Meeting note

EnergyAustralia Lithgow CCC Meeting

Date	07 September 2020	**Time**	5:00pm – 7:00pm
Chair	Brendan Blakeley, Elton Consulting	**Recorder**	Tara Howard, Elton Consulting
Attendees	Jamie Giokaris, CCC member Julie Favell, CCC member Alex Preema, CCC member James (Jim) Whitty, CCC member Aunty Helen Riley, CCC member Clr Joe Smith, Lithgow Council CCC Representative Lauren Stevens, Lithgow Council Michelle Blackley, EnergyAustralia Ben Eastwood, EnergyAustralia Greg McIntyre, EnergyAustralia Mick Hanly, EnergyAustralia	**Apologies**	Robert Cluff, CCC member Jill Cusack, CCC member

Item	Discussion Point
1.	**Welcome and introductions** » The meeting commenced at 5:00pm. » Brendan welcomed all participants, including an acknowledgement of country.
2.	**Review of notes from previous meeting** » Brendan called for comments on the previous notes. » There were no additional comments noted. The meeting notes were adopted. <u>Answers to questions/actions arising from June meeting:</u> *Q – Page 71 McMahons Report showing a graph and locations of leaching entering Neubecks Creek at D and between F & G. What is the rate of flow that is leaching combined? What is the actual salinity level? (noting on Page 73 of the report – "Pumped groundwater quality is likely to be in the order of 5,000 to 20,000 EC, pumping volumes up to 2ML/d are anticipated").* » Ben: In the report they used modelling to quantify the flow of groundwater that is coming in to Neubecks Creek. These estimates are around 0.6 to 6l/s. Ben highlighted that these are estimates based on groundwater flow, hydrogeology and flows into the creek and these estimates will be firmed up when drilling takes place and the production wells are put in. The actual salinity level of Neubecks Creek itself is reported as part of the annual environmental management plan report. The salinity ranged from low 200's up to 600µS/cm throughout the previous 12-month period. *Q – Julie: How many megalitres a day is 0.6L per second?* » Ben said reflecting the range of inflows, this equates with 0.5 to 2ML/d. *Q – Julie: Has the leaching been happening since 2017 as it was detected 3 years ago?* » Ben answered that the leaching was detected at an onsite monitoring bore designed to be an early warning system. The idea of this project is to intercept the groundwater that contains the leachate by putting in a series of groundwater pumps. *Q – Julie: When was it first noticed that it was entering Neubecks Creek?* » **ACTION:** This question is to be taken on notice.

Q – Julie: The part of the response to the question about the "Pumped groundwater quality is likely to be in the order of 5,000 to 20,000 EC, pumping volumes up to 2ML/d are anticipated" is confusing in comparison to the lower salinity levels of 200's to low to 621 µS/cm.

» A: Ben said that EnergyAustralia model and plan for the worst-case scenario that could be experienced in the groundwater that is intercepted and that would need to be transported back to a lined dam. Within the creek the groundwater would be diluted and it is highly unlikely to ever get to this level.

Q – Julie: It is possible that the salinity level could be between 5,000 to 20,000?

» Ben said that it is possible but very unlikely.

» Greg added that it is important to note the figure is for the salinity level of the groundwater that could potentially reach Neubeck Creek, it is not the salinity in Neubecks Creek.

Q – Julie: Is it known if the salinity has reached that level in the Creek?

» Greg: The creek is monitored on a regular basis. The results from the monitoring period from 2019-20 shows that the salinity levels ranged from between 272 to 621µS/cm. The purpose of the project is to intercept the potential high salinity leachates before they reach the creek.

Q – Julie: If the level of the leachate reached an alarming level, is there a plan in place to deal with that?

» Greg: We are currently implementing the plan which is to intercept the groundwater leachate before it gets to the point that we have that occur. Installing the bores means that there is the capability to intercept the high electro conductive water before it enters the creek. EnergyAustralia is preparing for that possibility by installing the bores to intercept the groundwater leachate before it enters the creek.

Q – Julie: In the previous June 2020 meeting notes, page 13 "The review of information to date has shown vertical migration of salts and metals through the ash profile at the Mt Piper Repository, which is derived from brine placed with the BCA". Could the Committee have the actual listing of the individual salts and heavy metals information?

» Ben noted that the groundwater and surface water monitoring results are included in the appendix of the Monitoring report for Mt Piper. EA is transparent and has ensured that this information is available in its annual performance reports.

Q – Julie: The report was very complex and it was hard to understand the technicalities within the report. I am not a scientist. Can examples be given of some of the heavy metal salts?

» Ben said there are many analytes monitored, in particular Chlorides, Sulphates, Boron and Nickel are some of the trace anolytes and metals targeted that may indicate water is influenced by brine.

Q – Julie: How about Mercury, Arsenic, Barium?

» Ben answered that many other anolytes are monitored but they are not metals generally associated with the brine waste water. Other metals are monitored.

3. **Site update from EnergyAustralia**

Site Safety update:

» Greg discussed the safety performance for the year to date.

» The safety performance has been very good to date with only two minor lost time injuries.

» There was a rise in Total Injury Frequency Rate earlier this year but this is trending down as per the graph on p. 19 of the attached presentation. This is important as we come in to the planned outage period.

» The site COVID-19 management plan is very comprehensive which is particularly important going in to the next major outage.

- EnergyAustralia are providing leadership in managing the risk of COVID-19 and have support from contractors in managing the risk of COVID-19.
- EnergyAustralia have been encouraging contractors to engage local people as much as they can. UGL, the main contractor, have over a 15% recruitment of local people from their total outage workforce.

Q – Julie: The people employed from outside the area, are they going in to quarantine before they come to the site?

- Greg: If they are coming from a hotspot, they will be required to quarantine and isolate as per NSW Health Guidelines. This includes international visitors coming from Japan for the outage, who will be required to be in quarantine. Staff and visitor quarantine will cost an extra $1MIL to the outage.

Q – Julie: Will this be subsidised from the government?

- Greg responded no.

Q – Julie: Will people coming from other areas have a permit to show that they are able to come on site?

- Greg: Yes, EnergyAustralia are organising all applications for any permits through the NSW Government and Border Security for people travelling from interstate and overseas.

Q – Joe: Many of the community are interested to know about the management of COVID-19 on site. Are workers being temperature checked? Can you put out some media to keep people informed about the management and protocols?

- Greg: This will be addressed later in the meeting.

<u>Pinedale Mine update:</u>

- Ben provided an update on the continuing care and maintenance of the site, noting there haven't been any major environmental incidents.
- The rehabilitation of the bund has not been affected by the drought. The plants are in bloom and progressing well.

Q – Julie: The Bursaria site, how is that going?

- Ben responded that one of the three sites that is monitored was impacted quite badly from the bushfires. The other two sites appeared to be doing well.

Q – Julie: How about the butterflies.

- Ben: The butterflies are currently being monitored, with the monitoring happening in the previous two weeks.
- **ACTION:** Provide an update on the September 20 monitoring round of the Bathurst Copper Wing Butterfly at the next CCC.

<u>Water Management Update</u>

- Ben discussed the water levels in the catchment.
  - Lake Wallace has been spilling in the last couple of weeks. Oberon Dam level is at 26.46% which is still quite low.
- Blue-green algae has reduced during the wetter period that we have had. There has been one Green alert in Thompsons Creek Dam. There is no evidence of Blue-Green algae in Lake Lyell and Lake Wallace.

Q - Brendan: Last meeting you talked about controlled environmental flows being released from Lake Lyell down the Cox River. Did they happen?

- Ben answered that yes, that occurred over a four-day period. Just over 1000/Ml of water was released down the Coxs River from Lake Lyell.

<u>Market Update</u>

- Greg provided an update on the energy market including the impact of COVID-19 and renewables on demand – refer to p. 19 of the attached presentation.
  - It is an interesting time in the energy market. The sunny, windy weather today saw energy prices at $0 or less. This is one of the impacts renewables is having on the energy market.
  - In the graph on p. 20 of the attached presentation, the black you can see is the reduction in megawatts being generated by black coal in NSW.
- COVID-19 has had an impact on demand. There has been quite a significant drop from our commercial and industrial customers but we have seen a reciprocal increase from our residential customers.
- There has been an increase in generation from Mt Piper for a number of reasons including offsetting the decrease in supply form other generators which has reduced quite significantly.
- The peak load average is dropping. This is based on the impact solar and wind power is having on the market, keeping in mind that the inputs from solar and wind will increase to 6,000MW over the next 2 years, due in to the market. That said there is still a major need for power generation in the morning and evening peaks when solar starts to leave the system.
- The average price of power is dropping. Importantly as renewables such as wind and solar are in play during the daytime, the price of power is as low as it can go. As the wind dies down and the sun goes down, coal and gas need to pick up the demand which increases the price.
- We are above budget in our generation. There is also more available, with the unbudgeted upgrade works taking place at the beginning of the year, we are 98.88% available. This is not necessarily utilised. Being available at this level is world class.
- The availability curve shows the rectification works on Unit 2 earlier in the year has increased the availability. It has also managed the load placed on Unit 1.
- Greg described what is called the duck curve. Refer to p. 25 of the attached presentation.
  - The graph shows how from 2015 there has been a reduction in demand right across the national electricity market. The graph shows that the evening and morning demand peaks are still high.
- Greg also described the renewables network. Please refer to p. 25 of the attached presentation and the map of Australia showing the renewables network in orange and yellow. There is a lot of work being done to create connectors that will secure the eastern seaboard network from Queensland through to South Australia.

<u>Operations (Site) Update – Mt Piper Operations:</u>

- Greg described that the key to operations is maintaining operations on Unit 2 and preparing for the Unit 1 outage.
- There are strong deliveries at Springvale and deliveries coming from Airly.
- The Lidsdale Siding unloader is operational.
- *Q – Julie: Is Springvale still meeting its quota?*
- Greg: EnergyAustralia is using Airly to improve the quality of the coal at Mount Piper. There have been reports that they have been experiencing quality issues with Coal at Springvale for a while.

4. **Project updates from EnergyAustralia – existing and planned**

<u>Wallerawang Sale:</u>

[redacted]

[redacted]

- This section has been redacted as it is Commercial in Confidence. Once the information is public, it will be re-inserted in the minutes.
- Greg explained that part of the site will be repurposed by BetterGrow for building an industrial eco-hub. Please see the map on p. 31 of the attached presentation.

Q – Brendan: Will BetterGrow resume all responsibilities for what happens on the site, particularly for liaising with community members.

- Greg: Yes, once BetterGrow take over Wallerawang they will be responsible for communicating with community members.

Q – Jim: The original dam that has a lot of water in it, will that still be managed by the government?

- Greg: Yes, the government will take responsibility of that and manage it appropriately.

Q – Jim: Regarding the pine trees will they be managed by BetterGrow?

- Greg confirmed that EnergyAustralia will hand over all access and management responsibilities.

Lamberts North Ash Placement Project:

- Ben: There has been no ash placement in the Lamberts North project area in the last three (3) months. This is because the ash has been sold or used to condition the brine wastewater disposal.
- No complaints or incidents have been recorded since the last meeting.
- The Revised Water Management Plan has been approved by NSW Department of Planning, Industry, and Environment in April 2020.

Q – Julie: Where is the Ash going to?

- Michelle: It is getting sold mainly to concrete companies and added to the brine for disposal to the Mt Piper Ash Repository.
- Greg: The more ash being sold for beneficial reuse the better.

Q - Julie: How much did Mt Piper's Ash repositories increase by?

- Greg: this question will be taken on notice for the next meeting.
- **ACTION** – Answer to be provided in the next meeting to quantify the increase in Mt Piper's Ash repository.

Q – Julie: Has Mount Piper Ash repository reached its capacity?

- Greg: Mount Piper Ash repository has not reached its capacity. EnergyAustralia also utilises Lamberts North to supplement Mt Piper Repository.

Community Engagement Program

- Michelle explained that Round 2 Community Grants have recently closed.
  - Nine applications were received and are currently being reviewed.
  - The CCC will be advised of the successful recipients at the next meeting.
- Sponsorship and donations have really slowed down due to COVID-19 restrictions.
- EnergyAustralia have recently provided water tanks to Barton Park Arboretum.
- New kits were also recently provided to Cooerwull Public School's Ready Set Go Kindergarten Transition Program.

Q – Julie: Does grant funding go toward educational interpretation signage? Lithgow Environment Group is working with Forestry Corporation and Local Land Services for regeneration of Long Swamp,

which is listed as an Endangered Ecological Community under both state and federal acts. Could funding be granted to LLS to assist with the signage needed for this area?

» Michelle: requested Julie advise Huw Evans from LLS to contact the EA team as it sounds like the signage would meet the criteria.

Comment – Aunty Helen: There has been a lot of destruction of some important Aboriginal sites and we've been talking to OEH, Council, National Parks about getting cameras and signage.

