Community for Accurate Impact Assessment of the Dalton Power Station (CAIAD)
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Director, Resource Assessments
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

April 13, 2017

Dear Sir/Madam,

SUBMISSION IN RESPONSE TO THE DALTON POWER PROJECT - REQUEST TO EXTEND LAPSE DATE

The Community for Accurate Impact Assessment of the Dalton Power Station (CAIAD) hereby submits this response to The Dalton Power Project - Request to Extend Lapse Date.

We wish to object to the application to Extend the Lapse Date of the Dalton Power Project (DPP).

The people of Dalton and Gunning have had the spectre of the largest open cycle gas fired power station in eastern Australia in their valley for nearly 5 years now. It is unfair and bad policy to extend the uncertainty and associated stress and anxiety further.

A two year extension will mean that the community will be living with the prospect of this development for 7 years. This extension is asking us to put our lives on hold for too long while AGL makes up its mind. While the uncertainty looms, our property prices are depressed and investments are put on hold.

In their application to extend the lapse date, AGL say they have modelled the flow-on benefits to the economy with a 780MW Stage 1 (Dalton Lapse Extension Application, AGL, 2 March 2017, p4). However Stage 1 is limited to 750MW by the conditions of consent. Furthermore AGL in their discussions with the Planning Assessment Commission (PAC) in 2012 said they had reduced the planned capacity of Stage 1 to 500MW. The community is alarmed and outraged that AGL are already modelling economic impacts of a power station larger than the one that has been approved.

The application to extend the lapse date is made by AGL with the DDP as a transitional Part 3A project. Back in 2011 the Liberal party promised to rid the State of this bad legislation that has been linked to corruption and inadequate environmental assessment. We need our government to stand by its promise, and stop projects continuing endlessly as transitional Part 3A projects. This is particularly the case with this project. AGL was found guilty early in 2017 in the Land and Environment Court of making undisclosed political donations while the Dalton Power Project was

being assessed by the Planning Minister as the consent authority. The undisclosed political donations should make the existing approval invalid and the notion of extending the lapse date completely out of the question.

AGL is applying for an extension of time by saying that things have changed. It is precisely because things have changed that it is not in the public interest for the DPP to proceed under the old environmental assessment. Things have changed for AGL, and things have changed for Dalton and Gunning too.

After 5 years there are many issues with the previous assessment and the conditions of consent that need to be reassessed. The noise emissions are huge from these power stations and are difficult to predict with any accuracy. The noise estimates were wrong at Uranquinty and AGL got the noise assessment wrong when proposing the Tuggeranong power station a few years ago. The previous noise assessment with the DPP can perhaps best be described as a work of fiction, made more so with the condition of consent limiting the stack height to 28m when all the noise assessment was done assuming 46m stacks. Equally the air quality assessment cannot be relied upon now the stack height is reduced to 28m.

Further certain conditions of consent relating to weather measurement appear to not have been complied with. Under consent condition C41-C45 AGL were required to monitor weather and report findings on a dedicated website. It is not clear that this has been done as specified in the consent conditions.

In summary we object to the request to extend the lapse date for the following reasons:

1. AGL's conduct in the Assessment Process;
2. Changes in the local environment, the electricity market and planning laws;
3. Failure to comply with conditions of consent;
4. Problems with the consent conditions;
5. Enormous risk and uncertainty with modelling the environmental impacts; and
6. Misleading statements by AGL at the recent Community meeting.

Given the changes that have occurred in the region and the electricity market, and the fact that AGL have been found guilty of undisclosed political donations while applying for planning approval of this transitional Part 3A project, we implore you to reject the application to extend the lapse date.

1. AGL's conduct in the Assessment Process

AGL's behaviour throughout the whole development application process has been deplorable and speaks to the need to deny AGL an extension on the project's lapse date. See below only some of the offences committed by AGL.

a. Deceptive images

AGL has conducted itself appallingly in the approval process. From the outset they have sort to deceive and underplay the impact of power station on the community. One of the requirements of the Director General is that the proponent consults with the community. AGL has failed to do this. Unbelievably the picture on the front of the EA wasn't even a image of the Dalton power station, rather it was an image of the much smaller Leaf's Gully power station (see Figure 1).

For many in the community their review of the project amounted to looking at the front cover of the EA. To put an incorrect image on the cover is unforgiveable. For this reason alone the project should have been rejected.

