

March 2015

snowyhydro

NEWS

Colongra: 667MW gas in NSW

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ISSUE 28

2015: Year of delivery



CEO, Paul Broad, welcomes 2015 and calls it the 'year of delivery' for Snowy Hydro after a big year of acquisitions and growth in 2014...

What a year 2014 ended up being with the purchase of Colongra Power Station, the largest gas-fired generation plant in NSW, right on Christmas Eve. This is a fantastic addition to our company, and as a peaking plant, is an excellent fit with Snowy Hydro's asset portfolio. Snowy Hydro now owns and controls 1,287 megawatts (MW) of gas-fired peaking power stations. This acquisition, along with our recent purchase of Lumo, is a significant step forward in achieving our vision of being the 'fourth pillar' in the National Electricity Market.

We have been in the market for a gas fired power station in New South Wales, similar to what we have in Victoria, for some time. Colongra puts us in a great position to leverage our success in the Victorian gas market into NSW, and to better diversify our fuel and transmission risks. The Snowy

Scheme is located in the middle of the transmission network between NSW and Victoria, so that if any crisis emerge in that network and we can't get generation from the Scheme into the grid, we now have the capacity to service our customers and manage that risk by having this generation capacity in NSW.

Colongra is an outstanding power station. It is relatively new with 667 megawatt capacity and is also dual fuel; so it can switch between gas and diesel seamlessly. I recently visited the plant up in the Hunter Valley and I was very impressed with not only the quality of the plant, but also the great team of people that have now joined the Snowy team.

This purchase signals the completion of the acquisitions that we outlined in our strategic plan.

Snowy Hydro now owns and controls 1,287MW of gas-fired peaking power stations...

We wanted to grow our retail businesses; which we did through the purchase of Lumo. We also wanted to grow our generation capacity through gas in NSW; also achieved with purchasing Colongra, and grow our retail businesses aggressively in NSW through Red Energy, which has seen a 23% increase in NSW customers in the last six months.

This year is all about delivery - making sure the amazing assets of the Snowy Scheme deliver and perform as well as they always have; making sure our retail businesses in Red and Lumo grow aggressively; that our Direct Connect business, which is a great channel to market, delivers us the 100,000-150,000 customers we expect over the next few years, and that our gas assets are primed and ready to go whenever we need them to.

We are in the best possible position to achieve all, however I want to make sure that in whatever we do, the fundamental values that drive our wonderful business do not change. For example, safety of our people is paramount, and recognising the importance of being safe in everything we do - at work and at home - will always be my number one priority.

It is also a great time of year for the communities of the Snowy Mountains with all the great festivals and events that are happening. We are pleased to

support such fantastic community events including Cooma Show, Tumbafest, and Tumut Festival of the Falling Leaf. We also had two teams compete at the recent Lake Jindabyne Dragon Boat Challenge which was a great success. I encourage everyone to get out and experience the best the region has to offer through these events.

On a final note, we have had some changes to our Board of Directors recently. After eight successful years on the Snowy Hydro Board, Bruce Hogan decided to step down from his role as Director and Board Chair as at the end of January. Bruce has provided invaluable guidance, leadership and strategic advice to the Snowy Hydro Board and the Executive. I would like to personally thank him for his support over the past 18 months and wish him the very best for his next endeavours. Noel Cornish, who has been on our Board for three years, is our Interim Chairman. Discussions are currently underway with our Government Shareholders on a formal appointment, however I welcome Noel to the position.

2014 finished strongly and was a great year for the company. This is an exciting time of growth for Snowy Hydro and I believe that 2015 will be another very important year in Snowy's remarkable and iconic history.



Snowy Hydro welcomes the employees from Colongra Power Station to the Snowy Team.



Snowy Hydro CEO, Paul Broad, and former Chairman, Bruce Hogan.

What's going on with the Renewable Energy Target?



Boco Rock wind farm



A hot topic at the moment is Australia's renewable energy target, or 'RET'. Executive Officer Risk, Technology & Planning, Paul Smyth, explains what the RET is, and its future...

