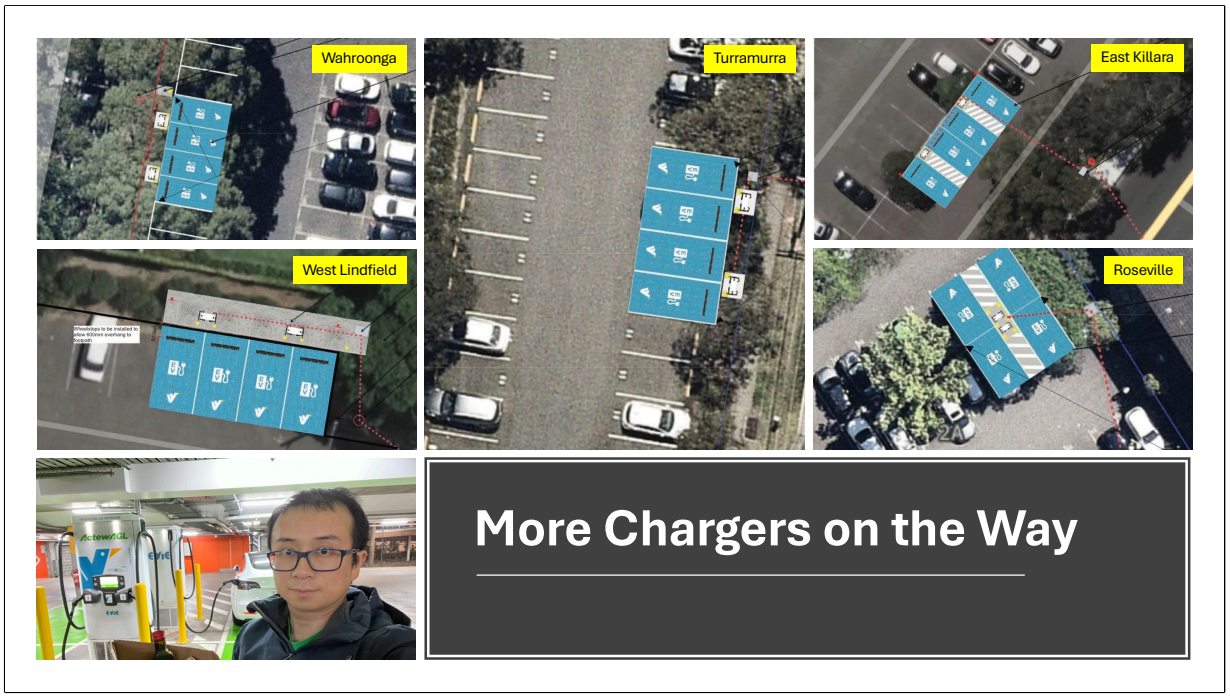
Vehicle electrification also plays a part in reducing our carbon footprint, and from time-to-time Ku-ring-gai offers residents the opportunity to check out EVs or even test drive them in St Ives.

To help with the transition, Council also invests in EV charging infrastructure at select sites so that residents can charge on the go.

We currently have 21 electric vehicle chargers rolled out.

15 at Lindfield Village Green, including 1 for disabled parking.
2 at North Turramurra Recreational Area.
2 at West Pymble Pool.
2 at Turramurra Library, next to Coles.

Some of these chargers used to be free but they now operate on a paid basis. But even when residents pay for the electricity, it's still much cheaper than petrol. My Volkswagen costs over 4x more to power per km than my Tesla, plus my Tesla is usually powered by electric grid renewables.



Council isn't stopping at just 21 chargers. We can realistically see a future where there will be thousands of chargers on the streets.

But as for the next step, we have 20 chargers proposed at five locations in Wahroonga, Turramurra, East Killara, West Lindfield and Roseville … and these should be coming later this year.

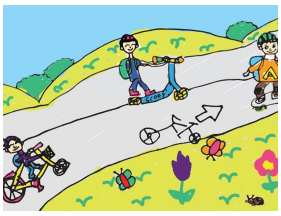
These chargers don't mean much for people like myself who live in a standalone home. We can easily install a personal EV charger. But they will certainly benefit those who live in existing apartments that have no charger.