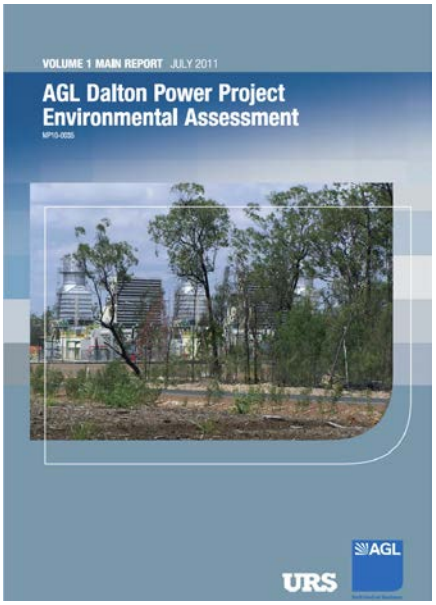
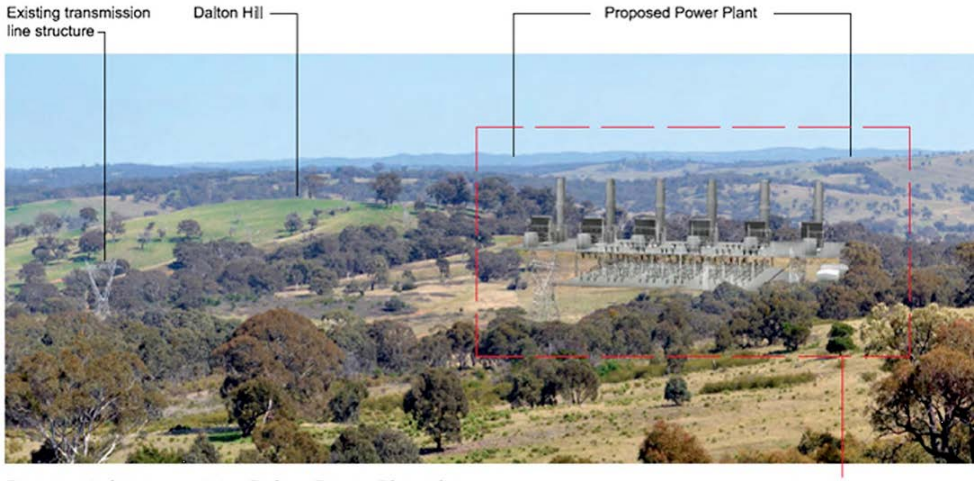


Figure 1: Original and actual images of the Dalton power station

Original image provided to the community



Proposed view toward the Dalton Power Plant site
(approximately 1.5km south east of the Dalton Power Plant site)

What the proposed Dalton power station actually was going to look

What the approved Dalton power station will look like with 28m stacks

AGL also put out a brochure early in the consultation which showed children on pushbikes cycling around the power station site. The community could have been forgiven for believing AGL was building a recreation park rather than Australia's largest ever open cycle gas fired power station with massive audible and low frequency noise emissions.

b. Approaching residents impacted by noise to sign confidentiality contracts

One particularly unconscionable act by AGL was to approach elderly and uninformed residents with confidentiality contracts offering to pay them compensation in return for allowing noise on their properties to exceed the limits set by the NSW Industry Noise Policy (NSW INP).

AGL failed to mention to residents that if they did sign the contracts, their properties would be significantly devalued if not made worthless, it was likely they wouldn't be able to sleep at night because of the noise and the noise impacts for their friends and family living next to them would be increased. And at no time did AGL tell people they should get independent legal advice.

The problem with AGL negotiating to increase noise on those closest to them is that it pushes the noise further out so more people in the community are affected. There are guidelines in the NSW INP about what the proponent should do if noise exceeds limits. Picking off vulnerable individuals with confidentiality contracts and hoodwinking them isn't part of it. The proponent is to engage with the community and negotiate a whole of community position. The NSW INP states: "*'Agreement' would need to be defined for the community so that a single community view could be regarded as representative"*, p45. Approaching individuals is in direct conflict with a negotiated 'single community view'.

c. AGL stating they had conducted a 'comprehensive review' of existing gas fired power stations

We asked to see the comprehensive review of gas fired power stations that AGL stated in the EA they had completed. When we received it, we found it to be a 'list', a couple of pages long, simply naming each power station and stating the MW capacity, rather than any sort of review.

Uranquinty had seen 10 families forced from their homes and residents there said windows rattled 5km away. This is a huge noise impact zone (5km radius, 10km across) and Uranquinty is a much smaller power station, using quieter technology. Our hope was that AGL's 'comprehensive review' would help prevent the same outcome at Dalton. It is hard to put into words how incredulous we were that AGL had done absolutely nothing to understand the problems with power stations elsewhere before inflicting the biggest one ever built in Australia on our community.

d. Failure to disclose political donations

In January 2017 AGL were fined for failing to disclose political donations when making planning applications. As stated in the NSW Department of Planning and Environment (DP&E) media release

the charges related to AGL's coal seam gas projects in Gloucester and Camden; the Newcastle Gas Storage Facility; the Broken Hill solar plant and the Dalton Power Station. For the Dalton and Gunning community this conviction taints the assessment process and invalidates the current approval.

We ask that this litany of appalling acts and omissions be taken into account when deciding whether to extend the lapse date.

2. Things have changed in the local environment, the electricity market and the planning laws

There are reasons why lapse dates are in place in planning consents that makes it important to enforce time limits. Overtime governments change planning laws, the socio-economic environment of regions change, and the supply and demand side aspects of industries alter.

All of these changes overtime erode the accuracy of the original Environmental Assessment (that had very questionable merit originally).

a. Changes in planning laws and policy

The Dalton Power Project (DDP) is a transitional Part 3A project. Part 3A was repealed in 2011. It is somewhat ludicrous that Department of Planning & Environment (DP&E) is being asked to consider extending the time this project can be allowed to commence given our government has long since repealed Part 3A as flawed planning legislation.

