### snowy hydro

# NEWS



## Sustainability in the Snowies

- Cabramurra takes shape
- Safe driving on winter roads
- Thredbo turns pink for breast cancer

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#### **CEOUPDATE** A message from Snowy Hydro CEO Dennis Barnes

It's a very busy time as Snowy's major projects, Snowy 2.0 and Hunter Power, both gain significant momentum.

Snowy 2.0, our pumped-hydro Snowy Scheme expansion project here in the mountains, is focused on both underground cavern and tunnel development and completing major civil works, with a workforce of over 3,000 involved.

This is a large and complex project with many challenges, including the recent Lobs Hole tunnel segment damage caused by blasting activities. Importantly, we recognised the risks associated with this work and braced the tunnel segments, and put in place appropriate safety measures.

At Kurri Kurri, all major civil works on the Hunter Power site are scheduled for completion by mid-year. In particular, the two gas turbines are assembled following the successful installation of the turbine dual-fuel combustors.

Together, these developments will provide 2,860 megawatts of on-demand, dispatchable energy required to help maintain energy security and reliability while enabling Australia's decarbonisation.

Speaking of projects, it's pleasing to see Snowy's mountain town of Cabramurra taking shape, with rebuilt accommodation and other services for workers and contractors. The fit-for-purpose facilities include bushfire bunkers and a medical centre. Cabramurra, originally built to support the construction of the Snowy Scheme, is NSW's highest town at 1,488 metres elevation and often receives visitors. Make sure you check the 'Plan Your Visit' section of our website before driving in.

Our multi award-winning retailer Red Energy has set another record, with its tenth straight win in the NSW Canstar Blue Most Satisfied Electricity Customers award. Red Energy's Australia-based team is proud to have earned a remarkable 40 Canstar Blue awards over 14 years – that's more than any other energy retailer. Snowy recently conducted a community insights campaign so that local residents, stakeholders, and interested parties could share their perspectives on Snowy Hydro operations and the Snowy 2.0 project. The campaign included an online survey, along with focus groups, one-on-one meetings, phone surveys and community pop-up stalls.

The survey findings are being consolidated, with the feedback and insights from this campaign informing Snowy Hydro's social impact strategy and community engagement initiatives.

As part of Snowy Hydro's 2023 Sustainability Report, we committed to supporting new rehabilitation and conservation projects in the region. We recently made a donation to Keep It Cool, a local not-for-profit organisation that works with business and communities to help restore and regenerate land through its tree planting program.

It was great to see a group of Snowy trainees and graduates from the Cooma and Kosciuszko regions joining the Snowy Hydro Environment Team and Keep It Cool on a volunteer tree planting day at Myalla to learn about bush regeneration and plant 500 native trees, including Snow Gums, Silver Wattle, River Bottlebrush and Ribbon Gums.

Finally, with the winter months upon us and snow, ice, rain and fog making driving even more hazardous in the mountains, I urge all drivers to take extreme care and please slow down. Reducing your speed when ice and snow is on the roads will provide more time to stop in slippery conditions. Stay safe everyone.

All the best,

binnis



# Take it slow on winter roads

Winter is a huge drawcard for visitors to the Snowy Mountains and with the ski season officially underway from the June long weekend, drivers are reminded to take extra care on mountain roads. One stretch of Link Road at Kiandra is of particular concern for motorists heading to the Selwyn snowfields.

New speed limits for heavy vehicles were recently introduced on Link Road to improve safety year-round. Trucks and buses will need to drop their speed from 60 km/h to 40 km/h for a three-kilometre downhill stretch along Link Road, west of the Snowy Mountains Highway.

The new speed limit further supports safe driving and speed limit changes introduced in 2023 following a speed zone review. NSW Police, NSW National Parks and Wildlife Service and Snowy Hydro requested the review following safety concerns for visitors stopping to play in snow by the side of the road.

The speed limit was subsequently reduced from 80 to 60 km/h along a six-kilometre stretch of Link Road to reduce the risk of accidents, and to improve safe access to and from local roads. Motorists are also reminded to adjust their driving in winter. Reducing speed when ice and snow is on the roads will provide more time to stop in slippery conditions. Accelerate slowly and brake gently to remain in control in the vehicle, and remember to leave extra distance from the car in front.