» EnergyAustralia has been providing funding to get the Lithgow City Rangers Park separated from the Wallerawang Power Station. A lot of work has gone in to this due to issues like subdivisions.
  > This funding has included plumbing and electrical work for the facilities which means they are now independent of the Wallerawang Power Station.
  > The Team is doing well in the competition.

» The WorkPlace Giving Program has provided a total of $36,725.
  > This has been donated to EnergyAustralia's local charity partner, CanAssist since its launch.
  > COVID-19 has caused disruption to the fundraising activities for CanAssist. EnergyAustralia will continue to assist them, as one of their partners.

» EnergyAustralia continues with employment opportunity and training programs.
  > There are currently four apprentices and one trainee.
  > COVID-19 has made it difficult with training due to social distancing and other protocols. EnergyAustralia has been working with TAFE so the apprentices and trainees can continue with their coursework. EnergyAustralia is providing additional support such as providing assistance for study to continue remotely.
  > Since the last meeting, two people have commenced work at Mt Piper: One in the Safety Team and one in the Purchasing Team. A warehouse role will also be filled to help with Outage preparation and delivery.
  > Two vacation students are also part of the team. These students will continue with their studies while gaining valuable workplace skills.
  > Training has recently been conducted 'in house' for the first time in 15 years through the Unit School. This has traditionally been done by TAFE. The course included work on the components and operation of the boiler, turbine, generator/electrical theory and ancillary plant and is designed to ensure that the next generation of operators is up to speed with what needs to be done to successfully run and maintain the plant.

<u>Update Ash Repository Groundwater Management</u>

» Ben provided details on the groundwater interception project. The project will inform EnergyAustralia of the long-term mitigation options and the closure strategy of the Mt Piper Ash Repository.

» The proposed project will involve the installation of groundwater extraction wells near Neubecks Creek and extraction of groundwater inflow from Neubecks Creek.

» The project will involve capturing the water and piping it underneath the Castlereagh Highway. EnergyAustralia has started the approvals process under the State Environmental Planning Policy (SEPP 55).

» The CCC will be provided a link to the Review of Environmental Factors (REF) when it becomes available in November.

» **ACTION:** Link to the published REF to be provided to the CCC.

Q – Julie: What is the rate of the transfer in megalitres under the Highway?

» Ben: This was discussed earlier as per the questions above. As it is groundwater, we anticipate it will be trickling in at a slow rate. Once the new test bores have been installed and the monitoring commences, we will be able to provide more detail.

Q – Julie: Will it be a requirement to keep monitoring the sub-structure of the ash dam repository base given that there has been leaching?

» Ben: There is an existing monitoring program in place for groundwater and surface water. An additional 14 groundwater monitoring bores have been installed around the ash repository dam as part of the BoreD10 water study. A further eight bores have been installed around the ash repository this year. This is a comprehensive network of monitoring points.

Q – Julie: Even when this [program] is finished, will they continue to be monitored?

» Ben: These bores will continue to be monitored for the remaining life of the power station. There are performance measures in place to monitor the water quality to make sure the creek water quality is maintained.

Update Rail Unloader Project:

» Greg provided a summary of the project.
  > The project is progressing and the team is working hard to put out the invitations to tender. The tender has been released.
  > EnergyAustralia did the site inspection with a drone rather than bring people out on site and to ensure that tenderers were kept informed.
  > An investment decision is still to be made, by late 2021.
  > Additional Aboriginal heritage work is currently being undertaken at Pipers Flat, where the previous work identified artefacts

Comment – Aunty Helen: A lot of artefacts have been found in the Creek.

Update Water Treatment Project

» Greg provided detail on the water treatment facility, which treats about 35ML/day.
  > The facility has treated up to 42ML/day. This means the facility is less reliant on water from the environment such as the Fish River or the Coxs River systems.

» EnergyAustralia is still doing work on providing storage ponds for the mixed salt water or brine water which is stored prior to being crystallised.

» *Q – Julie: With the treatment of 35ML/day, what happens when you don't use the full 35ML/day?*

» Greg: There is sufficient storage to ensure that Springvale will not be flooded.

Q – Julie: In the case when the 35ML/day is not used and that water is still coming through, what happens to the Creek water?

» Greg: In the event the water is not used, there is the capability to slow the water treatment facility down.

Update Mt Piper Energy Recovery Project

» Greg: In addition to the work done by ReGroup, Mick Hanly has been doing an excellent job with the public exhibition process out in the community talking about this project. See detail on p. 53 on submissions and analysis of submissions.

» Ben said that the submissions have been provided to the NSW Department of Planning, Industry and Environment (DPIE). These are up on the DPIE website. DPIE is doing their assessment and we are expecting a determination sometime within the next month to six weeks.

Q – Julie: Will it go to a PAC after the release of DPIE's assessment?

» Ben said this will very likely happen.

» Michelle highlighted the site location of the plant, which can be seen in p. 39 of the attached presentation.

5. **Projects in focus:**

Lake Wallace – Update from Council

- Lauren presented the Lake Wallace Foreshore Management Options Assessment on behalf of Lithgow City Council. Lauren highlighted that this was in Draft format at this stage.
  - This Assessment looked at issues raised about native aquatic reed beds in the shallow wetland areas adjacent to the western foreshore of Lake Wallace and the environmental considerations associated with the request to remove them.
  - Refer to p. 57 of the attached presentation.

Q – Julie: When will stakeholder meetings be held?

- Lauren replied that it is unknown as Council is still going through the management options at this stage.
- **ACTION:** Lauren will forward information to the CCC on the stakeholder consultation process for the Lake Wallace Foreshore Management Plan when more is known.

Unit 1 Outage

- Greg explained that the project will ensure reliable and safe operation of the unit.
- Unit 1 Outage is three (3) weeks away and will be completed on or before 20 December.
- Planning for the Unit 1 Outage has been taking place for several months to manage COVID-19 risk.
- EnergyAustralia will be spending $102M on this outage over 86 days.
- There are a number of COVID-19 management measures in place including health monitoring and the use of PPE.
- EnergyAustralia recently ran a mock evacuation to gain an understanding of what an evacuation would look like in the COVID-19 context.
- There will be 800 additional workers onsite. The workers will stay locally where possible, but some may be in accommodation as far as Blackheath. The contractors will look at bussing these workers in instead of individuals driving to site.
- The project will cost approximate $1.2M a day.

Comment from Councillor Joe Smith: Two local fire brigade staff contacted Joe, they thought the Mt Piper site was in lock-down. Mick Hanly contacted Joe to let him know it was a drill. Mick noted that they will advise key stakeholders about future drills to forewarn the community.

6. **General Discussion**

Q – Julie: Have there been any more discussions about taking Centennial's coal or bringing coal back on the empty train?

- Greg: There has not had any further discussion on that. The discussion has focussed around local coal, Springvale primarily and Airly secondary and potentially some coal from Clarence, however not very much in the scheme of things.

Q – Julie: As there is no back-up plan in the case of Springvale not producing, would you get the coal from Clarence or Airly?

- Greg replied that EnergyAustralia have a high degree of confidence in Springvale continuing and not in danger of failure however it is one of the reasons why the rail unloader project is progressing. EnergyAustralia currently has access to the Lidsdale rail unloader if it is required in an emergency.

Q – Julie: Have there been any discussions about getting the coal delivered on the Dubbo line?

- Greg: No, not at this stage.

Q – Jim: What is happening with the pine trees across the road from Mt Piper? EnergyAustralia was planning on taking the pine trees out and putting in a fire break.

	Q – Julie: reiterated this question, also asking about the pine trees neighbouring her area that are in EnergyAustralia land. » Michelle answered that this is not known since the last update provided. » **ACTION:** Michelle will chase up a response.
7.	**Meeting close** » Brendan thanked all presenters and wished the team all the best with the planned outage over the coming months. » The next CCC meeting is scheduled for Monday 7 December 2020. » Meeting was closed at 6:41pm.

7 September 2020

Energy*Australia* Lithgow Region

Community Consultative Committee

Greg McIntyre
Head of Mt Piper

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Agenda

1. Welcome and introductions
2. Review of Notes From Previous Meeting
3. Site Update from EnergyAustralia
4. Project updates from EnergyAustralia – existing and planned
5. Projects in focus:
   - Lake Wallace – update from Council
   - Planned outage
6. General Discussion
7. Meeting Close

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Welcome and Introductions

Review of Notes from Previous Meeting

Response to Questions

Response to Questions

Page 71 McMahons Report showing a graph and locations of leaching entering Neubecks Creek at D and between F & G. What is the rate of flow that is leaching combined? What is the actual salinity level? (noting on Page 73 of the report – "Pumped groundwater quality is likely to be in the order of 5,000 to 20,000 EC, pumping volumes up to 2ML/d are anticipated").

Based on the page numbers provided, it is noted that these comments are related to the McMahon's slides from the June CCC presentation, not a standalone report.

McMahon's has estimated based on available data, that input to the creek at Site D is approximately 0.6 L/s and 6 L/s in the vicinity of site G (as per slide 71).

The actual salinity level (as measured by electrical conductivity) of surface water in Neubecks Creek from the 2018-19 monitoring period (see Annex F at *https://www.energyaustralia.com.au/sites/default/files/2020-06/2018-19%20MP%20Brine%20in%20Ash%20Annual%20Review.pdf*) ranged from 272 to 621 µS/cm. The 2019-20 AEMR and results from the 2019-20 monitoring period, are currently subject to review by EnergyAustralia and will be available on the EnergyAustralia website in due course. The salinity of groundwater is being targeted for extraction before it discharges to the creek or, in the case of Site D, mix with the shallow water of the creek.

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Response to Questions

In previous June 2020 meeting notes, page 13 "The review of information to date has shown vertical migration of salts and metals through the ash profile at the Mt Piper Repository, which is derived from brine placed with the BCA". Could the Committee have the actual listing of the individual salts and heavy metals information?

Please refer to Annex F (surface water) and Annex G (groundwater) of the report provided at *https://www.energyaustralia.com.au/sites/default/files/2020-06/2018-19%20MP%20Brine%20in%20Ash%20Annual%20Review.pdf* for the full suite of analyses and results from the 2018-19 reporting period. Annex E of the 2018-19 AEMR also includes a list of the composition of brine used to condition ash for placement at MPAR.

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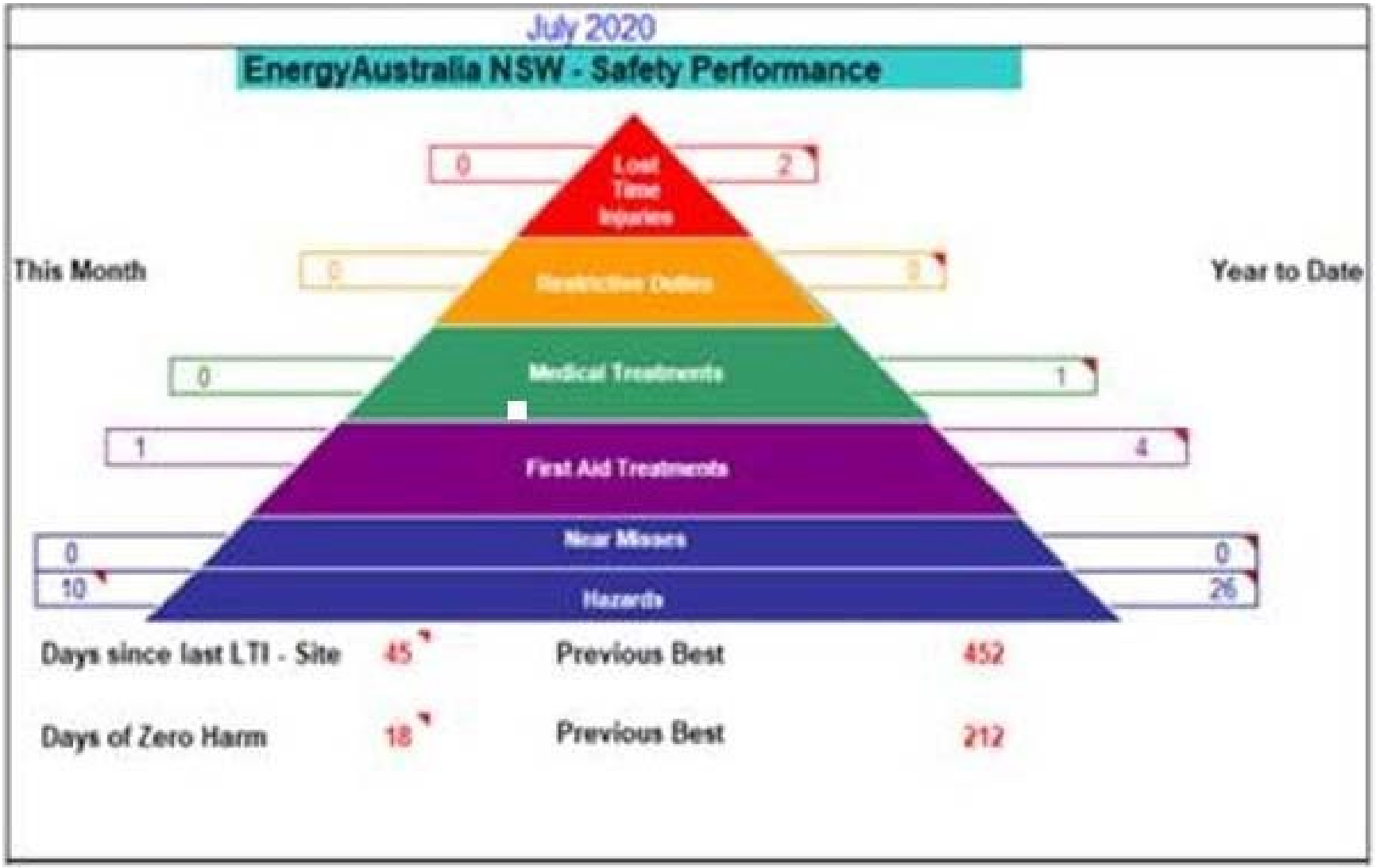
Site Safety