In 2011 the Barry O'Farrell Liberal government went to the election promising to repeal Part 3A if elected. After winning the election one of their first acts of office was the repeal legislation. The reason Part 3A was so politically charged was because of the corruption scandal with Eddie O'Beid and Ian McDonald. Mt Penny mine was a Part 3A project and under the legislation a mine approved under Part 3A must be allowed a mining licence. It was considered Part 3A put too much power in the hands of the Minister, left the planning system open to corruption and didn't subject projects to sufficient environmental assessment.

At the time the Department of Planning and Infrastructure (DP&I - now DP&E) said the purpose of the transitional arrangements were to phase out Part 3A in an orderly manner. It said "Part 3A project approval lapses if the development the subject of the approval is not physically commenced by the date specified in the approval." (*Part 3A repeal – transitional arrangements*, PS 11-021, DP&I, 30 September 2011).

In 2015 Clause 11A was added concerning requests made to the Minister to extend the lapse date of transitional Part 3A projects which is described as a ***relevant modification request***.

The Clause states where the approval would otherwise lapse "*the approval does not lapse on that date but continues in force until:*

(a) the request is determined or withdrawn, or
(b) the date that is 12 months after the request was made, whichever first occurs".

(Schedule 6A Transitional arrangements—repeal of Part 3A: 11A Requests to extend date that Part 3A approval lapses).

How the Liberal government's resolution to get rid of Part 3A and all its ghosts has faded with the longevity of office. Too long have Part 3A projects loomed over local communities where the development is contrary to the growth aspirations of a region. All the promise of removing these dirty bits of bad legislation is now just a distant memory to us and those we elected. We are forced to endure little amendment after little amendment perpetuating and enabling these wrong laws.

Now AGL has been found guilty of making undisclosed political donations in the Land and Environment Court while the Dalton Power Project was being assessed by the Planning Minister as the consent authority. This taints and invalidates the current approval of the project. Even before the MOD1 application good governance should have seen the DPP reassessed.

We implore our elected representatives to stand by the promise they made to us in 2011 and stop projects being assessed under Part 3A, particularly this project where the current approval is unsound because of AGLs political donations conviction.

b. Changes in electricity supply infrastructure

In their application to extend the lapse date AGL say they want a delay to look at a 'substantial modification' to the project. They say the increased supply of unreliable renewable (wind and solar) in the electricity market increases the need for rapid response open cycle gas fired generation. This is a real concern for the community as the original EA argued it would only operate in periods of peak demand – not when renewables are unavailable on **still nights**.

Also AGL say that the lapse date for the DPP needs to be extended because of the decommissioning of Munmorah and Wallerawang (base load power stations), and AGL's announced withdrawal of 2000 MW of generation from Liddell in 2022 (also base load).

Both operation when renewables are unavailable and increased need because of the decommissioning of base load power stations, are exceedingly alarming revelations. It signals that the power station will operate more often than stated by AGL previously. When 'consulting' with the public during the Environmental Assessment process AGL made public statements that the power plant would be operating very occasionally – 340 hours a year, or less than 20 days a year (3-4% of the time) (See AGL advertisement, 2011).

AGL have gone on the public record saying this is the estimated amount of time the power station will be operating. Had the planning process been fair to the community last time, a limit to this level of operation would have been part of the planning consent.

Any change to when or how often the power station will be operating because of changes in the electricity supply-side infrastructure must require a new EA.

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AGL addresses the issues

By: Neil Cooke, Dalton Power Project

There have been a number of questions raised in the media and other forums recently about AGL's proposed gas-fired power plant at Dalton. Many of these questions are reasonable and fair; some comments and images being disseminated locally do not reflect the facts. However, in this article and others in coming weeks, I will attempt to set the record straight in the interests of ensuring the community is informed and reassured.

Water

Questions about the use of water in the project are often raised and we understand why the community wants to make sure that this is being adequately addressed. AGL has been working with the Council to investigate various options for the supply of water for the plant. As many would know, the NSW Department of Planning and Infrastructure (DP&I) requires that "adequate and secure water supply is available for the life of the project".

Tests show water available on site

To secure water supply, AGL acquired test bore licences from the NSW Office of Water (NOW). Importantly, testing has successfully proven the availability of reliable water supply from on-site bores.

Testing to date has involved two bore holes drilled to a depth of approximately 120 metres and a 24 hour pump test conducted on site. A hydrogeologist managed the drilling and pump testing of both bore sites. Based on local geology, inspections of drilled material and flows from the holes, AGL has been advised that this level of production is adequate to provide the sustainable 25ML required annually.

No effect expected on other bores

Crucially, AGL has received further hydrogeological advice that these bores are not expected to affect other bores in the area. The Upper Lachlan Shire Council has confirmed that they have received similar hydrogeological advice and that they will monitor local bores to ensure that the community's local supply is secure.

This means that water will now only need to be brought on site for dust suppression during the start of construction. After the first three months the bore water will be available and AGL will be self sufficient.

This project is still awaiting approval from the NSW DP&I. AGL is currently preparing its submission report based on feedback to the Preliminary Environmental Assessment. We expect that this will be available on the Department's website in March.

Final assessment – more water efficient turbines preferred

Following this the DP&I will prepare the Director General's report and the project will undergo final assessment and decision by the Planning and Assessment Commission.