After forming government in 2013, the Coalition government commissioned a review of the RET. The review recommended a range of options, all of which would 'scale back' the renewable energy target. To date, the government has not been able to secure Senate support to amend the RET.

This political impasse is causing significant investment uncertainty and has seen new investment in large-scale renewable energy projects, like the recently opened Boco Rock wind farm near Nimmitabel, largely come to a stop. Some are even talking about the demise of the renewable energy industry.

What is the Renewable Energy Target?

Electricity generation is the largest single source of man-made greenhouse gas emissions in Australia. The RET was designed to ensure that renewable energy became a much larger contributor to the production of electricity in Australia and hence curb the growth in greenhouse gas emissions in Australia.

The RET scheme basically requires electricity retailers to source a certain percentage of the energy they sell from renewable generation, with the proportion increasing over time out to 2020. This in turn creates an incentive to build more renewable power generators. Without the RET there would have been very little investment in renewable power in Australia because our traditional power sources, particularly coal and gas, are cheaper.

The current renewable energy target for Australia, set in 2009, is to have 20% of electricity generated from renewable sources by the year 2020.

Importantly, at that time it was forecast that 300 terra watt hours (TWh) of electricity would be produced in Australia by the year 2020. Based on this forecast and a target of 20% renewable energy, the goal of the RET was for 60 TWh of renewable energy production in 2020.

After subtracting the 15 TWh of renewable generation already being produced at the time the RET first started, including 4.5 TWh from the Snowy Mountains Scheme, the increase in renewable energy production required by 2020 was calculated as 45 TWh. This 45 TWh figure was written into the associated RET legislation and became the legally binding target for the electricity industry.

In 2011 the 45 TWh target was split into two schemes with separate targets - the Large-scale Renewable Energy Target (LRET) with a 41 TWh target and the Small-scale Renewable Energy Scheme (SRES) for the remaining 4 TWh.

The split was done to encourage the growth of both the small scale technologies, such as solar panels, solar hot water systems and other small-scale renewable power sources that could be installed in homes and small businesses, and large scale renewable technologies, such as the big wind and solar farms.

Uncertainty surrounding the future target for renewable power generation has caused investment in renewable power in Australia to plummet.

The future of the RET

Various interested parties have lobbied for changes ranging from abolishing the RET altogether to retaining the RET and increasing the target and everywhere in between. The Australian government is proposing to reduce the LRET target from 41 TWh but is not proposing to change the SRES.

The Australian government has been unable to negotiate any change to the RET with the other political parties and a stalemate has prevailed for months. Recently it decided to have another go at resolving the impasse. Presumably a political compromise will be reached but how long this will take and what the LRET target will be is uncertain.

A big factor in the debate is the fact that Australian electricity production in 2020 is now projected in the range of only 200-250 TWh, well below the 300 TWh assumed when the target was set.