Site Safety – July 2020



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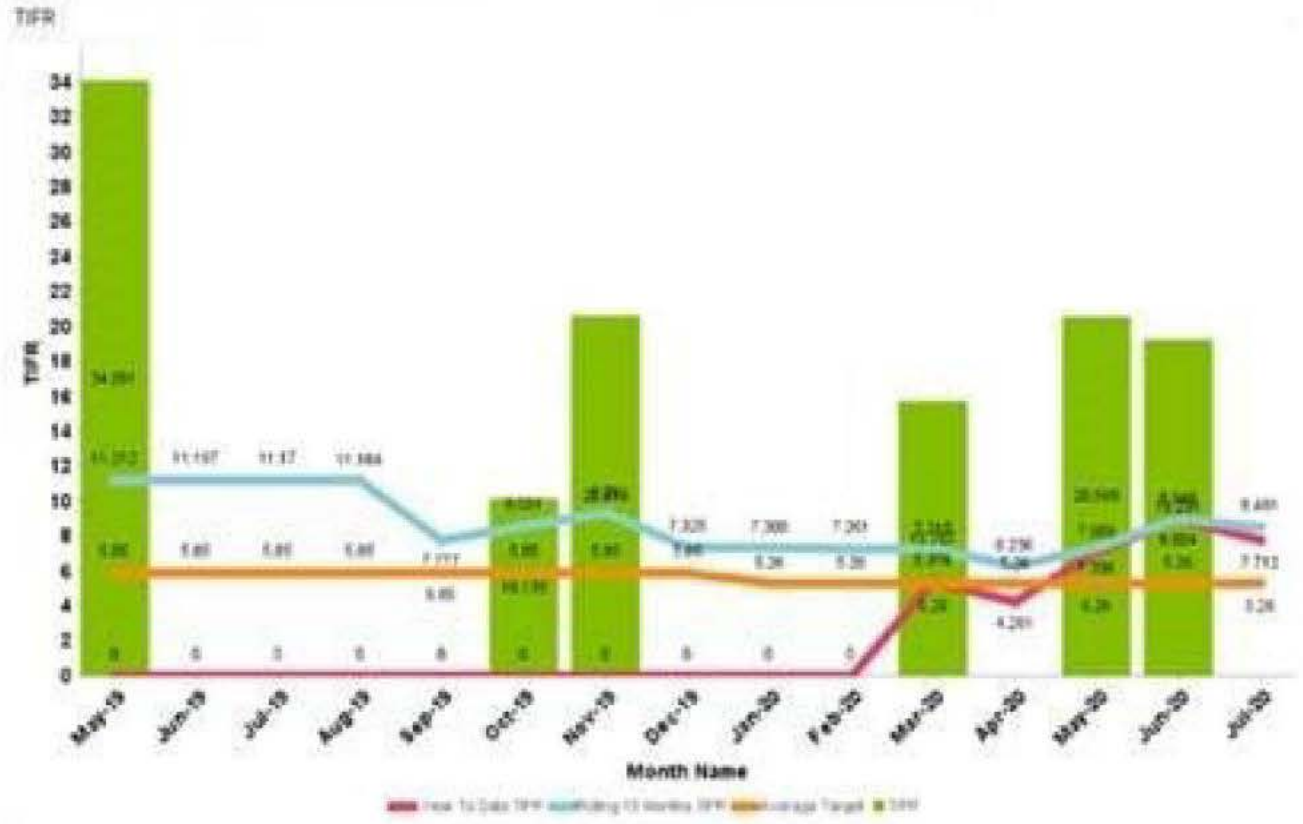
Site Safety – July 2020

Total Injury Frequency Rate



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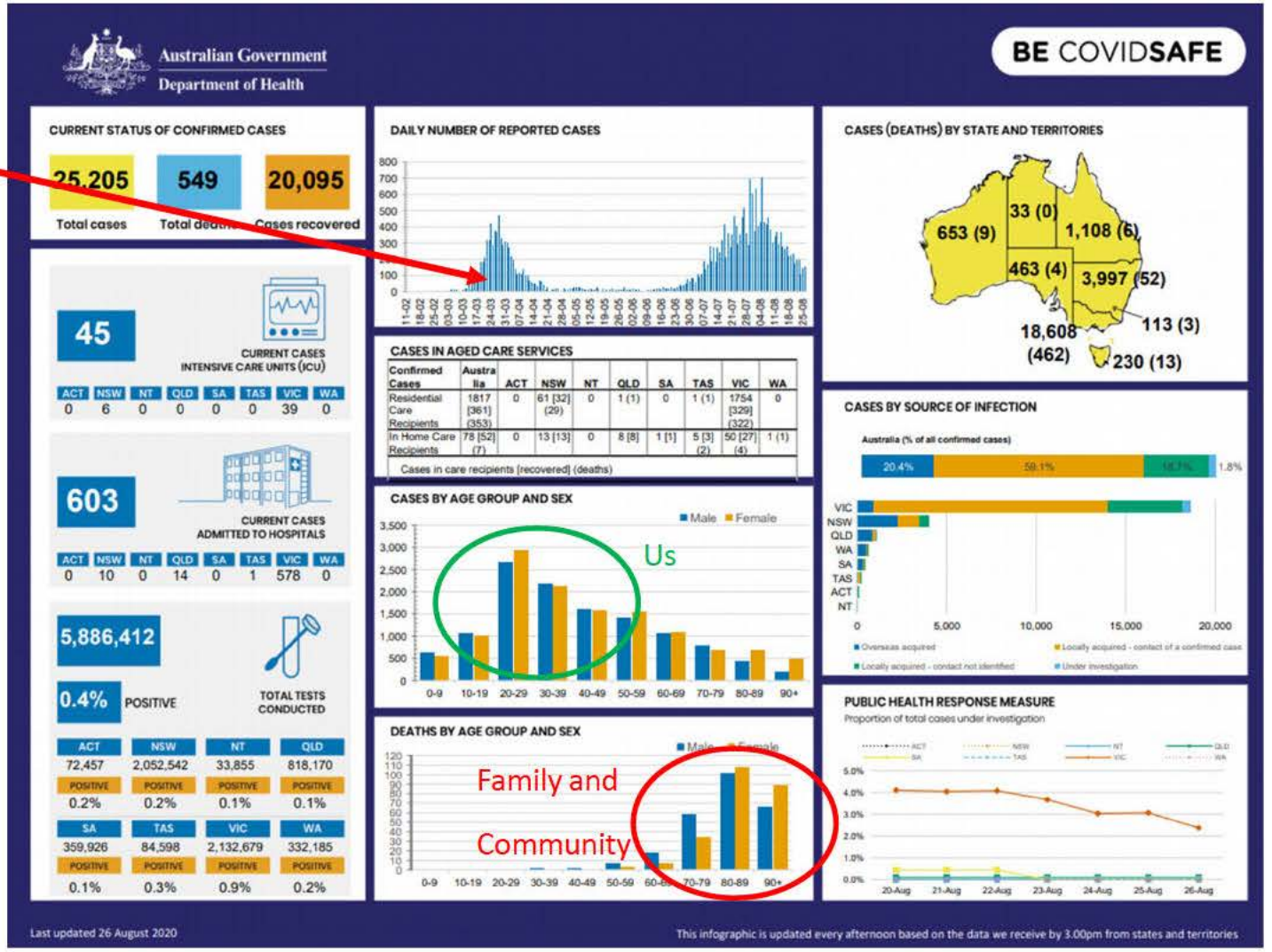
COVID Update

Period of WfH commenced

- Consolidation of COVID protocols
- Risk Managed and Consultation

Preparation for Post COVID

- Watching the "State of the Nation"
- Always going to have a prudent approach, when things looked stable, the consider a 3-4 week future.



Very aware that although cases in the workplace carry a significant risk to our operations, spreading to the wider community has serious risks to others.

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Mount Piper Approach

Manage Risks

- To our people – Protocols to reduce the possibility of transmission in the workplace to ALARP
  - Specifically to prevent any carried infection from affecting others.
  - Allowing those with specific needs to WfH or WfW where appropriate

- To their families and Community
  - Stop people getting sick and returning to families
  - Support for families with flexibility where it can be provided

- To Production
  - Critical areas identified (PCR and Maintenance), and protocols for those areas developed early.
  - People who can work from home effectively encouraged to and facilitated.

Consultative approach used with staff involved in generating protocols and for e.g. shift patterns

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COVID-19 - Where to From Here ?

Optimism that the initial Australian trend was effective and sustainable has been replaced with the knowledge that there is still potentially a long way for Australia to go.

- Protocols for recovery are still in place, but now is not the time.
- Although fatigued, we cannot let our guard down.

We are monitoring the State of the Nation, Government Guidelines and International Research continually.

- Our protocols and strategies will evolve as these areas and understandings improve.
- Will maintain consultative approach.

Only so much that Mount Piper and the Leadership Team can provide as guidance, the hard work is up to all individuals to maintain awareness and control.

Particularly with the outage coming, be prepared to **CHALLENGE** behaviours activities and processes that make you feel uncomfortable…It's our workplace.

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Pine Dale Mine Rehabilitation

Pinedale Mine Update

- Remains in care and maintenance while future resource utilisation options are assessed
- Desktop feasibility work continuing
- No environmental incidents or monitoring non-compliances have been recorded
- Maintaining existing mining and exploration leases
- Rehabilitation areas have responded well following the extended drought period and recent rains

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Update - Water Management

Update on Water Management

- Oberon Dam level is at 26.46%
- Total Active Storage is at 96.5% with:
  - Lake Lyell at 100%
  - Lake Wallace at 106.5%
  - Thompsons Creek Dam at 91.6%
- Lake Lyell commenced spilling Monday 27th July 2020. Lake Wallace continues to spill
- Green alert for Blue-green algae at Thompsons Creek Reservoir.

Market Update

What's the Market doing

Figure 20 Reduced black coal and GPG across the day, increased overnight hydro and daytime solar