One of the features of the approval process is that as it progresses, some of the different options stated within the Environment Assessment become preferred. One of these is the type of gas turbine. Both E Class (less water efficient) and F class (very water efficient) are considered in the EA. The F class has now been selected. Also, the power station is split into two stages with stage 1 being 250 to 780 MW. This has now been selected as 500 MW which will have a construction time of two years. At this size the F class will consume up to 11 ML of water a year, or the equivalent of about five Olympic swim pools.

In order to progress with stage 2 of the power station, it would be necessary for Transgrid to upgrade the 330 kV line between Bannaby to Yass to 500 kV. Transgrid have stated that the timetable for this is greater than five years but it is considered to be unlikely to be before the end of this decade.

AGL understands that the community has high expectations and we know we have to work hard to help people understand all aspects of the project.

It is important in the first instance for people to understand that this is a 'peaking' power station which will only operate at times of peak electricity demand. We estimate this means it will run for about 340 hours a year, or less than 20 days a year.

For the rest of the time, it will be completely switched off – this means that for more than 340 days of the year, there will be no emissions, no noise, no use of water, no impact. Local people will barely know the power station is there when it is running; but for the vast majority of the year, it won't be running at all.

Further information/ consultation:

I will be focusing on other topics in future articles including the approval process, water testing, emissions, the jobs forum and others.

Further opportunities for discussion with AGL representatives will be:

- **Water/ Traffic/ Community consultation forum** – March
- **Employment/ contracting/ accommodation/ food meeting** – April/ May – where AGL and its contractor will outline local employment opportunities.

AGL will publish details of these meetings in due course.

For further information:

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c. Changes to the local population and economy

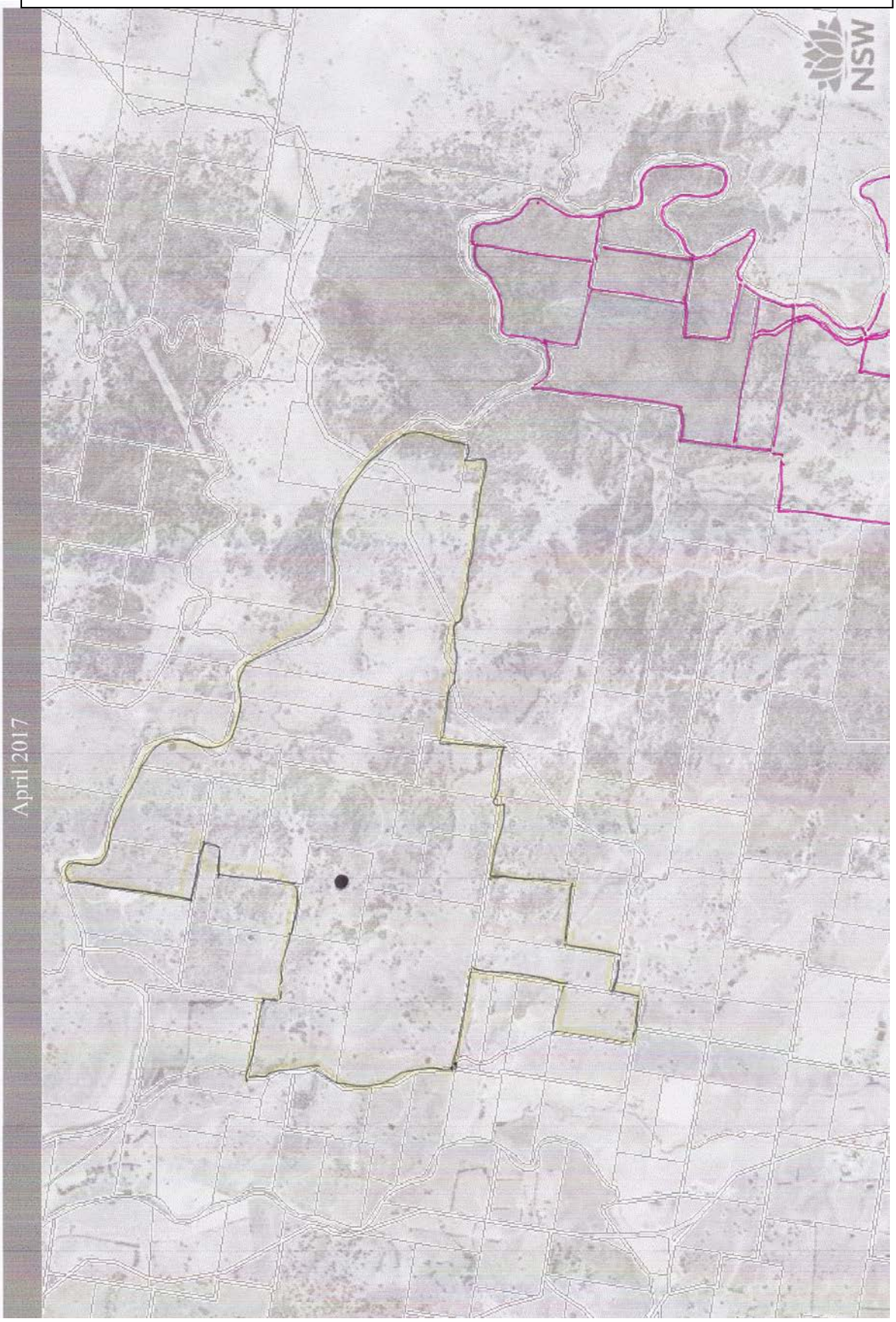
AGL is wanting an extension of time by saying that things have changed. It is precisely because things have changed that it is not in the public interest for the DPP to proceed under the old environmental assessment.