#### WINTER DRIVING CHECKLIST

- Check road conditions and weather forecasts before setting out
- Clear ice and snow from the vehicle, defrost windows
- Make sure tyres are suitable for snow and ice driving
- Have chains on board and know how to fit them
- When fog is present, switch on headlights day and night
- Use hazard lights in low visibility to help other vehicles



# Sustainability in the Snowies

Tree planting at Myalla

Snowy Hydro's commitment to caring for the environment is longstanding. For 75 years, Snowy has operated the Snowy Scheme within Kosciuszko National Park and the surrounding region, supporting rehabilitation and conservation initiatives to improve the biodiversity values of the different environments.

The Snowy Mountains are home to a range of sensitive and unique environments, and Snowy Hydro works with government bodies, universities and local communities to help protect and improve biodiversity.

As part of the company's 2023 Sustainability Report, Snowy Hydro committed to supporting new rehabilitation and conservation projects in the region. Snowy Hydro recently made a small donation to Keep It Cool, a local not-for-profit organisation that works with business and communities to help restore and regenerate land through its tree planting program.

A group of Snowy trainees and graduates from the Cooma and Kosciuszko regions joined the Snowy Hydro Environment Team and Keep It Cool on a volunteer tree planting day at Myalla to learn about bush regeneration and plant 500 native trees, including Snow Gums, Silver Wattle, River Bottlebrush and Ribbon Gums.

Since the 1990s across the Snowy Monaro region, the Ribbon Gums or *Eucalyptus viminalis* have been declining in health and dying in large numbers, a phenomenon known as dieback.

While the exact causes of the dieback are still unknown, insects, drought and climate change are thought to be contributing factors. The dieback means a loss of habitat for many native species, including threatened migratory birds, and reduced overall biodiversity and ecosystem health. Planting native trees helps to replace lost habitat and improve ecological connectivity in the Snowy Mountains region. Snowy's donation to Keep It Cool will go towards planting a further 1,500 native trees and help support future tree planting initiatives.

#### NATIVE SPECIES PLANTED AT MYALLA

- Eucalyptus pauciflora (Snow Gum)
- Eucalyptus bridgesiana (Apple box)
- Eucalyptus viminalis (Ribbon Gum)
- Acacia dealbata (Silver Wattle)
- Acacia melanoxylon (Australian Blackwood)
- Leptospermum grandifolium (Mountain tea-tree)
- Callistemon sieberi (River Bottlebrush)



**PROJECT UPDA** 

## Snowy 2.0

TBM Florence ring building

Excavation continues for the headrace and the tailrace tunnels, Snowy 2.0's two major waterways. Tunnel boring machine (TBM) Lady Eileen Hudson is approximately 3 km into the tailrace tunnel, which will eventually link Talbingo Reservoir with the underground power station. The TBM has installed around 1,500 rings, made up of more than 13,000 concrete segments, lining the tunnel as she excavates.

At Tantangara, TBM Florence is progressing well and has now tunnelled approximately one kilometre. Florence has begun excavating the waterway section of the headrace tunnel after completing the headrace adit (the short access tunnel). The TBM has operated successfully since its restart on 8 December 2023 and has moved through identified soft ground into hard rock.

Excavation works for the 50 metre-wide Tantangara intake are nearing completion. To date, just over 300,000 cubic metres of material has been excavated, with 7,000 cubic metres remaining. More than 36,000 lineal metres of rock bolts and almost 12,000 square metres of shotcrete have been installed.

The intake will be 49 metres deep upon completion to ensure the inlet remains below the minimum operating water level and is not impacted by the fluctuating levels of Tantangara dam. Drill and blast activities are underway at the gate shaft and intake to join up both structures. The transition from the intake changes shape as it is excavated to become the connection tunnel to the gate shaft. When completed, water enters the headrace tunnel from the intake, on its way to the power station.





