



snowyhydro

# NEWS

ISSUE 60 • AUTUMN 2023

# Snowy 2.0 powers on

- ▶ Tumut's engineering stalwart
- ▶ STEM support for local schools
- ▶ Community grants up for grabs



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# CEO UPDATE

## A message from Managing Director and CEO Dennis Barnes

Leading a truly iconic Australian company like Snowy Hydro is an exciting and special opportunity. It is one I'm very proud to take on, as the company's new Chief Executive Officer and Managing Director.

While I have only been in the role for a few weeks, I am already inspired by the dedicated and enthusiastic people I have met, and what I have seen of the incredible Snowy Scheme. In the coming months I am also looking forward to building strong connections with our most important stakeholders - the local communities we serve and operate in.

I think it's fair to say I have hit the ground running, having been to Cooma, Talbingo, Cabramurra, Snowy 2.0 worksites and Sydney all in the first week, getting to know employees and our assets.

My initial impressions are that we have an excellent team here at Snowy, which is critically important as we look to continue our strong performance during a complex period in the energy sector.

As for a bit about me, I have come to Snowy after my most recent role as CEO at Contact Energy in New Zealand. Before that I was with Origin Energy, and have more than three decades' experience in the energy sector, with a focus on renewables and retail. It is exciting to see Snowy's considerable work in this space, along with our award-winning retailers Red Energy and Lumo Energy.

I am focused on getting to know all elements of the business and the workforce as quickly as possible. I'm pleased to be working closely with our Chief Operating Officer Roger Whitby, who has very ably led Snowy in an acting capacity for the last few months and whose company knowledge is encyclopaedic.

In this Snowy Hydro News we are celebrating a milestone - 60 newsletter editions over 15 years, with a mountain of information packed into those pages.

Our communities across the Snowy Mountains continue to be informed about Snowy operations and activities through a wide variety of channels, but the newsletter remains a long-running favourite.

In this edition we look at a fantastic project to deliver a brand new 330kV/11kV substation near Cabramurra, along with the undergrounding of all 11kV and fibre communications infrastructure across the region. This has enabled the return of about 50 hectares of easements back to vegetation in Kosciuszko National Park.

Snowy 2.0 construction continues at a good pace and its workforce of more than 2,200 is bolstered by many people learning and training on the job. The project's school-based apprentices and trainees program at Monaro High is a major success story and has been recognised with an award from the NSW Education Department.

In the next edition of the newsletter we will take a closer look at Snowy 2.0 tunnelling achievements and the challenges we are managing at Tantangara.

Our Snowy Hydro education program has a focus on science, technology, engineering and maths (STEM), with the aim of fostering career pathways for young people and we are delighted this year to launch the Local School STEM Fund. Successful applicant schools will receive up to \$10,000 of funding to support STEM-related excursions, student sponsorships, equipment and camps.

In addition we are maintaining our decades-long support for the Snowy Mountains community through the Snowy Hydro Community Grants Program and you still have time to lodge an application for the current intake period - we need to receive your online application for a grant of up to \$10,000 by 15 March 2023. There's more information on our website.

All the best,

**Dennis Barnes**

Managing Director and CEO



## PROJECT UPDATE



A worker inside the emergency, cable and ventilation tunnel (ECVT)

# Snowy 2.0

2023 will be a year of ongoing excavation works for the intake structures and access tunnels for the power station complex before work begins to excavate the power station caverns and inclined pressure shaft.

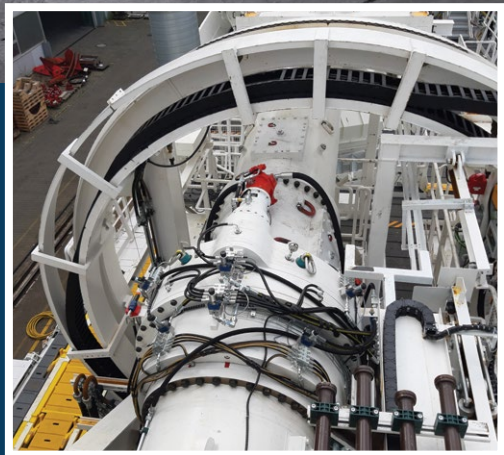
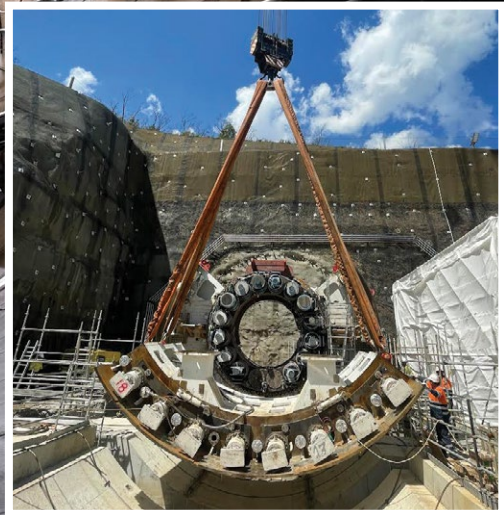
## Emergency, cable and ventilation tunnel