i. More impacted residents

There have been significant demographic changes to the region since October 2012 when AGL announced the suspension of the DPP. A subdivision has gone ahead in close proximity to the proposed site and there are some 18 new impacted people in the community. There is real risk that the power station will exceed the NSW INP criteria at these new properties (see Figure 2: Lot boundaries – Dalton April 2016– yellow highlighted DPP property, pink new Lots). The *MAJOR PROJECT ASSESSMENT:Dalton Power Project Walshs Road, Dalton(MP10_0035) by DP&I* in Table 13 indicates the night time criteria will be exceeded for nearby receptor J. This is expected to be a significant underestimate of the actual exceedances at these new properties. The exceedances reported in Table 13 occurred even though the noise assessment failed to model adverse weather conditions specific to the region, and the amplification from modelled adverse conditions was well below the 5-10dB, that the NSW INP policy says occurs on average.

See Figure 2 below.

Figure 2: Lot boundaries - Dalton April 2017, AGL property ‘yellow’, new subdivision ‘pink’



ii. Gunning/Dalton growth areas for affordable housing and tourism

A recent Socio-Economic Assessment of the region says the Dalton/Gunning area of "*Upper Lachlan Shire where the DPP is proposed to be sited is forecast to have the highest population growth in the Upper Lachlan Shire [ULS]with 6.58% growth forecast in the next 20 years [forecast.id.com/upper-lachlan]*".

(Why an extension of the approval of the Dalton power project will have a negative socio-economic impact, Australians Against AGL Dalton Power Project , 2017).

Tourism

The Socio-Economic Assessment points out that tourism is a growth industry for the region, with more than 177 tourism related businesses in the ULS local government area, while the DPP only expects to employ 5 full time employees. At a public meeting in 2011/12, when questioned about all the jobs they were promising for the community, AGL admitted that actually they expected there would be only one long term job for a person currently within the community.....for a cleaner. The negative environmental impacts associated with the DPP including noise, pollution and loss of visual amenity, mean the project is in conflict with the growing tourism industry which employs many hundreds of people in the region.

Affordable housing

When the Wellington Council recently objected to the proposed ERM 255 MW Siemens 4000F gas-fired turbines they said:

Economic Impact

Should a situation arise subsequent to the plants construction whereby noise levels exceed those predicted and this has a direct or perceived impact on the Wellington township a significant detrimental economic impact would be expected. Wellington's economy has suffered from regional and rural adjustment characterised in the Australian economy in the past 40 years. As a result we experience a declining population and a struggling retail sector.

An emerging strength for our local economy is to attract people who are being forced out of the increasingly expensive property markets of Dubbo, Mudgee and Orange and who are seeking a quiet country lifestyle within commuting distance to major regional centres. A power station on the edge of Wellington does not help to foster this opportunity.

*(*Mayoral Minutes/Councillors Supplementary Reports Presented to the Ordinary Meeting of Council, 24 June 2015*).*

People are being forced out of Sydney and Canberra because of unaffordable housing. Sydney and Canberra are the two largest cities in NSW and the ACT. The number of people seeking a quiet country lifestyle within commuting distance of the nation's capital can be expected to be significant - much more significant than the numbers considered important at Wellington to reverse support for the project at the proposed site.

The "NSW Government supports planning policies that encourage affordable housing development" http://www.planning.nsw.gov.au/planning-for-affordable-housing . The DPP is in direct conflict with this policy. The towns of Gunning and Dalton that are so physically close to Canberra and Sydney will no longer be regarded as desirable regional relocation choices. The Federal government calls the housing affordability crisis a supply side problem. The supply side gets a whole lots worse when you take pretty little country towns like Gunning and Dalton out of the equation.

iii. Clean green image of the region and water availability

The largest industry in the shire is Agriculture with 27.6% of the working population. It is vulnerable with the DPP proceeding because the clean green image of the area will be lost. Increasingly consumers care about the environment where their food is grown. Air pollution, including Hazardous Air Pollutants (HAP) like the carcinogen Formaldehyde, emitted by the DPP will undermine the environmental credentials of the region. This is not about exceeding limits. It's about perception. Even if the level of pollutants doesn't exceed limits, air pollution emissions impact negatively on the idea of a clean green environment.

The water requirement of the power station also puts agriculture at risk. AGL have only estimated water use assuming the plant operates 5% of the time. The approval allows the plant to operate at 15% of the time with extended operation above the 15% allowed if directed by the market operator. Water use for 5% of the time is currently estimated by AGL as 22ML (29ML in the EA). If the plant runs 15% of the time it will use 66ML. To put this into context, before the water pipeline between Gunning and Dalton, the town of Dalton only used 10ML pa. A figure of 66ML is equivalent to over 6 Daltons or 20-30 farming operations concentrated on the one site. There is real risk and uncertainty about the availability of water for existing agricultural industry with the DPP proceeding.

d. Offsetting negative impacts with funds from the Community Enhancement Fund

It has been suggested that the negative impacts on the region will be offset by the Community Enhancement Fund.