Change in supply – Q2 2020 versus Q2 2019 by time of day

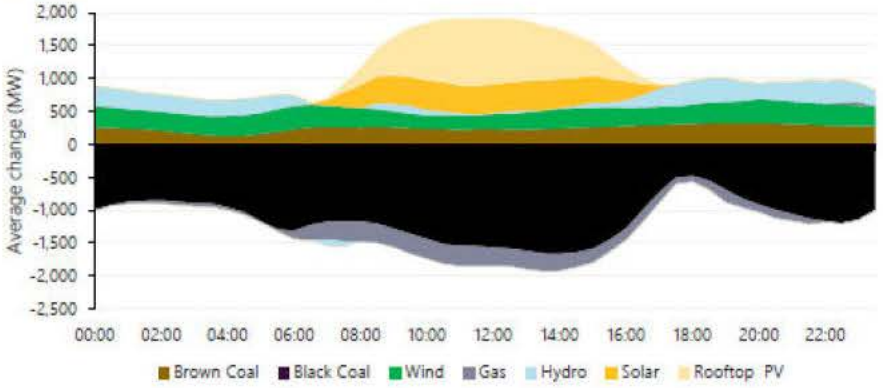


Figure 21 Eraring leads black coal generation reduction

Change in black-coal fired generation – Q2 2020 versus Q2 2019

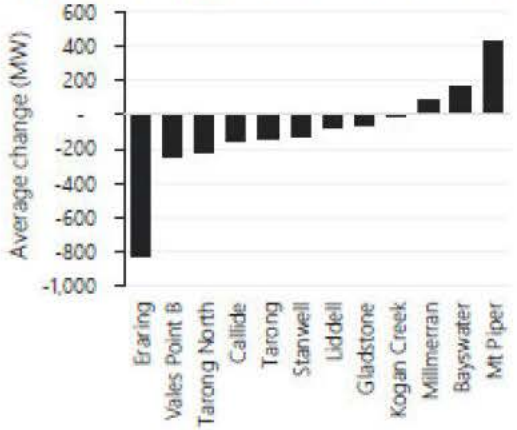


Figure 19 Significant reductions from black coal-fired generation

Change in supply – Q2 2020 versus Q2 2019

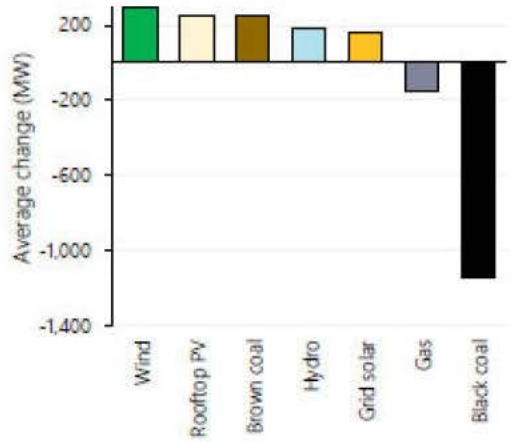
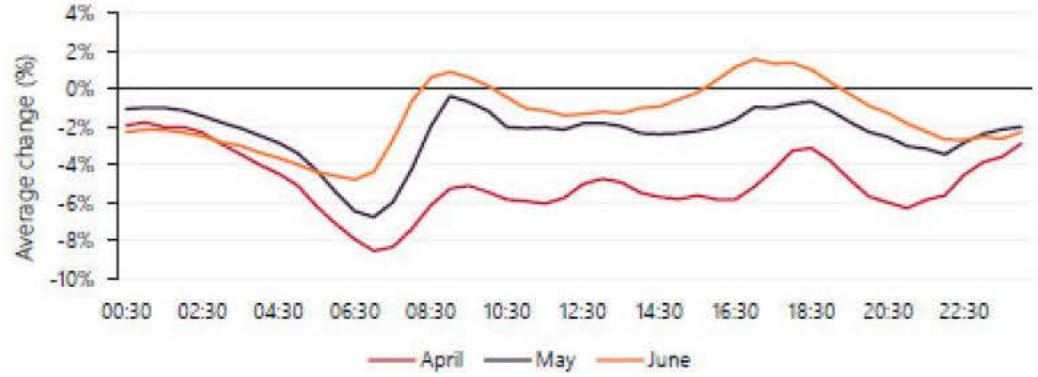


Figure 6 COVID-19 impact on New South Wales electricity demand

% change in NSW-average weekday operational demand by time of day (actual versus pre-COVID-19 control model)



Coal fired generation is increasingly being withdrawn from the market in low Spot Prices, and responding to Peaks.

Covid 19 had an impact on demand, but this is recovering – driven by residential use.

Mt Piper continues to generate into the market to manage Hedges and Revenue

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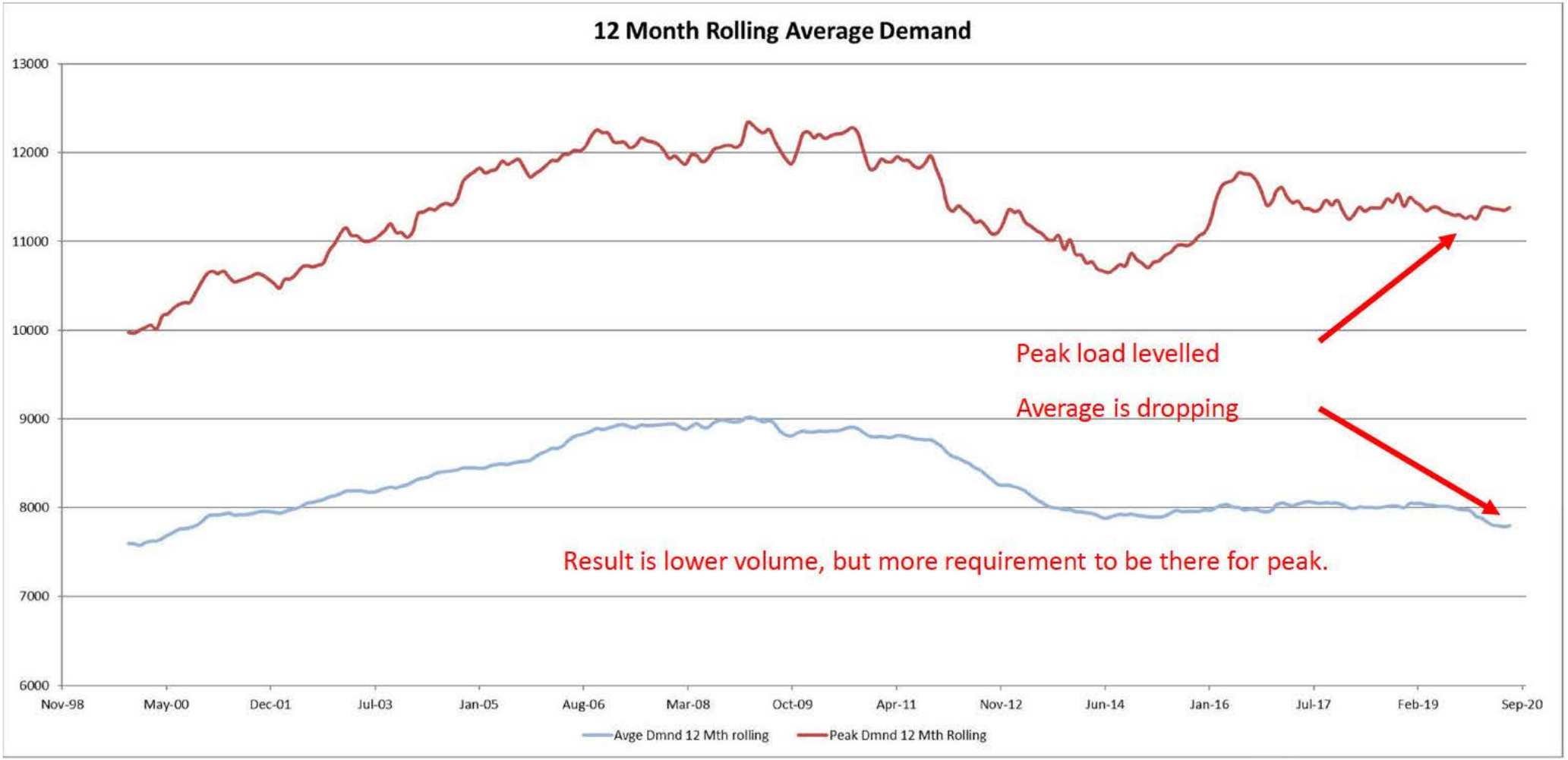
Operation in the Market



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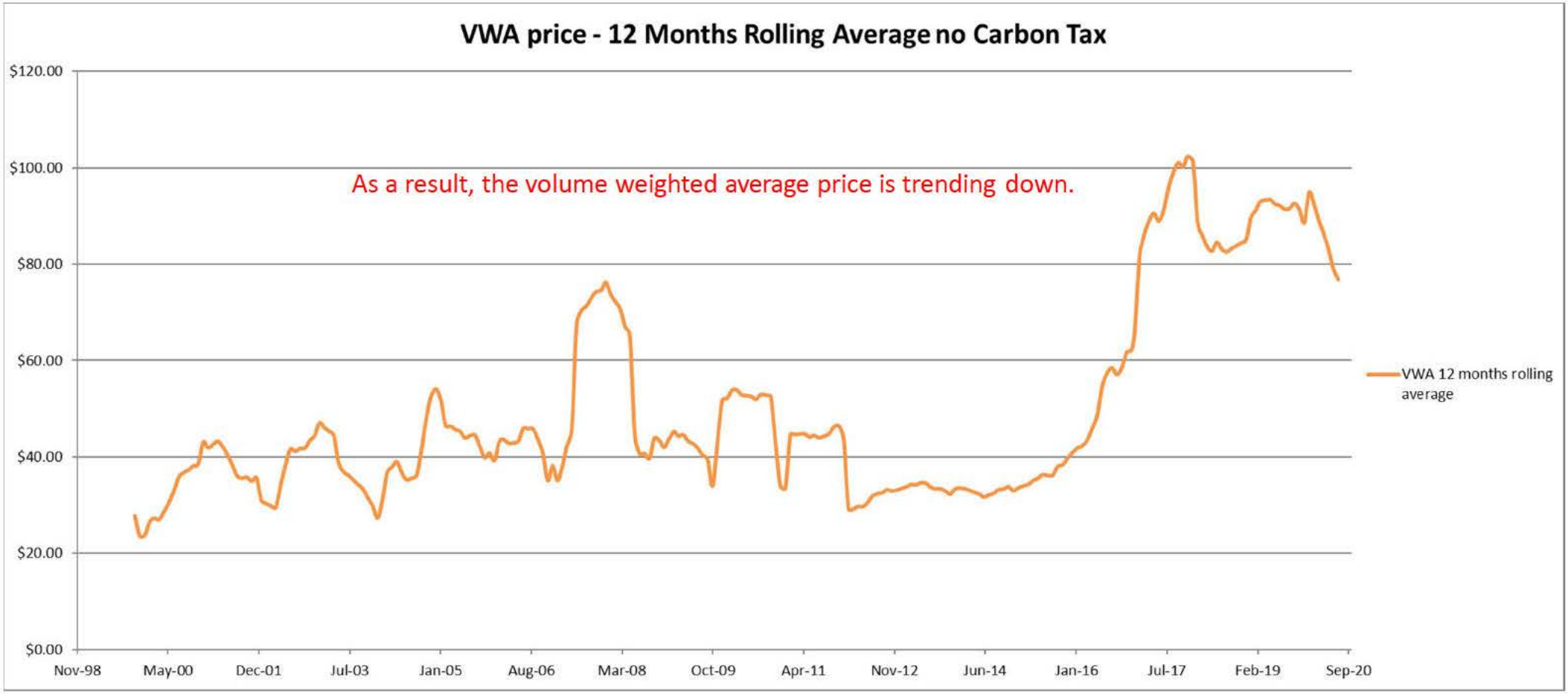
Operation in the Market



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Operation Availability

2020 July

	Metric	This Month	Budget	YTD	YTD Target
Generation and Fuel	Generation GWh	884	710	4226	4716
	Coal Use KT	369	287	1800	1891
	Auxiliary Energy	5.85%	5.94%	6.69%	5.94%
	Heat Rate GJ/MWh	9.78	9.33	10.05	9.33
Availability	Availability	97.80%	93.00%	78.42%	93.00%
	MP1	96.72%	93.00%	84.32%	93.00%
	MP2	98.88%	93.00%	72.53%	93.00%

Best performance for two straight months in at least an 18 month period.

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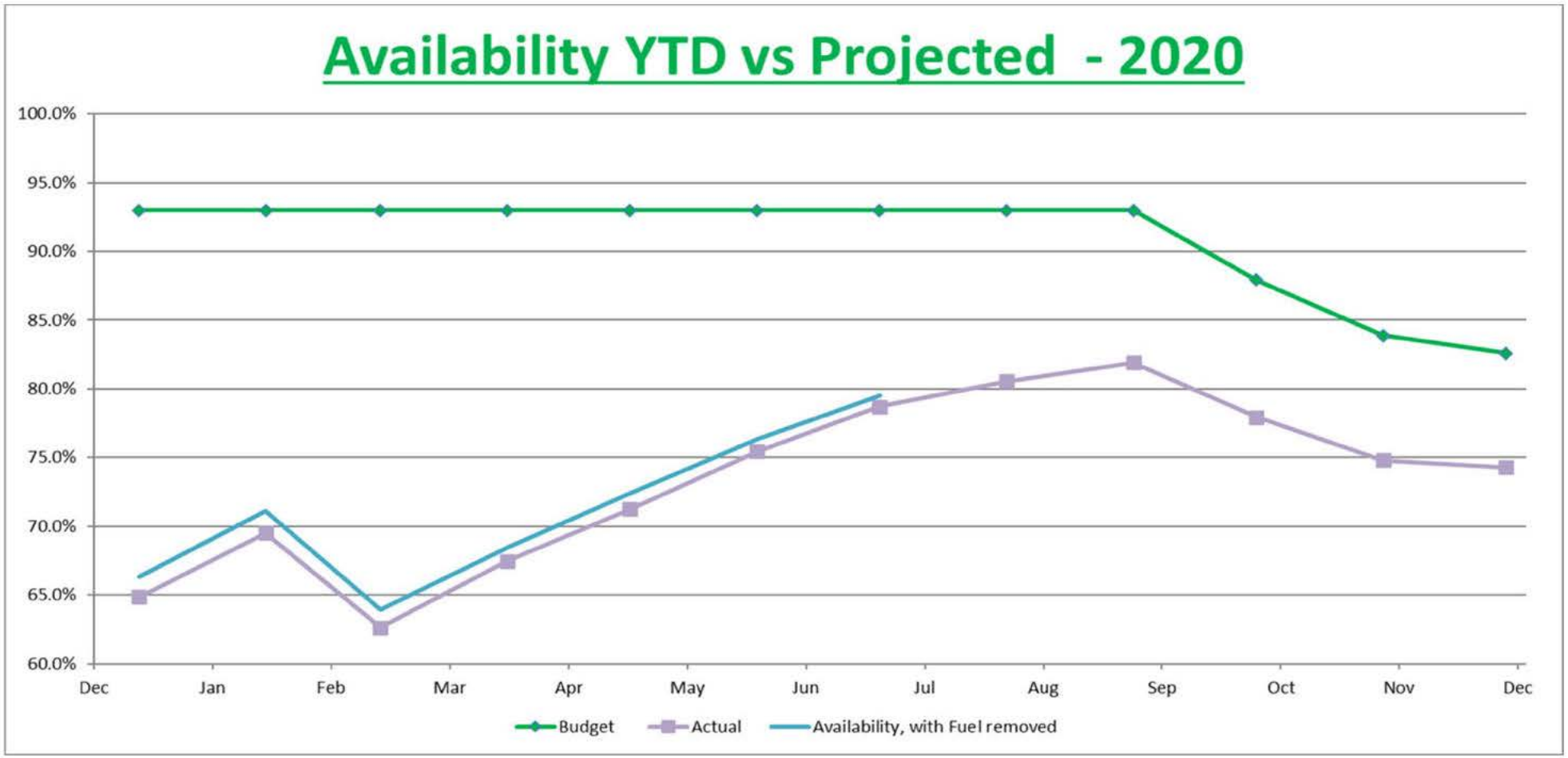
Mt Piper Operations



Negative Impact of Secondary Superheater failures was a significant poor start to the year.