Excavated material from TBM Florence coming off the conveyor belt



Tantangara intake changes shape as it transitions to connect to the gate shaft

#### **Critical connection points**

TBM Kirsten's next task, the excavation of the inclined pressure shaft (IPS), will soon be underway following substantial modifications to prepare the machine for the steep, uphill tunnelling.

The 1.6 kilometre shaft forms part of the waterway and will connect the headrace tunnel with the underground power station. The junction between the IPS, the Emergency Cable and Ventilation Tunnel (ECVT) and manifold tunnel is a complicated intersection between waterway and dry tunnels.

During operation, the manifold tunnel will channel water from the IPS through to the penstocks and power station complex where it will generate power.

Once TBM Kirsten completes the excavation of the IPS, the ECVT is required to be disconnected from the waterway tunnels.

The area where the manifold joins the IPS will be a 70m-long chamber, which in the interim is supported by temporary rock bolts and shotcrete. The chamber is then backfilled with mass concrete, and a cast-in-situ concrete lining is formed to the waterway tunnel profile at the interface with the manifold tunnel.

Simultaneously, a watertight concrete plug is cast at the end of the ECVT to ensure that water does not enter the dry tunnel during operation. The tailrace tunnel is six kilometres in length, with TBM excavation continuing through to mid-2025.

Snowy 2.0 is being engineered to deliver clean and reliable energy storage and generation for the next 150 years. The target date for commercial operation of all units is December 2028, with first power expected in the second half of 2027.

#### Underground waterways

The manifold tunnels (shown in green) will be subdivided into three smaller tunnels, which will then further divide into six penstock tunnels (red) through the bifurcation galleries (purple). The penstock tunnels will convey the water to the powerhouse cavern and eventually to the tailrace tunnel.



#### **REGIONAL WORKS**

### Cabramurra takes shape



High in the Snowy Mountains, the rejuvenation of Cabramurra continues with the historic township emerging with a touch of old and plenty of new, including a staff medical centre, worker accommodation and bushfire bunkers.

The recently completed medical facility is awaiting final certification and once up and running, will provide routine Occupational Health and Safety (OH&S) support for Snowy Hydro staff. Services will include hearing tests, eye checks, flu vaccinations and mental health support for the 200 workers currently on site. That number will double once the redevelopment of Cabramurra is completed. Construction of new 22-person bushfire bunkers is complete and awaiting final certification.

On the accommodation front, a newly built twostorey transit building with 100 fit-for-purpose motel style rooms and undercroft parking is nearing completion, with 70 of the rooms expected to be ready for handover by mid-year. The remaining rooms will be ready shortly after. Workers are living in existing township accommodation and a temporary accommodation camp on site until construction of the new apartments is finished and the certification process finalised.

Cabramurra's general store and the bistro escaped major damage in the 2020 Dunns Road bushfire and provided a solid starting point for the rebuild. A new covered walkway leading to the bistro is in the final stages of construction. The next stage of the rebuild includes design and construction of accommodation for drive-in drive-out workers. The building with 50 one-bedroom apartments will have ground floor parking for 50 cars, a small gymnasium, common rooms and outdoor facilities.

Cabramurra Township is open to the public 9am-3pm every day. Visitors can dine at the bistro and access the lookout. Please follow signage and be aware of construction traffic.



Above and below: The first of two new accommodation buildings at Cabramurra.



#### **PROJECT UPDATE**

#### snowyhydro

#### Hunter Power Project

The Hunter Power Project's two gas turbines are assembled following the successful installation of the turbine dual-fuel combustors. There are 20 individual diesel and gas combustors in both turbines, with each one weighing approximately 440kg. Installation involves opening the dome shelter covering the main body of the generator and turbine before each combustor is installed at an angle that requires a high level of accuracy.

The combustors are critical to the functioning of the units. Fuel from the combustor is ignited and mixed with compressed air in the combustion chamber. The hot air expands and pushes into the turbine blades, which turns the shaft to generate mechanical energy from this chemical energy.

Following successful testing of the turbine assembly, the upper casing on the machines was installed to finalise the build, another major milestone. The protective dome structures were then able to be removed.