The Assessment Report states:

"In May 2012, the Proponent entered into a Voluntary Planning Agreement with the Upper Lachlan Shire Council where it agreed to pay the Council's Community Enhancement Fund the amount of 0.833 percent of Stage 1 capital expenditure over a period of 40 years. Should the development proceed to Stage 2, the Proponent would pay the Fund 0.833% of the Stage 2 capital expenditure over a period of 40 years. To ensure that the agreed contribution is remitted, the Department has recommended a condition of approval to this effect".

Given that the project is forecast to cost $1.5b the community could be forgiven for thinking 0.833% will be a substantial sum. However this amount is paid over 40 years. Therefore if Stage 1 cost $750m, 0.833% spread over 40 years is $156,000pa - hardly enough to renovate a modest cottage annually let alone compensate the community for noise, ruining the growing tourism industry, lowering property values, and lost wealth from all the people leaving the district and no longer moving to the district.

All these changes described above relating to planning laws, the local economy and the electricity market invalidate the old EA and require a new assessment be undertaken, and mean the lapse date should not be extended.

3. Failure to comply with consent conditions

The Approval given by PAC required the following consent conditions:

WEATHER MONITORING
C41. The Proponent shall establish and maintain a meteorological station on site within one month of the approval of the Project, with the capability of continuously monitoring the parameters set out in Table 1.

C42. The weather parameters specified in Table 1 shall be monitored on site in accordance with the specified sampling methods, units of measure, averaging periods and frequency.

C43. The Proponent shall use the meteorological data collected on site to determine the occurrence and frequency of stability category temperature inversions prevailing at the Project site and whether they occur for a significant period of time at the site as defined in the NSW Industrial Noise Policy (Environment Protection Authority, 2000).

C44. Stability category temperature inversion conditions (stability category) are to be determined in accordance with methods set out in the NSW Industrial Noise Policy (Environment Protection Authority, 2000).

C45. After a period of 12 months of meteorological monitoring, the Proponent shall forward to the Director-General a report describing the type and frequency of temperature inversion conditions prevailing at the site. The report shall be made available on the dedicated website for the project within 1 month of it being forwarded to the Director-General.

(Project Approval, Section 75J of the *Environmental Planning and Assessment Act 1979,* 19 July 2017*,* p 12)

It is not clear that these conditions of consent have been complied with. Certainly no one in the community has been able to find the weather report available on the 'dedicated website'. Also the data collection methodology is questioned as the weather monitoring was undertaken in a depression under trees which can be expected to undermine the accuracy of the weather monitoring.

The inability to meet consent conditions so early in the project approval argues against extending the lapse date.

4. Problems with the existing conditions of consent

a. Stack height

Consent condition C18 states:

"Visual Amenity

C18. The height of the top most point of the gas turbine assembly shall not exceed 606 metres AHD (including stacks of 28m high and air intake but excluding lightning protection)." p9.

However all the noise and air quality assessment was done assuming 46m stacks (See Table 5-4 and Table 4-4 below).

Table 5-4 Sound Power Levels – 109F Class

Operational Noise Source		Source Height Used in Noise Modelling (m)	Estimated Overall Sound Power Level[3]	
			dB(Lin)	dB(A)
Inlet System (silencer included)	Inlet Ducting (filter house included)	27	107	95
	Inlet Filter Face	17	117	107
GT Power Train Package	Accessory Unit	13	111	103
	Inlet Plenum	18	104	103
	Turbine Compartment (acoustic enclosure)	13	119	113
	Exhaust Diffuser (acoustic enclosure)	9	125	112
	Load Compartment	18	114	105
	Liquid Fuel & Atomising Air (LF/AA) Module	13	111	103
Vent Fans	Turbine Compartment Vent Fans	13	112	104
	Exhaust Compartment Vent Fans	13	113	102
Transformers	330 MVA Transformer	3	108[2]	99[2]
Exhaust Stack[1]	Stack Body	25	131	110
	Stack Opening	46		

Notes:
1. Sound power level of the exhaust stack has been estimated based on the maximum cumulative sound power level the site can generate in order to meet the noise limits. To ensure the compliance with the noise limit, the sound power level of exhaust stack opening and body combined should not exceed 110 dB(A).
2. Estimated based on AS/NZS 60076.10:2009 – Power Transformers: Determination of sound levels.
3. All manufacturer sound power levels were supplied to URS by AGL.

Stack height

Note footnote 2: "Sound power level of the exhaust stack has been **estimated** based on the maximum cumulative sound power level the site can generate in order to meet the noise limits" AGL DPP EA, Appendix G – Noise Assessment, p30. To put 110dBA in context Wikipedea says its equivalent to an aircraft at take off at 200 feet (60 metres) – human pain threshold.