Management of load on Unit 1

Since repairs effected, availability has been well above target.

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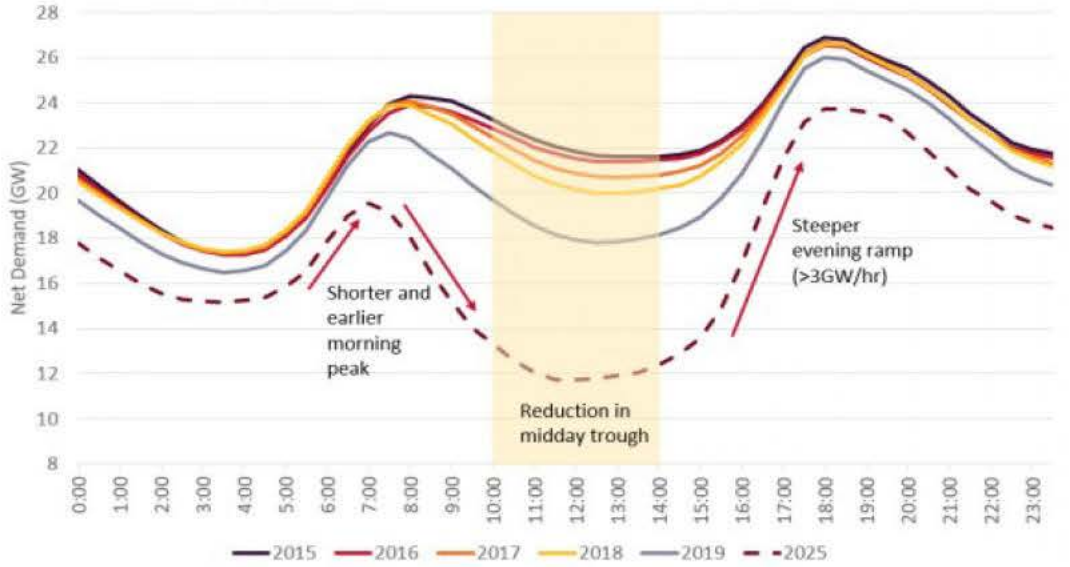
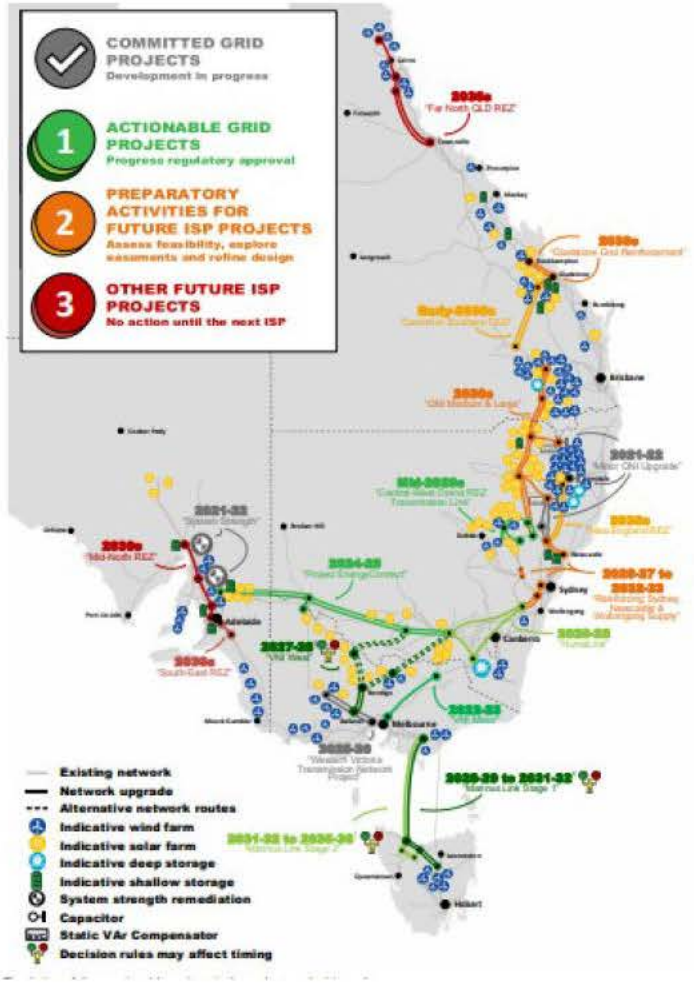
Network and Inter-Connectors

Figure 16 NEM average winter net demand curves, actual 2015-19 and projected in 2025 under Draft 2020 ISP Central generation build



AEMOs plan to strengthen the network and interconnectors enables further penetration of the impact of renewables on NSW Demand and day shape



AEMO 2020 Integrated System Plan July 2020

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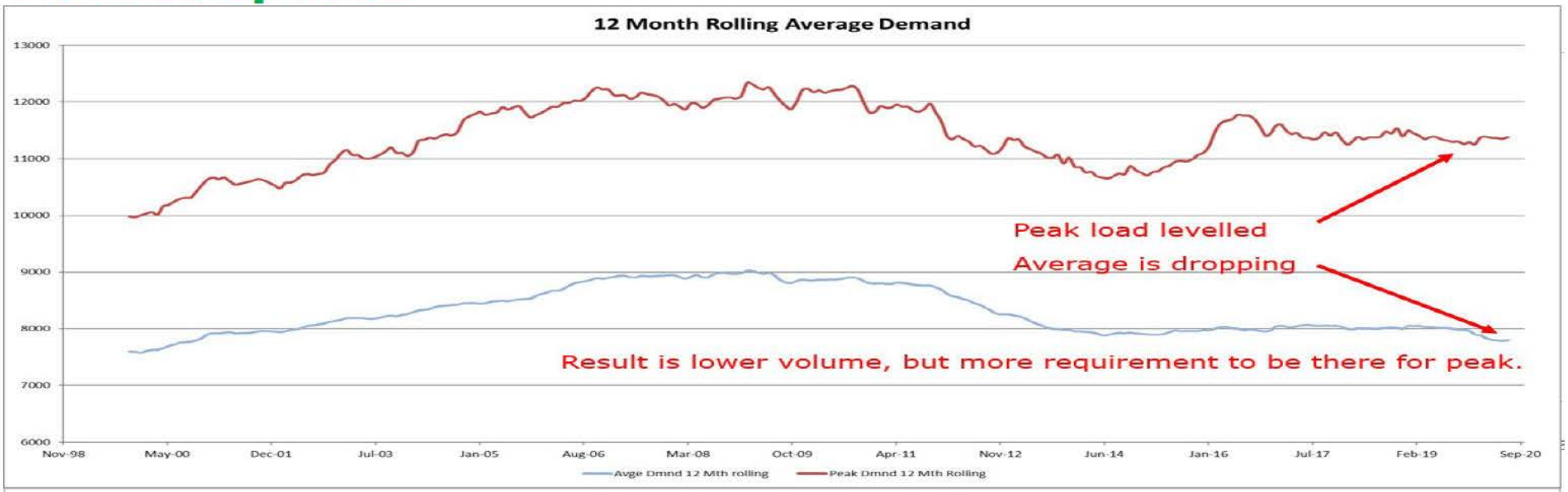
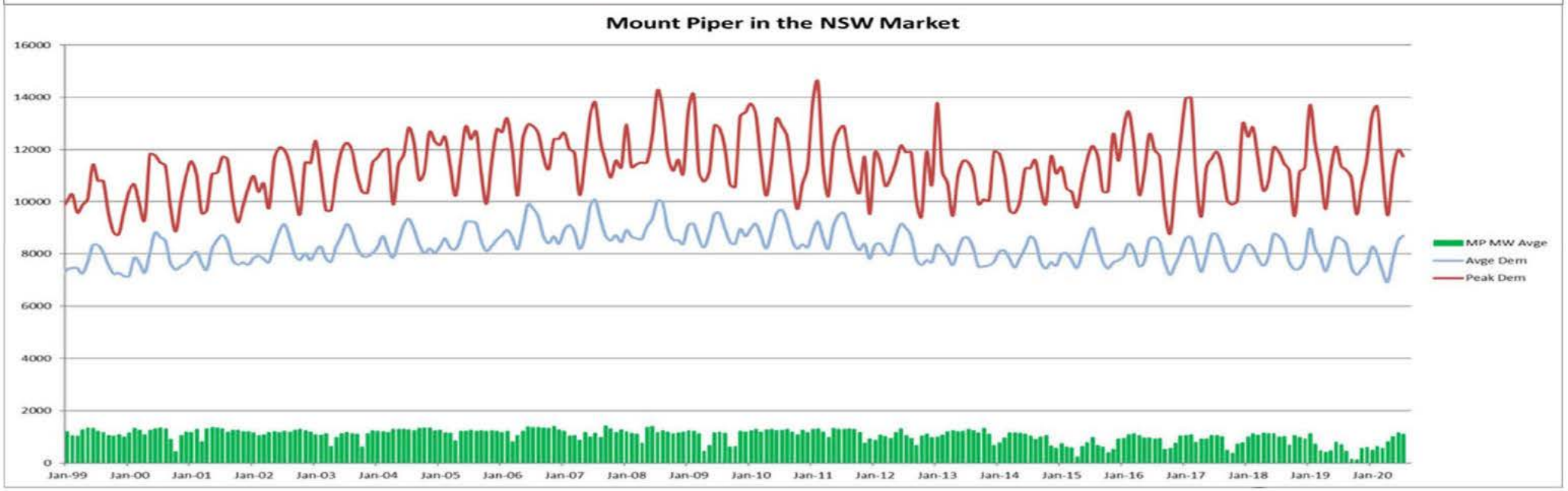
Market Update





Operations (Site) Update

Mt Piper Operations

- MP1 Outage planning in progress.
- Springvale strong deliveries and also Airly deliveries have recovered the stockpile level >1MT in May 2020, now hovering around 800KT
- Springvale O/S due to planned longwall move. Started 5th Aug and plan to complete by end September.
- Coal Services O/S also for planned belt replacement; started 10th August and due to complete 2nd Sept.
- Lidsdale Siding unloader operational.
- 30KT of Airly coal stockpiled and will be delivered once flow path from coal services are available.