Tunnel boring machine (TBM) Kirsten has almost completed excavating the 11-metre diameter emergency, cable and ventilation tunnel (ECVT). The TBM has passed the location of the underground power station and has installed 13,200 locally-manufactured concrete segments to line the tunnel.

The 2.9-kilometre tunnel will provide alternate access to the power station complex, as well as carrying the high voltage cables and the permanent ventilation system for the underground power station.

In early February, TBM Kirsten stopped for modifications so that it can excavate on a steep uphill angle to create the inclined shaft, which links to the headrace tunnel from Tantangara Reservoir.

These modifications include installing a screw conveyor (or auger) to extract excavated rock from the cutterhead to a sandwich conveyor system. The face-to-face rubber belts help constrain the crushed rock to transport it down the steep slope without spillage. At the bottom of the shaft, the material is transferred to a conventional conveyor system to carry it out from the ECVT to the surface.



Top: Part of the middle shield being lifted into place  
Bottom: A giant screw conveyor will be used to extract crushed rock from the TBM cutterhead

Other modifications include altering the levels of the tanks and mechanical equipment so they are level when travelling up the 25-degree incline, and converting all the walkways into steps and ladderways.

The ECVT will also have a monorail and manrider installed in the top of the tunnel for workers to access the TBM, along with a station platform to access the manrider. A rack and pinion system (similar to the Perisher skitube) will also be installed to pull the multipurpose special vehicles up the tunnel.

## Talbingo

Excavation for the Talbingo intake is continuing, with almost one third complete and 190,000 cubic metres of rock removed so far. The process involves rock bolting and the installation of mesh and shotcrete to support the high wall as the excavation progresses.

At the Talbingo adit, the enormous 150-tonne main drive and the front and middle shields have been lifted into the TBM cradle as the reassembly of TBM Lady Eileen Hudson continues. Lady Eileen will begin excavating the tailrace tunnel later this year.



## Tantangara

As the excavation of the Tantangara intake extends below the reservoir water level, a grout curtain has been installed to manage seepage into the excavation from the reservoir. Installation of rock bolts, mesh and shotcrete to support the walls is ongoing. The intake excavation is about 70 percent complete and is due to finish later this year.

Excavation of the gate shaft will start shortly and will be 50 metres deep and 20 metres in diameter at its widest point. A stop log gate will be constructed inside the shaft to allow the headrace tunnel to be isolated from the reservoir during future operations, if required.

## Ravine Road

One of the first projects to get underway in the early days of Snowy 2.0 was the construction of Ravine Road. Originally little more than a dirt track that even off-road vehicles struggled to navigate, the road was widened to a single lane for semi-trailers and then widened again to become a two-lane road providing safe, all-weather access to Lobs Hole.

The road now has an asphalt surface from top to bottom, with line marking, guideposts and signage being added. Slope support will soon be complete and safety bunds progressively removed as the guardrail is installed. Once Snowy 2.0 construction in the area is complete, the general public will be able to use the road to access a popular camping area once restricted to 4WD vehicles.



Aerial shot of Ravine Road, now an asphalt-sealed two lane road.



Joule Ridge accommodation facilities in Cooma.

## Joule Ridge

Joule Ridge, located in Cooma, is one of four worker camps accommodating more than 1,700 people across the project. The 126-bed facility is now fully operational, with 90 single rooms and 36 self-contained units. There are also communal facilities for recreation, dining and laundry, along with parking and landscaped grounds.

The accommodation investment is another significant contribution by Snowy Hydro to the local region's economy and supports the thousands of jobs created by Snowy 2.0.