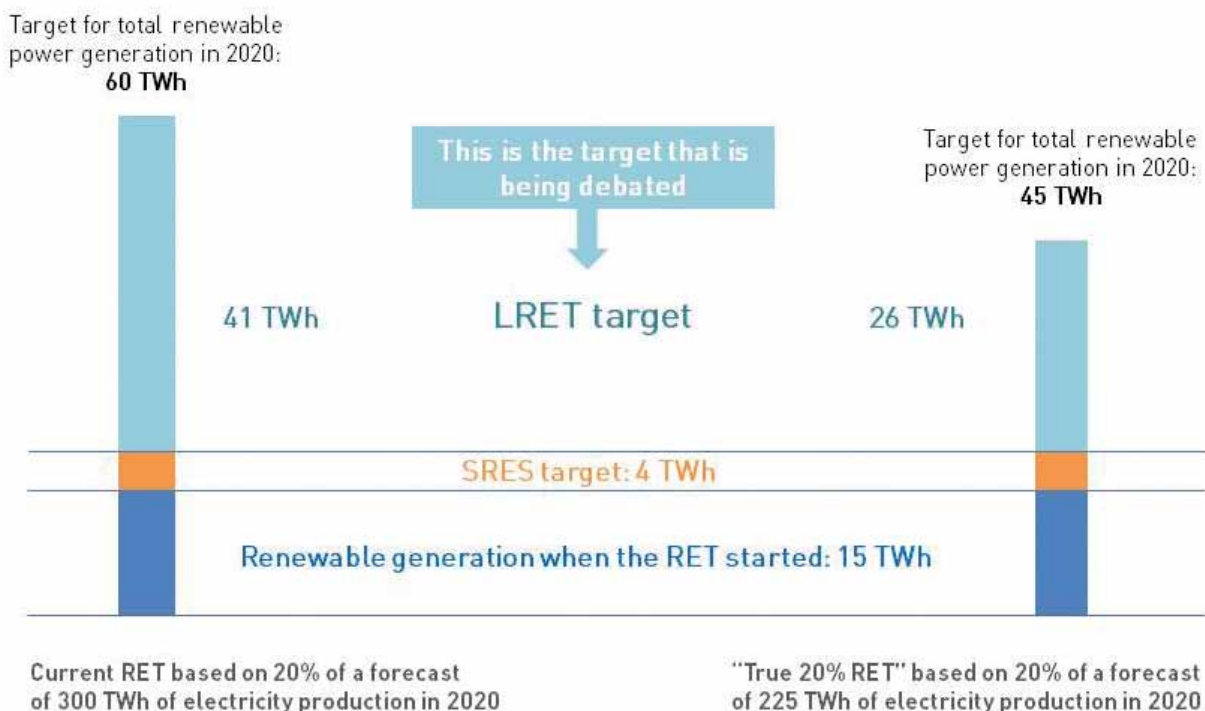
If a mid-range figure of 225 TWh production and a 20% renewable target was adopted, or a "true 20% target", then the LRET target would be reduced from 41 TWh to only 26 TWh (refer to diagram below). Obviously this would result in a dramatic reduction in opportunities for developers of large-scale renewable power projects, including for example various wind projects proposed in the Canberra, Cooma-Monaro and Yass regions.

Snowy Hydro and the Renewable Energy Target

The RET made it commercially viable for Snowy Hydro to build the 1.1 MW Jindabyne and 14.4 MW Jounama hydro stations within the existing Snowy Scheme. It also provides some small additional benefits from maintaining and improving the efficiency of the Snowy Scheme assets, for example by upgrading the main turbines as is occurring under the Scheme Modernisation Program.

However, large scale wind and solar generation are very expensive to build and under its current ownership arrangements, Snowy Hydro has limitations on the amount of capital it has access to. This means that Snowy Hydro must give careful consideration to the availability and prioritisation of its capital investments. In recent months Snowy Hydro has prioritised capital investment in growing its retail customers by acquiring the electricity and gas retailer LUMO Energy and in generation by acquiring the Colongra gas fired peaking power station in NSW.

Finally, whatever the RET target turns out to be, Snowy Hydro's flexible hydro and gas-fired generators and hydro pumping capability will play an important role in supporting any growth in wind and solar power by helping the national electricity market to manage the variability in energy production from these renewable power sources.





Talbingo Reservoir

Recognising and rewarding our apprentices...



Snowy Hydro has a number of apprentices working throughout the company and each year holds an awards ceremony to recognise apprentice excellence. **Chief Operating Officer, Ken Lister**, has the details of the 2015 awards...

In late January, Tumut hosted Snowy Hydro's annual Apprentice Awards Dinner that recognises and celebrates apprentices finishing their training, those with outstanding skills and workmanship, as well as those who are just commencing their apprenticeships with Snowy Hydro.