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Wallerawang Sale

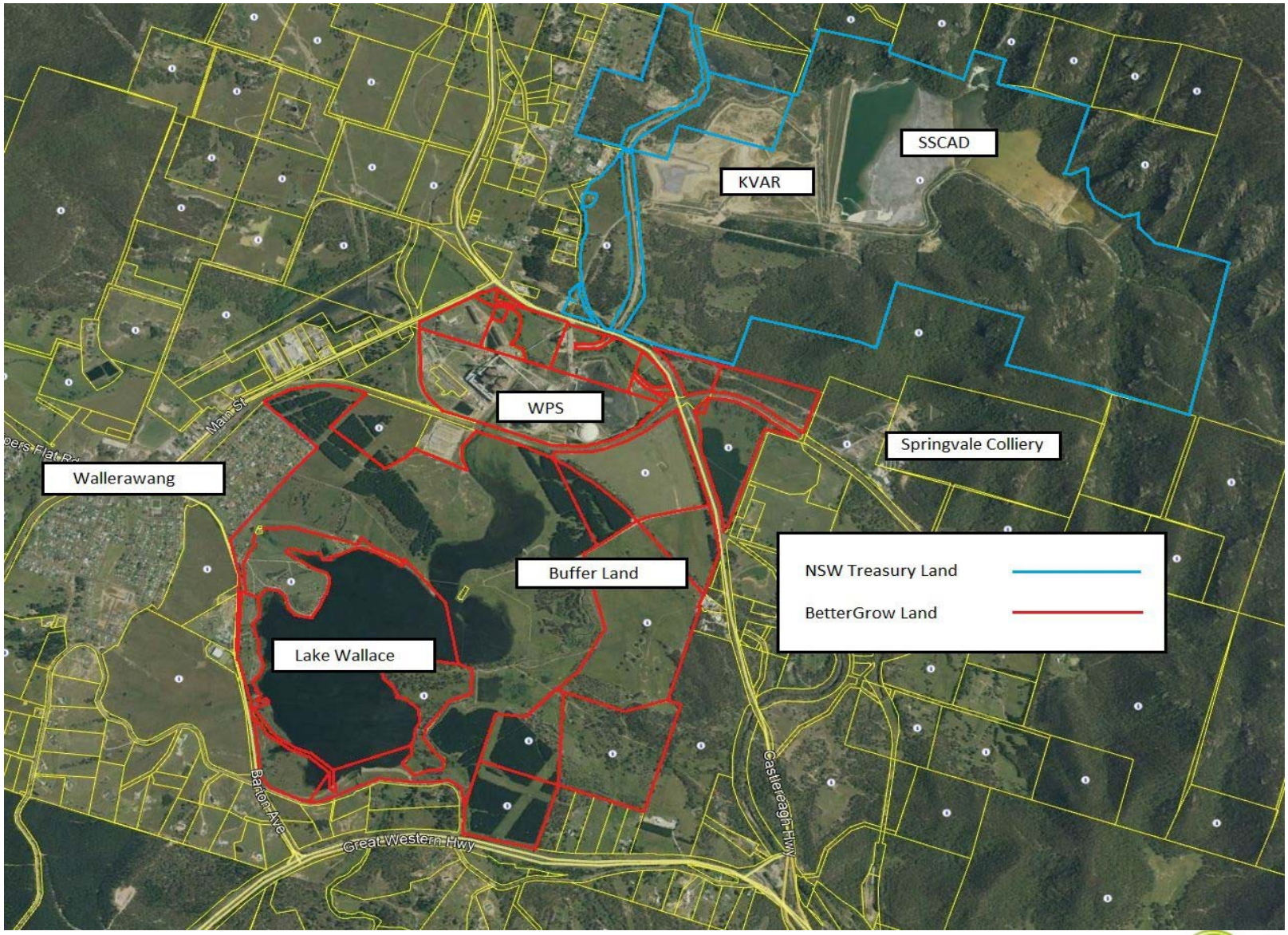
General Update

Wallerawang Update

- [redacted]

[redacted]

Wallerawang Sale



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Update – Lamberts North Ash Placement Project

Lamberts North Ash Placement Project Update

- Ash Placement Volume
- Since February, approximately 2,000 tonnes has been placed on Lamberts North water conditioned ash area.
- No complaints received
- No incidents recorded
- Revised Water Management Plan submitted to regulatory authorities and approved by Department of Planning in April 2020.

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Community Engagement Program

Community Engagement Program 2020

Community Grants Round 2

- $30,000 available
- Applications closed on 28 August 2020.
- 9 applications were received
- Applications are currently under review.
- CCC will be advised of successful recipients at the next meeting

Sponsorships and Donations

- Water tank for Barton Park Arboretum
- 60 bags for Cooerwull Public School's Ready Set Kindergarten Transition Program
- Many events and programs have been deferred cancelled due to COVID-19 Restrictions

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Lithgow City Rangers

Recently Mt Piper funded connections to the Council's mains water and the establishment of a new septic system so that the utilities at Rangers Park are now completely independent from Wallerawang Power Station.

Summary of Completed Works:

- New connection to town water supply
- Construction of new environmentally friendly septic system:
  - Development Approvals and environmental assessments
  - New septic tank
  - New evaporation mound
  - Turf covering of evaporation mound
- Associated plumbing and electrical work

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WorkPlace Giving Program

- A total of $36,725 has been donated to our local charity partner, CanAssist since its launch
- COVID-19 has meant all their fundraising activities have been cancelled, so our donations make all the difference.
- They are operating remotely and continue to provide vital financial assistance to those going through cancer treatment.

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Employment Opportunities

Apprentice Program

- We are planning for the 2021 Apprentice intake and will advise the committee when this information becomes available.
- Current COVID-19 situation is difficult to adhere to training on site, but we are working closely with TAFE and our on-site leaders, to not disadvantage apprentices in their course completion.

New Employees

- In the period June 2020 to September 2020 new starters were welcomed to Mt Piper in Assets team x 2, Safety Team x 1 and the Purchasing Team x 1.
- We continue to host 2 x Vacation Students to further their studies with practical industry exposure.
- We also have 1 x Warehouse max term role to help with Outage preparation and delivery.

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Unit School

- Conducted 'in house' for the first time in 15 years;
- Utilised on shift expertise, knowledge and experience to deliver training;
- Started in March, just before COVID-19 impacts;
- COVID presented some challenges and impacted the Unit School on several occasions with room shifts, social distancing, segregation from Shift Teams, as well as precautionary testing;
- Lectures were delivered on the components and operation of the boiler, turbine, generator/electrical theory and ancillary plant.

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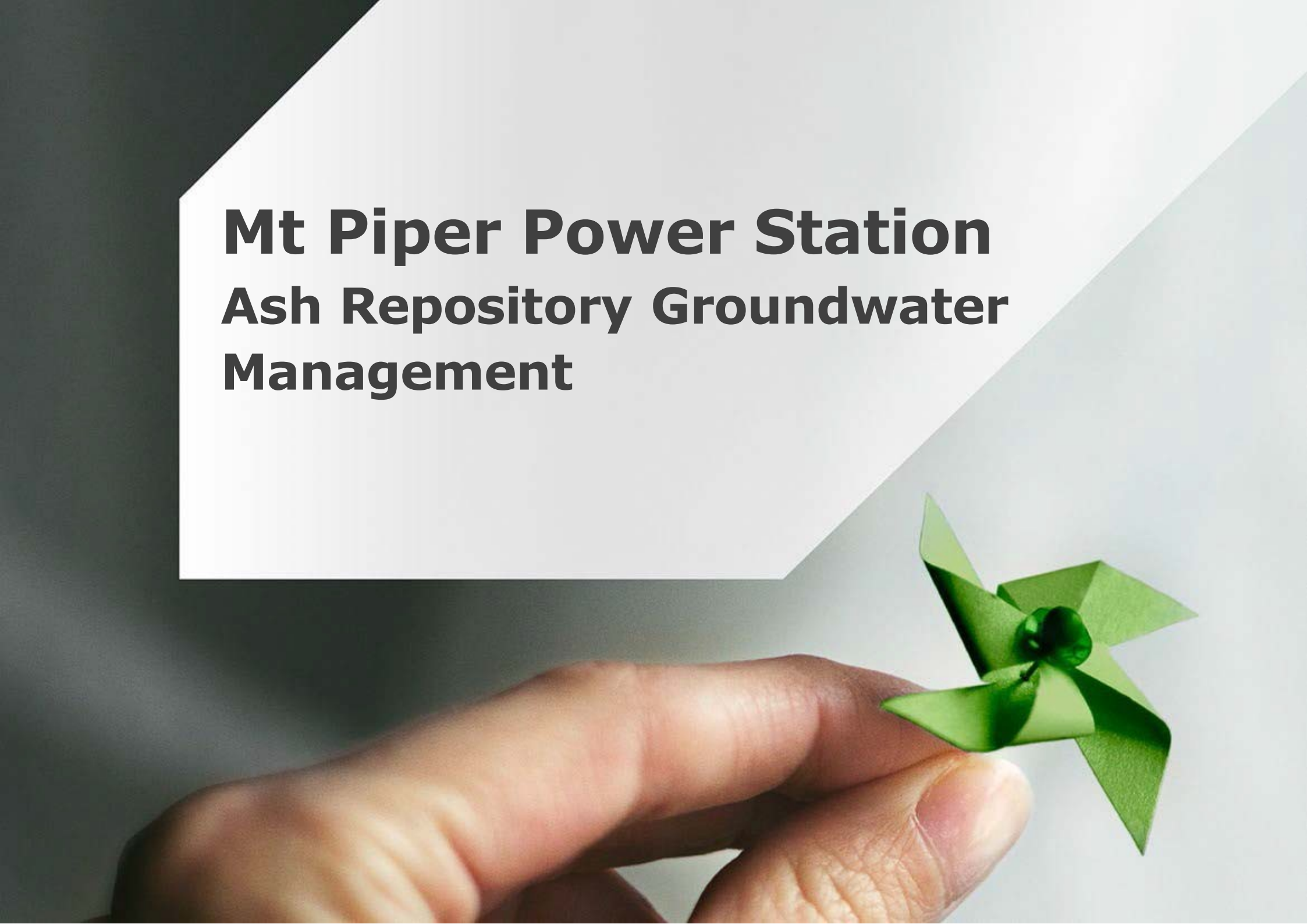
Mt Piper Power Station

Ash Repository Groundwater Management



Independent Groundwater Assessment

Mt Piper Groundwater Interception Project

- The NGM is based on extensive field investigations undertaken since 2018 as part of this project.
- The NGM is supporting development of the Mt Piper Groundwater Interception Project (short to medium-term groundwater mitigations)
- This project is proposed to involve groundwater extraction near Neubecks Creek, and extraction of deeper surface water (groundwater inflow) from Neubecks Creek.
- The objective is to improve surface water quality of Neubecks Creek, adjacent to the Mt Piper Ash Repository.

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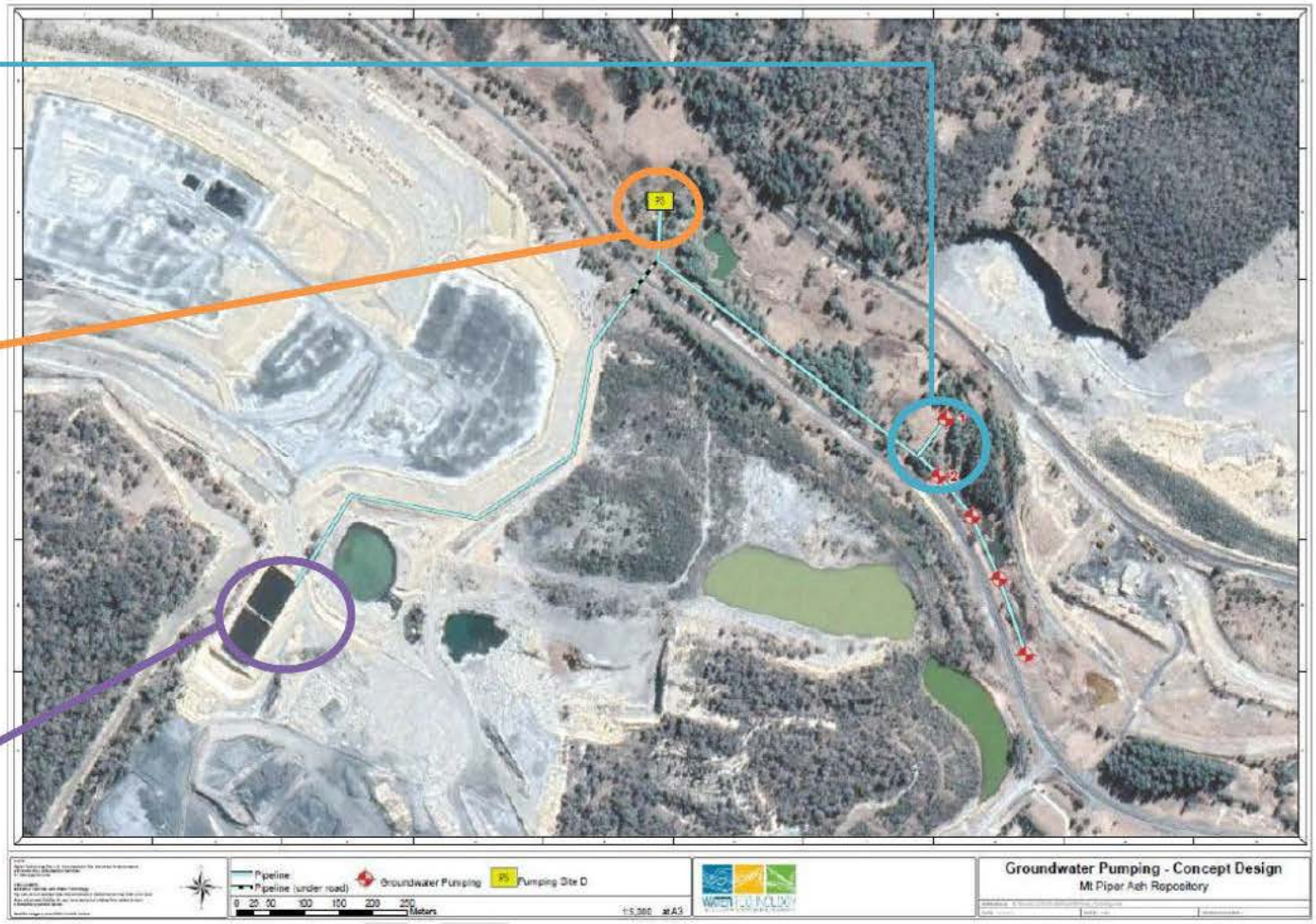
Groundwater Interception Project

- Groundwater pumping bores at targeted locations to intercept groundwater prior to interaction with Neubecks Creek
- In-stream pumping at D to remove deeper instream saline groundwater prior to mixing with shallow surface water of Neubecks Creek
- Pipeline (light blue line) via under-road crossing to transfer groundwater to on-site lined ponds for storage
- Treatment at the Mt Piper Water Treatment Plant in accordance with existing approved management practices



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Project Update

- Mt Piper Groundwater Interception Project will be approved under State Environmental Planning Policy (SEPP) 55 Remediation of Land
  [this has been confirmed by NSW Department of Planning, Infrastructure & Environment (DPIE)]
- ERM has been engaged to support EnergyAustralia in obtaining relevant licences and approvals for the Project:

Licence / Approval	*Authority*
Water licencing approvals	Natural Resource Access Regulator (NRAR) WaterNSW
Authorisation for under-road crossing	Lithgow City Council – LCC Transport for NSW – TfNSW
Environment Protection Licence (EPL) variation	NSW Environment Protection Authority (NSW EPA)
Environmental Management Plan update and approval	DPIE

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Project Update (cont.)