# Building back better



A transformer on its way to Cabramurra for the new substation

The new Cabramurra township emerging from the devastation of the 2020 Dunn's Road bushfire demonstrates the value of building back better.

Along with the loss of property at Cabramurra and Selwyn ski resort, power supply to the area was significantly damaged. The Essential Energy 33kV overhead line extending from the Providence Portal substation to Cabramurra was all but destroyed.

In the three years since, the region has relied on a number of temporary power supply arrangements including Tumut 1 and Tumut 2 power stations, Snowy Hydro's backup diesel generator at Cabramurra, multiple small diesel generators spread around the village and 'Dorothy', a 500kW trailer-mounted diesel generator supplied by Essential Energy.

These interim sources helped with supply, but were not a long-term solution. With two motivated organisations and a detailed study involving regional stakeholders, it was decided a new substation located at Upper Tumut Switching Station would provide the best benefits for all.

Snowy Hydro and Essential Energy worked together to conduct project feasibility and detailed

design and deliver a brand new 330kV/11kV substation, along with the undergrounding of all 11kV and fibre communications infrastructure across the region to Selwyn ski field.

The decision to bury the 11kV infrastructure removed the need for overhead lines through Kosciuszko National Park between Providence Portal and Cabramurra township. This has enabled the return of about 50 hectares of easements back to vegetation. The upgraded power supply will also provide flexibility for future regional power demands if required.

The project's successful delivery is a win for everyone. It provides the region with a robust power supply, expanding communications infrastructure and reduced overhead power lines within the national park. For community members, there is now more park space to enjoy.

The new substation and Cabramurra village power supply was commissioned in December 2022. The underground infrastructure installation between Cabramurra and Selwyn ski resort is in the finishing stages and will be powered up by early 2023.



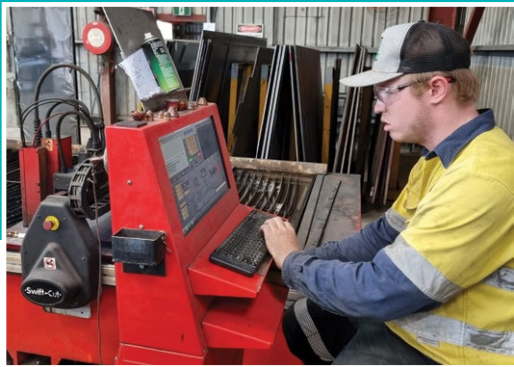
Aerial view of Cabramurra's new substation



Cabramurra's new substation provides the region with a robust power supply



## LOCAL BUSINESS



Above: Apprentice Jarrod Manns at work  
Right: Roddy Engineering GM Michael Dean



Roddy apprentices Lachlan Piper, Hunter Boyd, Samuel Erskine and Jackson French

# 21st century engineering

When Roddy Engineering's General Manager, Michael Dean, stands in front of a class of high school students to talk about career opportunities, he has a fair idea how they perceive the industry.

"Most people think: big, dirty, hot – but that's not who we are any more so we have open days and invite students to come and see what we do."

In the almost three decades Roddy Engineering has worked with Snowy Hydro, the traditional engineering workplace along with Roddy's expertise, has changed significantly.

"We have gone upstream in the supply chain. We do design, drafting, engineering, project management, manufacture, install and ongoing asset maintenance. It's not only fabrication and welding. When I started three years ago we had 15 employees and now we have more than 50.

We're growing with our customers to meet their needs."

On most days, the Tumut-based company has six full-time workers on Snowy Hydro projects (outside of Snowy 2.0) ranging from transformer maintenance to asset upgrades with jobs lasting a few days or several months. One project, the safe access program, involves modernising worker access routes such as walkways and platforms first put in place in the 1950s and '60s when the original Snowy Scheme was built.

Roddy recently achieved ISO accreditation, which means the business meets internationally recognised quality standards for its products and services. Michael believes that 'uplevelling' of their work practices stood them in good stead to handle rapid growth and to secure bigger projects, including on several of the Snowy 2.0 sites.

For students at McAuley Central and Tumut High schools, Roddy's growth has opened up new opportunities for future apprentices and trainees, along with work experience and mentoring for students through the Clontarf Foundation. Michael says the company's success has given them the confidence to go to schools and offer longer term options.