Snowy Hydro's Apprentice of the Year Award recognises an Apprentice who greets tasks with enthusiasm, and completes them to a high standard. This year, a new award, Snowy Hydro's Apprentice Coach of the Year, was introduced to recognise an individual who demonstrates outstanding mentoring abilities to apprentices, and exhibits the values and behaviours expected of all personnel. Snowy Hydro would like to congratulate Jethro Peck as Apprentice of the Year, and Ben Klippel as Apprentice Coach of the Year.

Jethro, who is based in Talbingo, has demonstrated high standards of work throughout his four year apprenticeship, and counts working with the variety of tradesmen as the highlight of his apprenticeship. Upon notification of his achievement, he said he was "very grateful and a little surprised to win the Apprentice of the Year Award."

Ben has made a significant impact on Snowy Hydro apprentices and describes receiving the award as "a surprise, privilege, and honour". He commends all of the apprentices' ability to adapt to their changing workplaces throughout their yearly rotations and finds the highlight of his position is observing the development of the apprentices and their application of skills.

Congratulations again to Jethro and Ben for their significant achievements, who both demonstrate Snowy Hydro's standards of excellence.



Chief Operating Officer, Ken Lister, presenting the Apprentice of the Year award to Jethro Peck.

Congratulations to our Apprentices for their significant achievements in demonstrating Snowy Hydro's standards of excellence.

Welcome to our 2015 trainees...



Each year Snowy Hydro offers office administration traineeships to local school leavers. **Learning and Development Advisor, Lyndal Cass**, has the inside story on what it is like as a new trainee...

January 2015 marked the end of our 2014 Trainees' time at Snowy Hydro, but also introduced a new group of high school graduates to Snowy Hydro in Cooma. Five young women and one young man were welcomed into our Information Control Systems, Information Resources, Health & Safety, Operations, and Corporate Affairs & Community Relations teams for a one year traineeship. They will learn a range of skills including communication skills, reception duties, IT skills and more that are unique to the business unit they form part of. The program also includes studying at Cooma Tafe one day a week for Certificates III & IV in Business Administration.

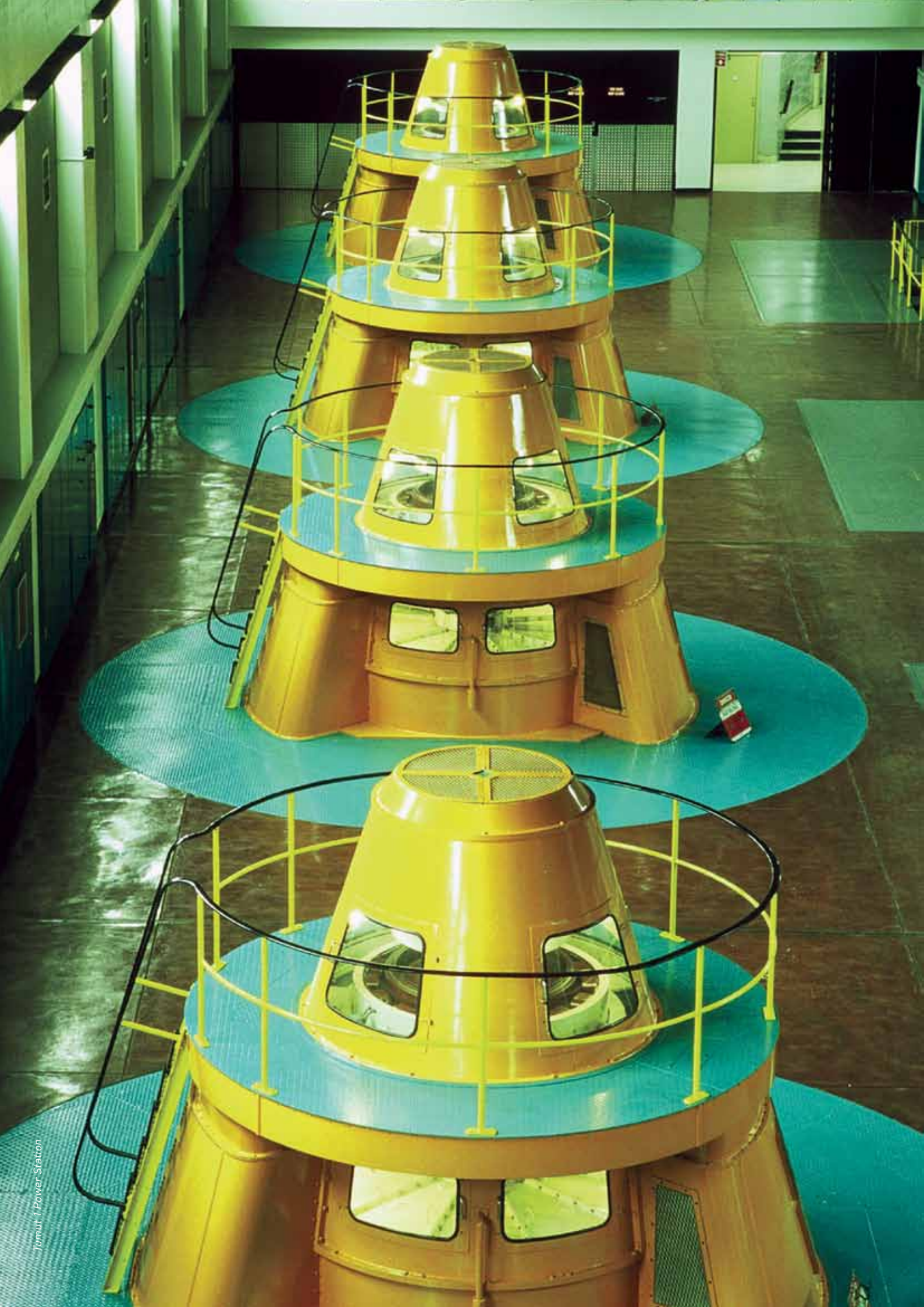
Snowy Hydro Traineeships are offered annually to school leavers from the local area. The traineeships provide an excellent opportunity for school leavers to gain valuable experience in a corporate environment for 12 months before moving on to tertiary study or their chosen career.