Table 4-4 Gas turbine emission parameters

Parameter	E Class		F Class	
	Startup	Operation	Startup	Operation
Stack Height (m)	35	35	46	46
Stack Diameter (m)	6.0	6.0	6.7	6.7
Exit Temperature (°C)	365	532	435	610
Exit Velocity (m/s)	20	40	13	45
Duration (min)	15	-	20*	-

Stack height

AGL DPP EA, Appendix C –Air Quality Assessment, p25.

The F class turbine stacks vent approximately 1700m3/s of exhaust gases at a speed of 150km/h, and a temperature of around 500 to 600 degrees C. A bushfire would seem a risk with the lower stacks.

Although the community is pleased that the bulk and scale of the structure is reduced, it would seem all the environmental assessment of noise and plume dispersion modelling is wrong if a lower stack height is required.

b. Noise limits don't apply under prevailing weather conditions of the region

AGL don't have to comply with the noise limits under certain weather conditions including:

a. *wind speeds greater than 4 metres per second measured at 10 metres above ground level; or*

b. *F stability category temperature inversion conditions and wind speeds greater than 2 metres per second at 10 metres above ground level; or*

c. *G stability category temperature inversion conditions.*

The data to be used for determining meteorological conditions shall be that recorded by the meteorological station located on the project site.

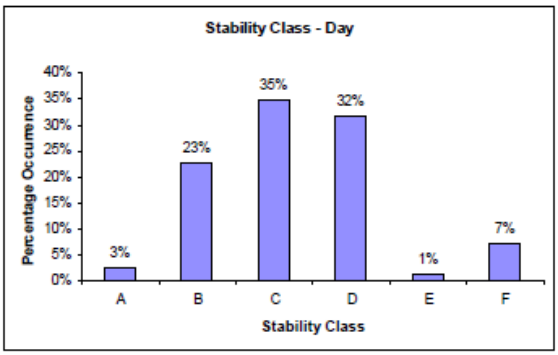
The stability category temperature inversion exceptions detailed in (b) and (c) are not applicable if the report prepared under condition C45 demonstrates that the stability category inversion conditions described in (b) and (c) are characteristic of the area and occur for a significant period of time, unless otherwise agreed to by the Director-General. p31.

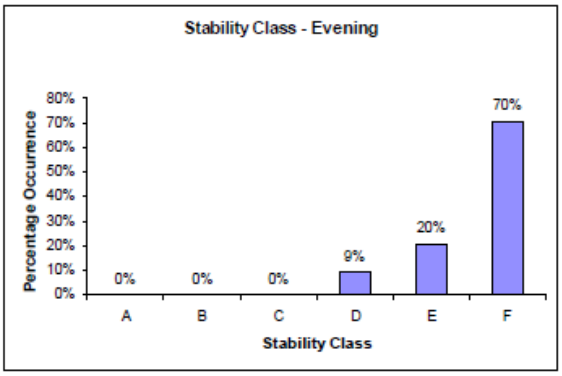
As no weather data was available at Dalton, in the EA weather from Goulburn was used. The community successfully argued that the weather at Dalton is significantly different to Goulburn and so consent condition C45 was required.

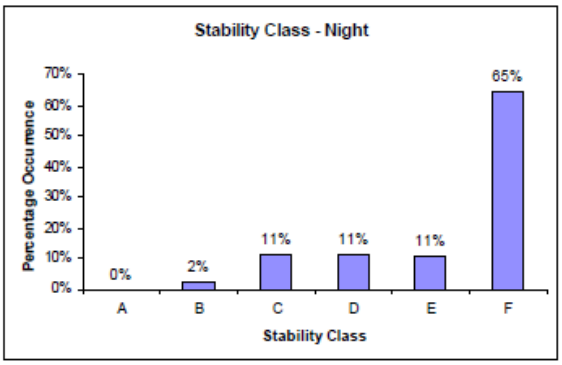
The Goulburn weather data showed that in the evening and night F class temperature inversions occurred for 65-70% of the time and average wind speeds every year from 1999 to 2006 exceeded 4m/s (14km/hour) (see Figure 3 below).

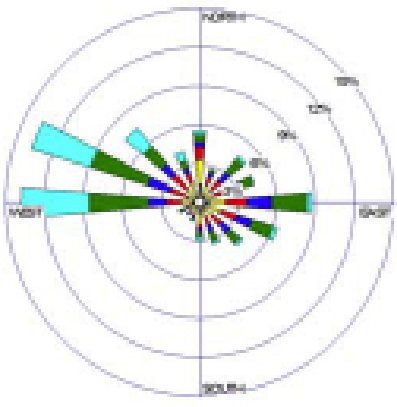
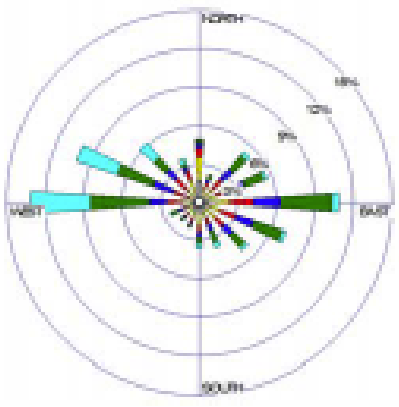
Figure 3: Goulburn weather – inversions and average wind speed

Calculated Stability Categories from Met Data







2005 Average wind speed: 4.22 m/s Calms: 13.01 %	2006 Average wind speed: 4.09m/s Calms 11.88%
	

These conditions were modelled by AGL/URS as adverse weather conditions of the region. However they are in fact average weather conditions of the region (see Table 5-1 Prevailing meteorological conditions; and Table 5-5 Meteorological Conditions used in Noise Modelling, below).