We have also updated our Development Control Plan (DCP) so that all future apartments are required to install electrical conduits, switchboards and meters to support electric vehicle chargers at each parking spot. The DCP stops short of mandating the installation of EV Chargers … that will be up to residents to arrange when they decide to make the switch

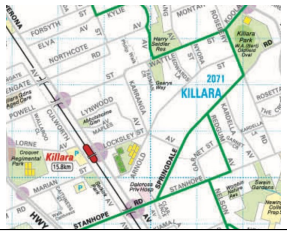
Active Transport











As we know, Ku-ring-gai's population will substantially increase in the next two decades but our road network isn't going to be come any bigger. So even if we reach 100% electric vehicles, traffic is still going to be a real issue.

Public transport plays a big role in supporting our population growth and I genuinely hope that a future State Government will invest in it seriously.

However it is also important to encourage our residents take active transport options wherever possible. We want them to walk, to scooter, to cycle or even hop on an e-Bike for daily travel.

We have cycle maps indicating which routes are best to take when getting around Ku-ring-gai. We are incorporating active transport routes in our future town planning. We are also promoting initiatives such as Ride2School Day to show our families that the school trip can be achieved without a car.

We will soon start a Smart Travel Advisory Committee which seeks to explore further ways of promoting sustainable transport. Applications to join this Committee closed last week, and I'm keen to see the ideas that they bring.



Urban Tree Canopy

Various studies have shown that suburbs with urban tree canopy are cooler than those that are without.

At Ku-ring-gai Council, our urban tree canopy was estimated at 43.81% in 2022, which is the highest in Greater Sydney, and we are doing what we can to protect it and promote future growth.

With urban tree canopy, our suburbs remain cooler and our residents are protected from the adverse effects of climate change. Cooler homes also means lower power bills as we do not need to go hard on our air conditioning. For some homes such as mine, it even means that it doesn't make sense to invest in solar because the shade (plus the solar duck) leads to a much longer payback period.

As you know, our Council has been quite vocal about the State Government's housing policy changes and it is the desire for proper urban planning and tree canopy that drives us (along with infrastructure funding, community consultation, and heritage conservation).





Circular Economy

Like other Northern Sydney Councils, Ku-ring-gai is also doing everything it can to promote the circular economy.

If you think back to the 1980's, we used to throw everything in one bin. Then came the vegetation and recycling bins in the 90's and 00's. But where we want to get to is a situation where goods are used for multiple cycles before going to the bin, or consumption is avoided altogether.

We run events where residents are encouraged to swap toys, clothing, and other equipment.

We promote compositing initiatives, use of glass over plastic, repairing equipment instead of binning.

We also work with other councils to provide a Community Recycling Centre in Artarmon which accepts difficult-to-dispose of goods.

We are conducting a Food Organics and Garden Organics trial to learn how we can encourage residents to adopt sustainable practices.

Community Education and Grants







Community Education plays a vital role in helping our residents collectively reach Net Zero by 2040.

We engage our volunteers and Net Zero Champions to promote sustainability initiatives at community events and run educational workshops.

We also have Environmental Levy Grants and Net Zero Community Grants which promote environmental works, conservation, or waste / energy / water efficiency projects.

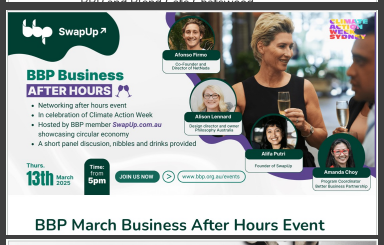
This session held by EnergyZE is also supported by a Council Net Zero Grant.

https://www.krg.nsw.gov.au/Council/Grants-and-sponsorship/Environmental-Levy-Grants

Better Business Partnership













As a Council we also want to help businesses with the transition to Net Zero.

The Better Business Partnership is jointly operated by Ku-ring-gai, North Sydney and Willoughby.

The staff at BBP are fantastic – they help connect likeminded local businesses with monthly events, and they assist them with ideas to improve sustainability practices.

BBP also has a partnership with Greener for Business, which provides small businesses with tools to reduce their environmental impact and accelerate carbon emissions reduction.