"We have 15 apprentices and trainees and have committed to taking on four or five each year. Our emphasis on training and education supports local kids from high school and it's also part of our growth strategy, making sure we can grow our workforce.

"A trained apprentice can stay in the trade or they can do other things like drafting or go on and study mechanical engineering. We encourage students to come in for a career path not just a job for four years."





## EDUCATION & TRAINING

# An eye on the future

Students in their final years of school trying to decide which career path to pursue often find the answer in work experience. Programs ranging from the well-established week or fortnight in year 10 to longer more immersive programs in years 11 and 12 can help young people appreciate the sort of work that matches their interest.

School-based apprenticeships and traineeships (SBAT) take the concept of work experience a step further by providing students with an opportunity to enter the workforce part time while they complete their HSC – and they earn an income for hours worked.

At Future Generation, the principal contractor for the construction of Snowy 2.0, the first round of SBATs has just completed both year 12 and the two-year SBAT program and joined the workforce.

Of the cohort of seven students, one decided on a career in shearing and the other six completed the program. A typical week for the SBATs is one day onsite at Snowy 2.0's concrete segment factory, one day at TAFE and three days at school. Some students also worked weekends and during their school holidays. When schools were shut during COVID, the students were able to work full time as an alternative to online learning.

Since achieving their HSC and simultaneously completing their studies at TAFE, five of the students have secured full time employment. When apprenticeships come up, all graduates will be able to apply, bringing their new skills to the table.

Training Manager Aaron Reid says it's immensely satisfying to see the students progress to the next stage of their work life.

"It's very refreshing watching the students grow their careers into something successful and grasp their opportunities with two hands. I can't thank their supervisors and mentors Kyle Pullen, Afa Gafa, Tim Dean, Mick Courtney and the rest of the crew enough for taking these students under their wings and showing them what it takes to be successful in this industry."

Year 12 students **Luke Fely, Talon Kelly and Cameron Filtress** are in their second and final year of the SBAT program. They opted in at the start of 2022, along with four other students, hoping to learn more about what jobs exist in the construction industry, and to discover where their interests lie. All three are keen to secure an apprenticeship of some type, and while Talon and Luke are keeping their options open, Cameron is leaning towards becoming an electrician.

Their main task at Polo Flat is to glue rubber onto timbers used to transport the segments to Snowy 2.0 TBM sites. Other tasks include labouring roles across the site or administrative roles to learn about the business side of construction.

One thing all SBATs have in common is their appreciation of earning an income while they figure out their futures.





Future Generation Training Manager Aaron Reid recently accepted the NSW Education Department Director's Award in acknowledgement of Future Generation's contribution to vocational education at Monaro High School, and for providing outstanding opportunities for students.

**Alex Aitkenhead** is one of Future Generation's first SBAT graduates. He started at Polo Flat in 2021 and says he and a group of classmates were keen to join the program as they all wanted to secure a trade apprenticeship.

Now a full-time labourer onsite, Alex is completing his forklift, C6 crane and dogman tickets which will enable him to move into an operations role. His advice to students thinking about joining the program is to give it a try. "It's really good experience – if there's a trade involved or tickets, definitely give it a go."



Talon Kelly is one of three year 12 students completing his final year of a school-based apprenticeship



# Safe parking for long loads



Above and right: temporary long vehicle parking area in Adaminaby.

The impact of driver fatigue is well-established, with motorists encouraged to take frequent rest stops and where possible, share the driving on longer trips. Truck drivers with heavy vehicles must take extra measures and plan ahead to know where they can safely park their loads while they take a break from driving.

Plans by Snowy Monaro Regional Council to provide six truck parking bays in Adaminaby will enable drivers to pull over safely when travelling between Cooma and Tumut, including to various construction sites for Snowy 2.0.

The new parking bays, each three metres wide and 30 metres long, will be sealed and lit, allowing truck drivers to stop for food and drink breaks, stretch their legs or update their logbooks.

Snowy Hydro will contribute \$188,000 to support the Council's new truck parking facility, with construction expected to commence in early 2023. In the interim period, a temporary long vehicle parking area has been made available in front of the Big Trout statue in Adaminaby.

Along with the improved safety for all road users, the new parking bays will remove the need for trucks to park in the town's residential streets. A separate council project will provide permanent parking facilities in Adaminaby to accommodate cars towing boats or caravans and other recreational vehicles.

The two projects are scheduled for completion by April 2024, weather conditions permitting.