While Henry, Milly, Sammy, Kali, Meg and Kailey have only been working with us for little over two months, they have already learnt many skills and a lot about the company and its culture.

A highlight for Milly and Henry so far has been a trip to Geehi and the regions, which they described as a great opportunity to develop their understanding of Snowy Hydro.

Many of our trainees were quite surprised about the company and its working environment. Meg, our trainee at the Discovery Centre, said that her customers always surprise her, as she meets new people everyday that she can share information about the Scheme with. Kailey, on the other hand, was surprised about "the variety of positions, systems unique to the company, and the impact Snowy has on the community".

It has been great to see the new trainees settle so quickly into their roles. I hope that their time at Snowy Hydro enables them to gain work skills that they can take into the future.



Scheme Modernisation commences at Tumut 1



Snowy Hydro's Scheme Modernisation Program continues and 2015 sees the commencement of works at Tumut 1 Power Station. **Manager Strategic Asset Management, Darren Davis**, has more...

This year will see the continuation of our Scheme Modernisation program with Tumut 1 Power Station, located near Cabramurra, next in line to be refurbished and upgraded. Tumut 1 Power Station is located 366 metres below ground, which creates a number of logistical challenges, requiring detailed and intricate planning to ensure the works can be completed safely and efficiently.

The Tumut 1 modernisation works are worth a total of \$68 million and will be completed over the next four years. There are three main parts of the work: refurbishment of the generating units, upgrade of the turbine capability, and replacement of major systems & components.

Refurbishment works include the overhaul of main inlet valves, turbine components, generators, and main bearings of each of the units. Upgrade works will see the replacement of turbine runners, guide vanes, and generator cooler components - the higher capacity turbine runners alone will increase efficiency by approximately 4%, generating an additional 34GWh annually from the same volume of water. Finally, major systems & components to be replaced include the Control, Protection, Excitation, and Governor systems; along with the recently completed main transformer replacements.