Preliminary alignment of the turbine and generator followed for both units, with the project team now focused on connecting the assembled turbine and generator to the rest of the project components. The assembly has been a complex process requiring collaboration and expertise from mechanical, civil, scaffold and lifting, piping, electrical and instrumentation teams.

In other milestones, the towering exhaust stacks have now reached external mechanical completion. The 65 metre-high stacks have a base diameter of 10.5 m and weigh around 500 tonnes each.

All major civil works on the site are scheduled for completion by mid-year.

#### **Construction teachers on site**

Youth Express construction teachers were treated to a site visit for their Teacher Development Day, with 12 educators given a background on the Hunter Power Project along with a site tour for an up-close view of the giant exhaust stacks.

The teachers will be able to incorporate their learning from the excursion into the Construction Certificate II course they teach to Year 11 students, our future construction workers.

#### Team Quantum's F1 success

Cessnock High School's Team Quantum, a Year 8 all-girls team, progressed to the National Finals of the F1 in Schools STEM Challenge. The global competition challenges students to build the fastest car possible.

Snowy Hydro is a proud sponsor of Team Quantum, and HPP Project Director Daryl Young attended a team presentation on the finer points of Formula 1 and how they built their cars. He also had the chance to test his reflexes and race their cars.

Congratulations to the students who missed out on qualifying for the world finals, but clearly have bright futures ahead.



#### COMMUNITY

# The power of community

For 75 years, Snowy Hydro has been a proud part of the communities where the Snowy Scheme operates. We value our relationships with local residents and businesses and know they are essential to the success of our business.

To better understand the social impacts of our business, a community insights campaign has been underway to gather insights, opinions, and experiences related to Snowy Hydro operations and the Snowy 2.0 project.

An online survey conducted during April and May invited people to share their perspectives to help shape the future of their communities. A series of focus groups, one-on-one meetings, phone surveys and community pop-up stalls will support the online survey.

"This campaign reiterates Snowy Hydro's commitment to transparent and inclusive community engagement," said Snowy Hydro CEO Dennis Barnes.

"We value the input of our community members and recognise the importance of understanding their needs and concerns."

Survey respondents were able to comment on how they feel about the Snowy 2.0 project, and offer suggestions for improving Snowy Hydro's community engagement efforts. Responses will help inform Snowy Hydro's social impact strategy and community engagement initiatives.

To ensure transparency and impartiality, a third party organisation is undertaking the research on Snowy's behalf.

From top: Local residents have their say; enjoying the beautiful Snowy region



#### **Community feedback**

Feedback or inquiries about the community insights campaign can be directed to Snowy Hydro via phone at 1800 623 776 or email at community@snowyhydro.com.au



## **FLOR**

LOCAL BUSINESS

### Printing wit purpose

Dale and Brian Coyte with TBM Florence

When Brian Coyte bought his offset printing business from the Cooma Monaro Express newspaper 30 years ago, the industry looked very different.

"Everything was done on typeset and in the dark room. Every job was set in hot metal or film. In the old days, no job was less than two weeks, that's just how it was."

Brian's biggest print jobs for his newly-named South East Printing business were docket books for retail stores, construction companies and couriers. If you sold it, leased it, built it or delivered it, some sort of paperwork was required.

The arrival of digital technology, followed by the introduction of the Goods and Services Tax in 2000, transformed the capture and delivery of information which fast-tracked computerisation, particularly for retail point of sale.

Those changes turned the printing industry on its head and Brian knew he had to pivot his business to save it. In the early days, South East Printing had seven staff and four offset printing machines. Brian introduced the first computer to the business and today, most of their printing is done digitally with a smaller team, including Brian's wife Dale.

The business was sold to Brian with a customer base that included Snowy Hydro, which has since swapped out its paper docket book orders for repair and maintenance products, specialised danger, warning and defect tags, this quarterly news magazine and giant stickers for the Snowy 2.0 tunnel boring machines.

The TBM stickers are 1,300 mm wide on a 50-metre roll, with each sticker section 10 metres long, but the same machine can also print and face cut Snowy's small hard hat stickers.