# A top spot to cool off

Snowy Hydro's new and improved community recreation space at Talbingo Reservoir has passed its first test, with visitors flocking to the picturesque picnic spot over the summer months.

The upgraded facilities include a safe swimming beach with better pedestrian access and car parking, as well as a large picnic shelter and open grassed areas. For the boaties, there is a widened two-lane boat ramp and new mooring pontoon.

Snowy Hydro contributed \$560,000 to the recreation area project, with the NSW Government investing \$850,000. Snowy Valleys Council managed construction of the project.

Formally known as the Talbingo Dam Recreation Area, the new facilities were inspected late last year by Dr Joe McGirr MP (Member for Wagga Wagga) and Mayor Ian Chaffey from Snowy Valleys Council. They were joined by students from the Tumut Clontarf Academy and Snowy Hydro's Chief Operating Officer, Roger Whitby.

This section of Talbingo Reservoir is a popular destination for locals and visitors, who enjoy fishing, water sports and swimming. The upgrade creates a safe beach for swimmers away from boating activity and plenty of grass to spread out a picnic blanket and enjoy lunch in the fresh air.



Above and below: Visitors enjoying Talbingo Dam's new recreation area over summer.



# Read all about it

60<sup>th</sup> edition for Snowy Hydro News!



Issue #2

When Sir William Hudson was overseeing construction of the original Snowy Scheme in the 1960s, he understood the importance of keeping the local community and stakeholders informed of progress. Members of the public were invited to tour the various sites and an internal Film and Photography department created an extensive visual archive that is still used today.

In 2007, the first edition of this publication, Snowy Hydro News, was distributed to the Snowy Mountains community, continuing the practice of sharing news about power stations and penstocks and Snowy's many regional activities. The magazine began at an exciting time for the Scheme, with construction of Jounama Small Hydro, one of the biggest projects since Sir William's days.

Project manager at the time, Peter Hill – who is still part of the Snowy team – wrote a number of Jounama updates in the early years of the magazine and recalled the high level of public engagement. “There were local stakeholder meetings with big turnouts to hear about jobs and opportunities and things like the approvals process. People were interested and this newsletter was a good tool to get the information out to them.”

Fifteen years later, Snowy Hydro News has a huge new project to report on with Snowy 2.0, but the newsletter is also a useful source of information on youth education programs, community events, major asset upgrades, the energy sector and human interest stories. Keep an eye out for printed copies distributed throughout the region, or visit our website to read the latest edition online. [www.snowyhydro.com.au/news/newsletter/](http://www.snowyhydro.com.au/news/newsletter/)





# Maddy Most Valued

Maddy Proud (far right) with her NSW Swifts team mates in 2021

By anyone's measure, 2022 was a standout year for netball star and Red Energy Ambassador Maddy Proud, but the NSW Swifts co-captain sets an exceptionally high bar for herself.

"On an individual level it was probably one of the best of my career – to debut for the Diamonds is something I've dreamt of my whole life – but the Swifts didn't make the finals and that's always at the forefront of what I want to achieve, so that left me a little disappointed."

Maddy describes her last couple of years as a roller coaster. Despite being selected in the Australian squad in 2020 and travelling to New Zealand in early 2021, she wasn't named in the team. It was during last year's off-season while soaking up the sun on a European trip, Maddy found out her dream of playing with the Diamonds had finally come true.

"I woke up one morning in Paros in the Greek Islands to an email telling me I'd been picked in the team for both the New Zealand and the England series."

But there were a couple more twists ahead. Maddy made her

debut for Australia against New Zealand, was named player of the match in the England series opener, only to suffer an elbow to the face and concussion the game after.

And while the NSW Swifts missed out on a finals spot, Maddy picked up almost all the end of season awards including Most Valued Player.

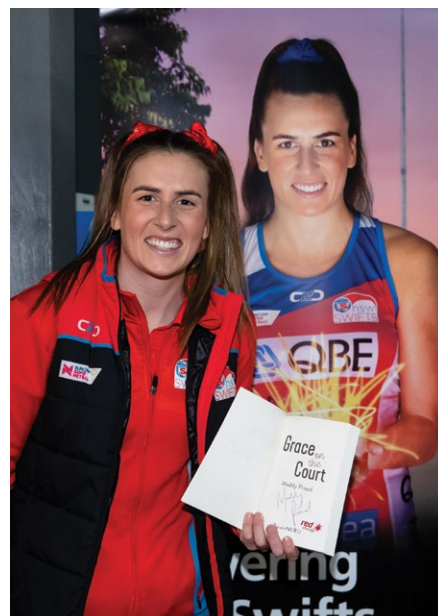
Beyond her training and playing commitments, Maddy is a high-profile promoter of the sport and an ambassador for Swifts sponsor, Red Energy.