Generating unit overhauls commenced this month, and are planned to conclude in mid 2018.

What is Scheme Modernisation?

Snowy Hydro's Scheme Modernisation Program is a \$400million program to increase generating capacity of the Snowy Scheme.

Planning for the program commenced in 2002, with site works starting in 2006 at Tumut 3 Power Station. The program sees the ongoing replacement of ageing technology. Some of the components have been operating since construction which commenced over 65 years ago.

Modernisation works include refurbishment and upgrades of existing plant, including the replacement of turbine runners - the large water wheel in each of the generators. These new runners optimise generation capabilities and improve efficiency of water utilisation.

In 2012 a major program milestone was achieved with the completion of the Tumut 3 Power Station upgrade - the largest in the Scheme.



Business and Education degrees on offer in Cooma...



2015 sees two degrees from two different Universities being offered at the Cooma Universities Centre. CUC Manager, Zoe Dawson, outlines how you can study 'distance with assistance'...

2015 is already gearing up to be an exciting year for the Cooma Universities Centre. There have been visits from local, state and interstate politicians, students graduating from their degrees, mentions in national newspapers and applications flooding in for the two face-to-face degrees being offered at the CUC this year.

There have already been fifteen applications for the Bachelor of Education (Primary Teaching or Early Childhood Teaching) degree, which will be commencing on March 9th 2015 at the CUC in partnership with CQUniversity. Students are looking forward to studying this world class degree with one of Australia's most innovative universities. In addition to engaging, up-to-date and comprehensive online content, students at the CUC will be supported throughout their study journey by a local expert in the field who will deliver a weekly tutorial, right here at the CUC.

In mid-February the CUC also partnered with the University of Canberra to deliver a unique and specifically designed degree, right here in Cooma. The degree, a Bachelor of Business Studies (Events and Tourism Management), has been structured to fit the needs of the local Snowy Mountains community with a focus on tourism and events. Similar to the Education degree, the Bachelor of Business Studies degree will be delivered via 'supported learning' - a combination of online content and face to face tutorials to further support students.

Not only has this opportunity created a buzz of excitement amongst potential students, but local businesses, ski resorts and Tourism Snowy Mountains are also looking forward to creating successful partnerships and practical opportunities for students.

To accommodate for these two inaugural degrees, and to continue to support all our other students studying via distance at the CUC, we are now offering extended open hours with swipe card access available from 7am right through to 11:59pm, seven days a week. This provides even greater flexibility to all students so they can pop in before and after work, or even when the kids are in bed!

It's not too late to sign up to study these two degrees, or any other distance degree from any university! Pop in and visit the CUC to discuss the best option for you.



L-R: CUC Board Member, Richard Clarke, Member for Monaro, John Barilaro, Deputy Premier of NSW and Leader of the National Party, Troy Grant, Mayor Dean Lynch and CUC Chairman, Duncan Taylor.

Degrees on offer in 2015:

Bachelor of Business Studies - Event & Tourism Management

As part of the Bachelor of Business Studies suite, the Bachelor of Business Studies (Event and Tourism Management) is delivered online and designed to prepare students for a leadership role in today's highly competitive, global business environment.

The core units will provide students with a range of general business knowledge common to all business career paths. In parallel to the core business units, students will study a major in Events and Tourism Management, designed to develop knowledge and skills relevant for those students seeking a career in the event and tourism industries.

Events considered, both in tourism and non-tourism contexts, may include sports, festivals, conventions, meetings, and community activities. Key elements of the course are the development of teamwork skills and the pursuit of workplace experiences to enhance the employability of students, upon their graduation, who are seeking careers in the diverse and evolving event and tourism industries.



UNIVERSITY OF
CANBERRA



Bachelor of Education - Early Childhood or Primary

The Bachelor of Education Primary and Bachelor of Education Early Childhood share a common first year and graduate students who qualify for professional registration as teachers throughout Australia.