Brian and Dale Coyte at the South East Printing shop.

The one offset machine retained from the original purchase still works perfectly and Brian keeps it for special jobs suited to the old way of printing. The print shop is a godsend for locals unable to use selfserve printers for small personal jobs, a service Brian is happy to provide.

"I've seen so much change and had to change with it, so it's difficult not to be passionate about the entire print industry," says Brian. "It has a real purpose."

Brian notes that the recent closure of the cinema in the building occupied by South East Printing does not affect the operation of his business.

Brian and Dale are also deeply involved in local community events including the Snowy Ride, which ran for 20 years and raised more than \$10 million for childhood cancer research, along with the associated family program to give children receiving treatment a much-needed break in the mountains after hospital. Dale's long involvement with the Monaro Committee for Cancer Research has helped raise funds in support of the Cooma Oncology Unit, the mcCr Financial Assistance Scheme and cancer research.



#### CAREERS

### STEM careers up close



Students at Tumut 3 Power Station

The Snowy STEM Academy Careers Day program, now in its second year, connects young people from schools across the Snowy Mountains region with people working in science, technology, engineering and mathematics (STEM) at Snowy Hydro. Students have the chance to see firsthand what their future career might look like.

In April, 60 students from McAuley Catholic College and Tumut High School travelled to Talbingo where the Snowy team shared their career path stories and the importance of studying the STEM subjects.

Students were treated to a behind-the-scenes tour of Tumut 3 Power Station to see what it takes to make hydro power. There was also a demonstration of underwater drone technology where some students took the controls of a remotely operated vehicle (ROV) to explore the Talbingo Dam Swimming Area.

And at Cooma, the Snowy STEM Academy team welcomed 120 Year 10 students to the Discovery Centre for a day of immersion in all things STEM. Students explored a range of STEM-related fields, participated in career talks and enjoyed hands-on activities.

After an official welcome, students and teachers listened to Snowy engineers, climate scientists and STEM experts share their different paths into a wide range of STEM careers. A diverse group including Snowy project managers, surveyors and past vacation program students hosted a career panel and discussion so students could ask all their burning questions. The day included a rare look inside the operations of Snowy Hydro, with a guided tour of SMCC, the central control room for the Snowy Scheme.

From top: The Snowy STEM Academy Careers Day program showcases STEM-related fields.

Students were also able to attend presentations based on their specific STEM interests, which included the technology behind Snowy 2.0's segment trucks, environmental science, trade skills and 3D modelling.







# Thredbo turns pink for breast cancer

Skiers heading for the slopes at Thredbo in July are invited to add a splash of pink to their ski gear to support the Breast Cancer Network Australia (BCNA) Pink Lady campaign.

Thredbo will turn pink for the weekend of 20-21 July to acknowledge the significant impact of breast cancer across Australia. One in seven Australian women is expected to be diagnosed in their lifetime, and one in 555 men. For more than two decades, BCNA's campaigns have helped raise breast cancer awareness and the importance of screening and early detection.

Pink BCNA merchandise will be on sale and skiers can join the Pink Lady ski run and an evening pink flare run. A mini Field of Women featuring the iconic BCNA Pink Lady silhouette will be set up and Thredbo guests can contribute personal messages of support.

Donations are welcome and will help BCNA continue to provide all Australians and their families affected by breast cancer with the best care, treatment and support.

Signing up or switching to Red Energy's BCNA Saver Plan\* is another way to support the BCNA cause with up to \$120 annual contribution per eligible gas and electricity customer.



#### Most awarded energy provider

Red Energy's mission to deliver outstanding service and genuine customer care has been the company's number one focus since entering the energy market 20 years ago.

In another nod their mission is on track, Red recently received its tenth straight win in the NSW Canstar Blue Most Satisfied Electricity Customers award. Red Energy's Australia-based team is proud to have earned a remarkable 40 Canstar Blue awards over 14 years – that's more than any other energy retailer.

"We sell an essential service and we take that responsibility very seriously," says Red Energy CEO lain Graham. "Our lives depend on electricity to power our phones, to stay connected for work, to cook a meal for our families and to heat and cool our homes. Every single customer is important to us and we strive to provide them with a service they can depend on."