"As soon as I met the team from Red it was like we'd known each other for years. I got to tour the Snowy Scheme - I always had a passion for science and renewable energy so to be part of it and get a first hand experience is something I will never forget."

"Maddy is a wonderful role model and embodies all of the values we admire as a business," says Rachel Friend, General Manager of Marketing and Sales in NSW for Red. "She is a tenacious competitor, a wonderful team player and is just great fun to be around."

Somewhere in her schedule, Maddy also finds time to write. The second book in her *Grace on the Court* series, aimed at girls in their early teens, was published last year – and there's a third in the wings.

"For me starting high school, sport was a saviour and so was reading. Sport gives you so many skills and teaches you so many life lessons so I thought if I could get young girls into reading a book and wanting to play netball, I've done my job!"



NSW Swifts co-captain Maddy Proud with her first *Grace on the Court* book



# Boost your brilliant idea

If you have a clever idea to help make the Snowy Mountains region even better, it's time to polish your pitch and apply for a grant through the Snowy Hydro Community Grants program.

Grants of up to \$10,000 are on offer to support and help deliver positive outcomes for regional communities in the areas of Education and Development, Health and Wellbeing, Regional Capacity Building and the Environment.

Applications for the current intake period must be in by 15 March 2023 with notification to applicants by 30 April 2023. Head to our website for all the details on eligibility and assessment criteria, and to access the online application form.

## Careers Day at Snowy

Snowy Hydro is an ideal employer for anyone seeking a career in the fields of science, technology, engineering and maths (STEM). Students approaching the career decision-making stage and keen to learn more will be invited for an inside look to see what Snowy has on offer.

The Year 9 Careers Day, held at Snowy's head office in Cooma, is an opportunity for students to step behind the scenes and see what engineers and climate scientists do on a day to day basis. There will be talks from experts on career paths in STEM-related fields along with hands-on activities.

Save the date! This special careers day will be held on 30 March 2023, supporting schools in the Snowy Monaro, Snowy Valleys and Towong local government areas to participate in quality STEM learning experiences.



Lake Light Sculpture  
Photographer Boen Ferguson, 2021

## It's showtime

Autumn in the Snowy Mountains marks the start of seasonal festivities celebrating agriculture, local legends and our prize-winning produce. Snowy Hydro is proud to be part of the Mountains community and help support a variety of regional events.

11 MARCH

Adelong Show

11 MARCH

Cooma Show

6-9 APRIL

Lake Light Sculpture

13-16 APRIL

Man From Snowy River Bush Festival

28-29 APRIL

Falling Leaf Festival

20 MAY

Batlow Ciderfest





## STEM school funding

Snowy Hydro's education program aims to foster career pathways for young people with a focus on science, technology, engineering and maths (STEM) subjects.

As further support, Snowy will launch the Local School STEM Fund with successful applicant schools receiving up to \$10,000 in funding. The funds are to support STEM-related excursions, student sponsorships, equipment and camps.

Schools in the Snowy Monaro, Snowy Valleys and Towong local government areas are eligible to participate in the Local School STEM fund. For more details visit [snowyhydro.com.au/localstemfund](https://snowyhydro.com.au/localstemfund)

Applications close on 3 March 2023 with notification of outcome by 30 March 2023.



### H2o Holiday fun in the Hunter

The team from Snowy's Next Generation Hub recently visited the Hunter region of NSW to deliver sessions from the H2o holiday program to primary school students in Cessnock and Morisset.

The program is part of Snowy Hydro and Red Energy's support of the Police Citizen Youth Clubs

(PCYC) and included a tailored learning package for 5-12 year olds. The hands-on activities help students understand the water cycle, snow-making and engineering.

The emphasis on science, technology, engineering and maths aims to introduce and provide experiences to explore the idea of a STEM career. The kids had a blast learning something new while having fun!

Students enjoying H2o holiday fun in the Hunter region.





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