- McMahon Services Australia will be contracted to undertake the detailed design, supply, construct and commissioning of the Project.

- EA is currently engaging with the relevant approving authorities (EPA, DPIE, NRAR, WaterNSW, TfNSW and LCC) regarding the proposed mitigation solution.

- EA intend to exhibit a Review of Environmental Factors (REF) related to the Project in November 2020.

- The CCC will continue to be updated regarding the Project.

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Indicative Project Timeline

	2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Ground Water Modelling								
Complete stage 2 of Numerical GW Model								
Assess longer term mitigation options								
Mt Piper Ash Repository Closure & Rehab Plan								
Interception bores								
finalise Interception bore design								
Regulatory consult & obtain approvals								
install interception bores			Stage 1			Stage 2		
Future Brine & Ash Disposal								
Investigate and assess future Brine & Ash Disposal options for Lamberts North								

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Update Rail Unloader Project

Rail Unloader Project

Recap

- Mount Piper has a key role in NSW's electricity market and in the transition to a clean energy future
- EnergyAustralia is undertaking a multi-faceted coal sourcing project to underpin the long-term future for Mt Piper once Springvale mine closes in 2024
- A rail coal unloader at Pipers Flat is a core part of the project's objectives to ensure fuel security for Mt Piper

Current

- Invitation to tender has been released
- COVID has changed the traditional site inspection. Now includes drone and panoramic camera imaging to ensure interstate tenderers are informed

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Rail Unloader Project

- Additional Aboriginal heritage work is currently being undertaken at Pipers Flat, where the previous work identified artefacts
- A European heritage study was also undertaken and the report is currently being finalised
- Tenderers for the project recently visited Pipers Flat and Mt Piper, to assist with the preparation of their tenders
- Based on the outcome of the tender process, EnergyAustralia expects to make a final investment decision in 2021

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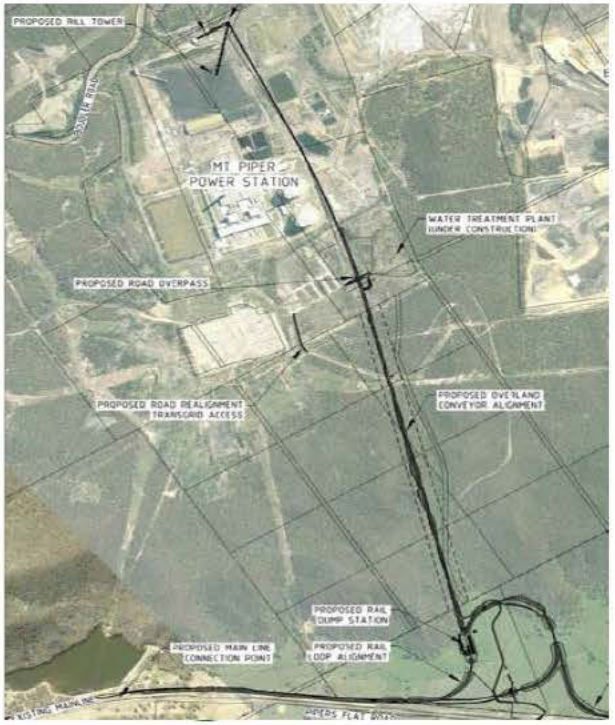
Rail Unloader Project

- Rail loop at Pipers Flat and eastern siding
- Two major bridges over Pipers Flat Creek
- A rail unloading station and amenities area
- A dump hopper and loadout to the overland conveyor
- An overland conveyor
- A transfer station at Mt Piper Power Station
- A new rill tower on the coal stockpile
- An extension to conveyor C14 for direct feed to the plant



Update – Water Treatment Project

Joint EANSW/Centennial Water Treatment Project

- The Water Treatment Facility (WTF) is treating up to 35Ml/day and the treated water is now being used in the power station.
- The “B” blowdown pond is being cleaned out and a new second liner is being installed to allow Veolia to repurpose the pond to buffer the flow of mine water providing smoother running of the plant even when preforming maintenance.

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Mt Piper Energy Recovery Project

Re.Group

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Stages of EIS

Explain concept and ask about concerns/need for further information	Discuss draft information and seek feedback on results	Discuss proposed changes in concept	Explain information presented in EIS

In response to the EIS, DPIE received:

- 97 submissions from the public (including 4 duplicates)
- 6 submissions from organisations
- 10 submissions from Councils and government agencies

Analysis of the submissions indicates the most common issues raised related to:

- air quality and human health impacts on the local community; impacts of RDF haulage; impacts to the local economy; impacts on recycling and the waste hierarchy; impacts on the Sydney Drinking Water Catchment; greenhouse gas emissions.

We have submitted a response to the submissions made during the public exhibition process.

After the Response to Submissions, DPIE will prepare an assessment report.

A decision will then be made, either by DPIE or the Independent Planning Commission as appropriate.

We are here

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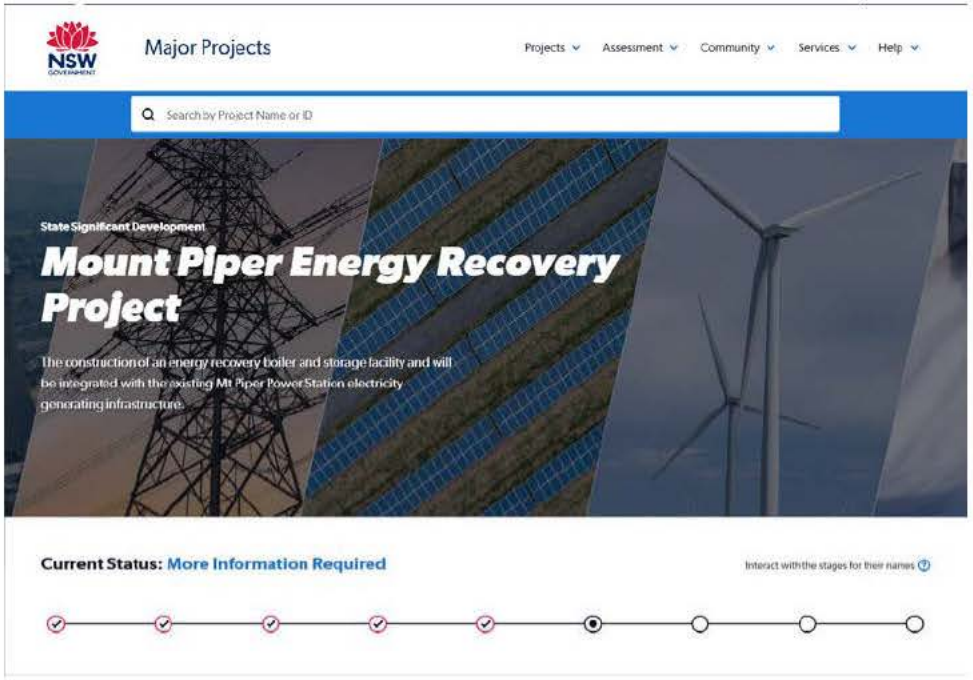
Community Information (since last CCC meeting)

- Covid-19 risks have prevented face-to-face updates, however informal briefings to Industry Bodies, Council, Community groups, Organisations as well as individual members of the community have continued remotely where possible.
- We met with various government agencies to discuss and clarify the issues raised in their submissions.
- We have begun exploring a voluntary planning agreement (VPA) with Lithgow City Council. A letter of intent was included as part of the Response to Submission.
- Meeting was also held with Lithgow and Blue Mountains City Councils to update the status of the Project and possibility of working together.
- In the next stage, the Project will undertake an Engineering, Procurement and Construction (EPC) tender to identify a suitable contractor to build the plant.

More updates will be provided as the Project undergoes next stage of Development Approval Process



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PROJECTS IN FOCUS –

- Lake Wallace – update from Council
- Planned outage

Lake Wallace Foreshore Management

Options Assessment

DRAFT prepared for Lithgow City Council

The Environmental Factor

This Assessment considered issues raised by individuals within the Wallerawang community regarding the native aquatic reed beds in the shallows adjacent to the western foreshore of Lake Wallace and the environmental considerations associated with the request to remove them.

The main concerns raised to remove the vegetation includes:

- **Visual impacts,**
- **Odour- potentially from algae caught in the aquatic vegetation along the foreshore,**
- **Safety Issues and**
- **Reduced visibility for launching boats**

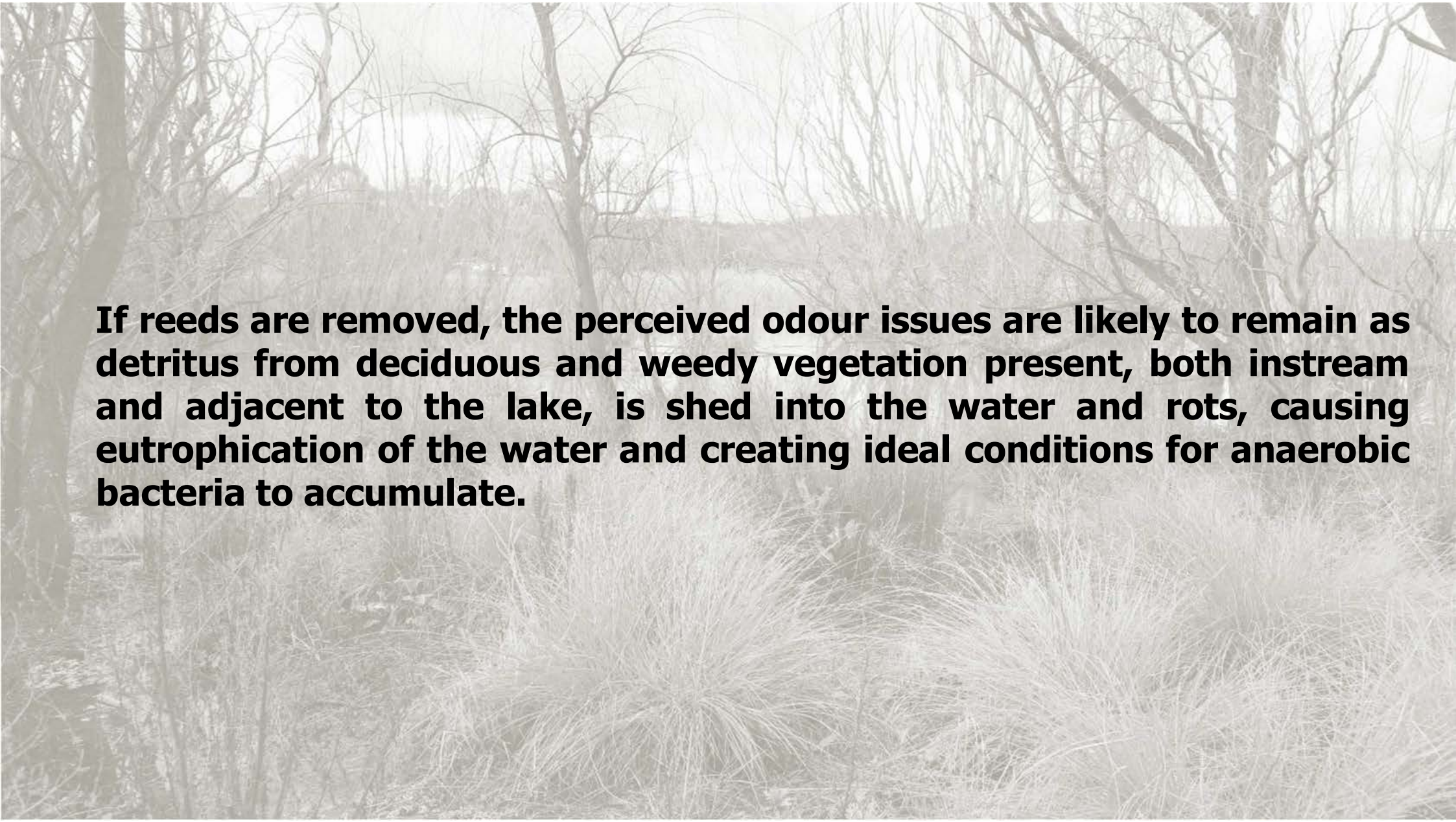
The extraction of this native vegetation, will however:

- **Remove habitat for native wildlife such as birds and fish which currently inhabit the area, including potential habitat for threatened and migratory species listed under the *Biodiversity Conservation Act 2016* (BC Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).**

- **Stability of the subsurface as sediments will be disturbed, which is likely to result in increased turbidity, as suspended solids are released into the water column.**

- **Water quality at this location would also diminish, as the reedbeds also provide oxygenation of the water and act as nutrient sinks through the uptake of metals, nutrients and other contaminants.**

- **Depending on the proponent for the works and the appropriate approval pathway under the *Environmental Planning and Assessment Act 1979*, the vegetation removal may also warrant participation in the Biodiversity Offset Scheme (BOS) to be offset as an ecological impact, if this clearing cannot be avoided or mitigated.**



If reeds are removed, the perceived odour issues are likely to remain as detritus from deciduous and weedy vegetation present, both instream and adjacent to the lake, is shed into the water and rots, causing eutrophication of the water and creating ideal conditions for anaerobic bacteria to accumulate.

The current options presented to Council for management of this area, in light of community concerns raised and ecological and water quality considerations for Lake Wallace, include:

1. **Remove all the vegetation,**
2. **Remove some of the vegetation,**
3. **Install an additional pontoon, jetty or boardwalk, or**
4. **Do nothing.**

Choosing management options is dependent on a number of factors including:

- **Capital costs**
- **Operational/ maintenance costs**
- **Environmental benefits, including the benefits/impacts upon amenity, recreation, public access and use and ecological habitats (noting there may be trade-off between these aspects for some options),**
- **Adaptability of the option (e.g. is it reversible or permanent),**
- **Likely effectiveness of the option,**
- **Likely acceptability of the option to the community,**
- **Degree of difficulty in implementing the option (including sourcing the necessary funds), and**
- **Ability of the option to treat more than one issue (and the relative priority of the issue).**

Recommendation:

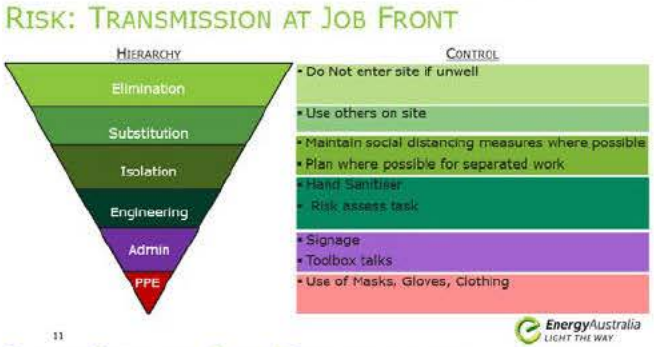
- **Consultation with a broad range of stakeholders and community groups, as this may elicit different and/or opposing perspectives and values for the Lake Wallace foreshore, including tourism opportunities associated with bird watching and rehabilitation of the foreshore through establishment of native vegetation, acknowledging that there are existing access areas for recreational Lake users.**
- **The feedback will also help to prioritise management outcomes.**

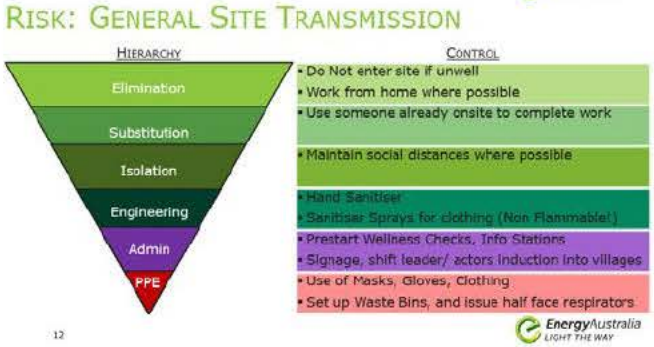
Project in Focus – Unit 1 Outage

Project in Focus – Planned Major Outage – Unit 1

Major Outage in October – planning has been taking place (with COVID) for months.

- Influx of new people including overseas, interstate
- Additional health measures are being considered, including temperature monitoring and masks.
- Additional control measures being considered
  - 4 off "Alimak" lifts
  - Segregation of workforces into work/lift areas being considered
  - Additional sanitisation of spaces and surfaces
  - Evacuation of 400 people in a COVID world.
- What are the impacts of COVID management on other areas of safety (can't take our eyes off traditional safety concerns)
- Actions if a worker tests positive.





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Project in Focus – Planned Outage – Unit 1

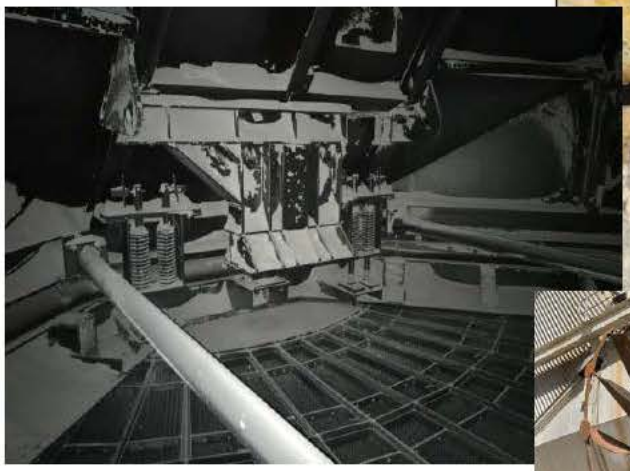
Unit 1 Outage is now 3 weeks away and a major focus for the remainder of the year

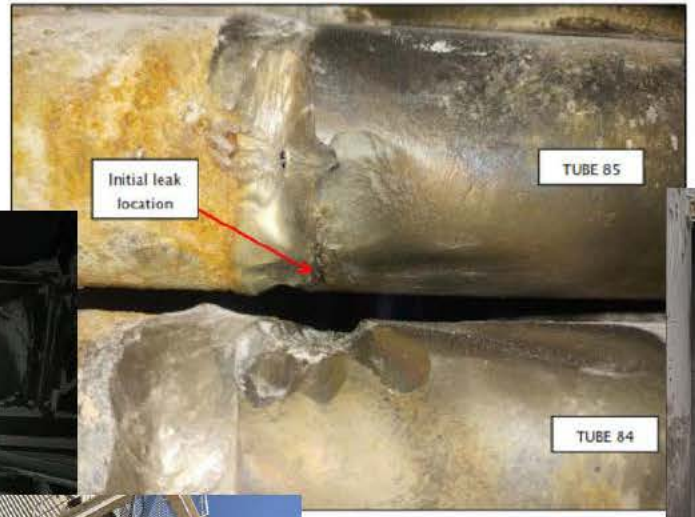
- Unit 1 will be removed from service on 25 September, for a return to service and full commissioning to be completed before the end of the year.

- Approximately 800 additional workers will be onsite from 26 contractors, with a significant portion engaged via our Outage partner – UGL
  - These workers will be accommodated locally wherever possible, and as far as Blackheath in some cases
  - A small contingent of international workers are required, with all COVID-19 protocols to be followed (e.g. onshore isolation prior to attendance onsite).

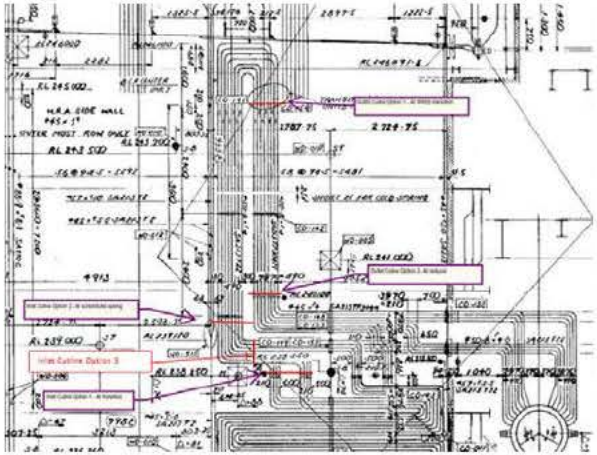
Project in Focus – Planned Outage – Unit 1

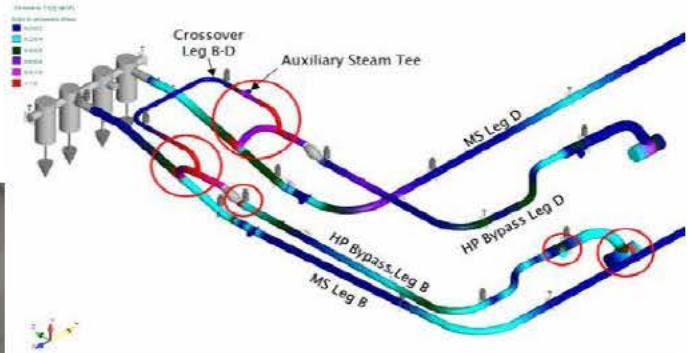
A significant portion of work will be completed that will ensure reliable and safe operation of the units





Close up of leak location.





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Outage Governance is well underway

CLP Checkpoints

Strategic Direction	
Scoping and Development	**Scope is frozen** Change of Work submissions are now required for any scope changes.
Planning	**Currently in Progress** CCR planning work and engineering works are progressing, a late design change was required, drawings to be reviewed and signed off.
Scheduling	**Currently in Progress** Extension was required to complete the proposed reheater scope. UGL scheduler to commence 24th August. Jason and Ryan working on EA internal works schedule including Turbine Aux. Intention is to then consolidate into one master schedule.
Execution and Delivery	
Completion	

Work scope (Extract)

Area	Status	Detail
Electrical		An order with Transgrid to be placed.
Controls		Orders in place, no identifiable issues with core scope. External scopes may impact readiness here, Turbine Supervisory, Transformer Cooling Control and Chemical Control Room interfaces are potential risks.
Boiler		Boiler scope is well defined, there is a risk of an extension being required to cover reheater works, but the implications are well understood. Challenge sessions have refined the scope, the scope cost remains over budget.
Boiler Aux		GAH and Ducts are being incorporated into the EAUGL framework.
Turbine		Significant work has gone into this area, the bulk of risks are being mitigated. A detailed schedule has been provided and is being integrated in overall planning.
Turbine Aux		Significant work has gone into clarifying scope, EA Maintenance Planners have taken a lead on this reducing risk. Majority of the outage works in this area will be undertaken utilising existing EA contractors and internal staff.
External		Detailed plan from Lend Lease has been supplied for Ash Hopper works. The works in the cooling tower are a repeat of previous scope with minimal risk foreseen.
Chemical CCR		Late design changes have been required however this is progressing with UGL Engineering currently designing the layout of pipework to and from the skid. Skid design was revised with Electrical drawings to be signed-off by IC&E team.
Chemical Clean		Chemical Clean Scope now confirmed. Order has been placed on ECOLAB.
Operations		Plant performance improvement opportunities have been identified. Isolation safety improvement suggestions have been detailed.
Safety		The safety scope has been detailed; however significant work is required to put all in place.

Inter-Project Impacts

Area	Status	Detail
Electrical		Switchboard work will cause lighting to be impacted in the turbine house. Two small lighting outages are required to minimise impacts. 23/11kV transformer work areas are cluttered with activity.
Controls		DCS upgrades will make the DCS unavailable for 5 days. No workarounds are available, timing will be critical.
Boiler		Cleaning works impact starting dates on fans and motors in the area. The current Alimak install impacts, Boiler, fan, and chemical clean work. Alimak being dismantled and removed from site, order to be placed on Fowlers for 4 hoist units.
Boiler Aux		Fan works may impact of access to install chemical clean equipment.
Turbine		Limited Access to both loading bays Limited Access to Turbine house cranes 5 - 12-day impact on Aux Transformer work Power required to rotate shafts at start and end
Turbine Aux		Crane availability risks will be typically mitigated via large portable gantry cranes.
External		
Chemical		Chemical clean equipment install will impact activities in boiler basement (motor and fan work)

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