CQUniversity's education programs are innovative and unique in their approach to learning. Whether you are looking to start your career, or widen and improve your employment prospects, CQUniversity can help you to achieve your goals.

In addition to building the professional knowledge and skills required to teach effectively in a wide range of contemporary educational settings, this program prepares teachers who have the dispositions for engaging in and contributing to the teaching profession through a commitment to ongoing professional learning.



If you would like to complete one of the above degree's contact us on:

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UNIVERSITIES CENTRE

From Jindabyne...



Events that highlight the b



Snowy Hydro is proud to support local festivals and events as part of our Community Partnerships Program. Manager Visitor Centres, Heath Woolley, recaps two of the best...

The month of February showcases two of the best events our region has to offer, the Lake Jindabyne Flowing Festival and Dragon Boat Challenge, and Tumbarumba's flagship event, Tumbafest.

The Lake Jindabyne Flowing Festival celebrated its 10th anniversary and a record amount of teams for the Lake Jindabyne Dragon Boat Challenge over the 14th and 15th of February. Market stalls, marquees and a sea of colour filled Banjo Paterson Park, and the crowd enjoyed the beautiful 25°C heat and clear skies. Over 500 paddlers raced in multiple divisions and competed in land-based challenges, testing paddlers on & off the water.

Snowy Hydro is proud to support the Lake Jindabyne Flowing Festival & Dragon Boat Challenge, sponsoring the school-based teams in the Junior Challenge, which had its largest amount of participants to date. More than 100 students represented Monaro High School, Snowy Mountains Grammar School (SMGS), St Patrick's Cooma, Jindabyne Central School, and even local Girl Guides on the day.

Forty Snowy Hydro & Red Energy employees and partners also took to the water to represent the company in two teams for the community and corporate teams' division, each competing in three 200m races against 10 other teams over the course of the day.

Team Snowy were the first to compete, achieving their best time of the day in their first heat, crossing the line in 58:98 seconds! They worked their way to the Major Final in their races but unfortunately finished at the back of the pack that afternoon.

Team Red made the minor final but unfortunately could not cross the line in the lead, but did achieve their best time of 1:00:29. Team Red did, however, place third in the team land-based challenges, and were awarded a bronze dog-tag for their efforts.

A huge thank you must be extended to the event organisers, lead by Jo Davis, for once again holding an event that is a highlight for the region. We look forward to next year's event.

to Tumbarumba...

est our region has to offer...

Once again, Snowy Hydro was also proud to be a major sponsor of Tumbarumba's flagship event, TumbaFest.

Tumbafest is always a great weekend out and 2015's event was no different. Tumbafest is a celebration of regional living. The event had a jam packed schedule of entertainment on the main stage as well as an array of local food and wine produce and market stalls.

Events are an important economic driver to local communities and Snowy Hydro's continuing association with the festival reflects our long standing and strong support for local communities and their festivals and events.

Tumbafest is a great example of what can be achieved when communities, council and businesses small and large work together for a common goal.

Snowy Hydro not only supports Tumbafest, we also support a number of other key regional Snowy Mountains festivals and is the major sponsor of our regions rescue helicopter, Snowy Hydro South Care.

Festival-goers spent the weekend enjoying entertainment from the likes of Sol Nation, The Mighty Yak, The Convicts and the internationally acclaimed Leo Sayer.

Congratulations must go to the Tumbarumba Shire, Tumbafest Committee, Sponsors and the public for making Tumbafest 2015 such a success.



The community teams battle it out on the lake for the Jindabyne Dragon Boat Challenge.



The crowd at TumbaFest enjoy the sounds of the internationally renowned performer, Leo Sayer, who was the headline guest at this years event.



GOOD THINGS ARE WORTH SHARING.



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If you're already a Red customer visit redenergy.com.au/referafriend with your Customer reference number handy (it's on the top of your bill) and we'll do all the work for you. Or simply let your friends know your Customer reference number when they sign up. If you're not already a Red customer join now and share in the benefits of Red, simply contact us on the number or website below.

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