\*Residential customers only. Eligibility criteria and conditions apply. Basic Plan Information Documents and Fact Sheets available at redenergy.com.au/bpid

#### **COMMUNITY & EDUCATION**

#### Gather together for a yarn

Gudja Gudja, meaning 'a coming together place' in the language of the Ngarigo people, is the ideal name for the recently opened 'yarning circle' in Tumbarumba. The culturally significant site has been a meeting place for thousands of years for Indigenous people from many different mobs.

People came together every November for corroborees and knowledge sharing, and Ngarigo people would trade their valuable white and pink ochres for tools such as boomerangs. The group then walked together to the junction of Yellowin Creek and the Tumut River for initiations and more celebrations, before heading into the high country to hunt bogong moths.

Ngarigo Elders had long hoped to secure the site and establish an Indigenous walking trail and yarning circle to celebrate Ngarigo culture and heritage, and last year that dream was realised. Ngarigo Toomaroombah Kunama Namadgi Indigenous Corporation (NTKNIC) was awarded a Snowy Hydro Community Grant in 2023 to kick-start the project with a yarning circle and bora (initiation) circle.

Snowy Hydro's Community Grants of up to \$10,000 support projects that align with the community commitment pillars of education and development, health and wellbeing, regional capacity building, and environment.

Ngarigo man Uncle Craig Wilesmith, representing NTKNIC, said in less than a year, word has spread. "People have a real thirst for knowledge," said Uncle Craig. "This has outgrown our expectations and it's still growing!"

The yarning circle now has a new car park big enough for coaches, as well as public amenities and a sheltered barbecue area. A large wooden carved turtle at the centre of the bora circle is a popular resting spot for younger visitors, with school groups arriving by the busload from all over the region, as well as Canberra and Sydney.

The next stage of Gudja Gudja includes a cultural walking track to connect the area to the Tumbarumba to Rosewood Rail Trail.



Snowy Hydro's Local School STEM Fund is encouraging schools to put STEM learning at the forefront of their curriculum with a range of new initiatives now up and running. Grants of up to \$10,000 were awarded across three local government areas (LGAs) last year to help students discover the fun and challenge of STEM projects.

Students of all ages are learning coding and robotics, and fuelling their imaginations with topics around science, technology, engineering and maths. The innovative programs, including a First Nations Science camp for 280 students, provide new opportunities for students to explore, think and solve problems, and learn skills that will set them up for future success.

Cooma North Public School utilised funding from the first round to purchase 3D printers and equipment for their robotics club that enabled participation in the 2023 Spike Prime Challenge. The school will be celebrated at the upcoming STEM 2024 conference for their successful industry and education collaboration.

In 2023, the Snowy Hydro Local School STEM Fund supported 2,200 students from 18 schools with a total of \$160,000 in funding. This year, schools in the Cessnock LGA are eligible to apply, along with schools in the Snowy Monaro, Snowy Valleys, and Towong LGAs.

Successful applicants in the first round of 2024 Local School STEM funding will soon be able to see their STEM ideas become reality.

#### Supporting a bright future

A cohort of First Nations students from Tumut High School have begun their journey on the Stars Foundation program that will offer support and guidance for improved health, education and employment outcomes.

The official launch of the Stars Foundation Tumut Program in March was marked by a moving Welcome to Country ceremony led by proud Wiradjuri woman, Auntie Winnie Bulger. Students Marli and Jaydah spoke of their gratitude to have a safe space to learn more about their culture through painting and language, and connecting with their elders.

Snowy Hydro's three-year sponsorship for the Stars Foundation Tumut Program continues a commitment to initiatives that support young local people. The group of 40 girls will be offered opportunities for work experience and career development, targeted programs from Snowy STEM Academy as well as access to Snowy Hydro sites and power stations – real life experiences to help make visible to the students what's possible for their future.

Stars Foundation programs across Australia support more than 3,400 First Nations girls and young women in 57 partner schools.



### Awarded NSW Most Satisfied Electricity Customers 10 years in a row.