The results of the meteorological analysis are presented in Table 5-1:

Table 5-1 Prevailing Meteorological Conditions

Time of Day	Pasquill Stability Class	Wind Speed (m/s)	Wind Direction
Day (7.00 am – 6.00 pm)	C (28 %), D (26 %)	4	Summer: Easterly Autumn: Westerly & Easterly Winter: North-westerly & South-easterly Spring: North-westerly & South-easterly
Evening & Night (6.00 pm – 7.00 am)	F (65 % - 70 %)	2	

AGL DPP EA Appendix G, p28

5.3.3 Meteorological Conditions Used in Noise Modelling

Potential noise impacts have been predicted separately for each of the meteorological scenarios in Table 5-5.

Table 5-5 Meteorological Conditions used in Noise Modelling

Met. Scenario	Meteorological Condition				
	Temperature (°C)	Relative Humidity (%)	Pasquill Stability Class	Wind Speed (m/s)	Wind Direction
Day Operation – Neutral Met. Conditions	25	60	D	0	n/a
Evening & Night-time Operation – Neutral Met Conditions	10	75	D	0	n/a
Day Operation – Adverse Met. Conditions	25	60	C[1]	4	source-to-receiver
Evening & Night-time Operation – Adverse Met. Conditions	10	75	F	2	source-to-receiver
Notes: 1. Modelling results indicated higher levels using C class than using D class.					

AGL DPP EA Appendix G, p30

When determining the impacts under adverse weather conditions the NSW INP requires "*to ensure that the situations where the maximum level of impact is likely to occur are identified and quantified.*

(NSW Industry Noise Policy p37). Instead AGL modelled prevailing conditions and passed them off as adverse weather conditions.

Further the determination says "the Environmental Assessment was based on a worst case scenario"(PAC, 2012, p3). Although Section 75F of The *Environmental Planning and Assessment Act 1979* requires that air quality and noise are assessed under "worse case operating scenarios and meteorological conditions", this was not done. Again.....the adverse weather conditions modelled were the average weather conditions of the region.

On p42 of the response to submissions AGL states based on the Goulburn weather data that G class inversions would most likely occur only 15% of the time (Submission Report AGL DPP, April 2012,p42). Not considering G class inversions that occur 15% of the time, is inconsistent with the over-riding objective of capturing the 'maximum level of impact' from adverse weather conditions.

AGL also admit that G class inversions could be expected to increase noise by 20dB(A) (p42) but this was not assessed in the EA.

d. Low frequency noise limit

As noise is the environmental criteria most likely to be exceeded, it is essential that noise criteria are rigorously established. In an attempt to better protect the amenity of the community from low frequency noise, NSW Planning and Infrastructure (DP&I) has recommended low frequency noise criteria that fall outside the current NSW Industry Noise Policy (NSW INP) base on research by Dr Norm Broner.

However it has not been established that the new low frequency noise criteria recommended by Dr Broner will protect the community from annoying low frequency noise. There has been no public consultation, no peer review and no scientific testing of Dr Broner's criteria for industrial noise. In particular the Broner criteria haven't been independently critiqued against international best practise low frequency noise controls published in literature reviews. Also there has been no assessment of the effectiveness of the Broner criteria for preventing sleep disturbance or disturbance inside a dwelling.

We contacted Dr Broner to see if his criteria would have protected the community of Uranquinty. He said it would be interesting to review the data from Uranquinty and doing so would allow him to check his proposed criteria (email 6/5/2012). The community questions why the project was approved before the criteria had been checked and peer reviewed. The Broner criteria may be the best possible, but this needs to be scientifically established.

We also pointed out in a submission to the PAC that the 5dBC penalty on the criteria recommended by Broner, if the low frequency noise is fluctuating, has not been adopted as policy or a condition of consent for the Dalton power project.

While the community welcomes PAC imposing the cost of compliance on the proponent, for this to protect the community the criteria need to be carefully and scientifically determined. DP&E and the PAC have a legal responsibility to protect the community from offensive noise. This can only be done

if the recommended criteria are scientifically tested and the proponent is not frequently exempt from meeting the criteria during the prevailing weather conditions of the region.

e. Operation of GE 9FA turbines in Australia

There are some errors of fact in the PAC determination of the Dalton power project. Firstly it is stated F class turbines are proven machines and 9FA turbines have been in operation in Australia since 1990s. They are not new technology." (PAC, 2012, *Determination of the proposed Dalton power project,* p3). However AGL have stated to the community that there are no GE 9FA turbines operating in Australia. There are F class turbines at Mortlake in Victoria that were being commissioned in 2011 but these are Siemens SGTS 4000F and not GE 9FAs as proposed for Dalton.

The community asks that AGL provide information on the GE 9FA turbines that they say have been in operation in Australia for many years – where they are operating, how they are configured and what noise they are emitting.

Further the determination states:

"The Commission raised the community concern with the proponent and sought advice on how it will ensure the Uranquinty experience would not be repeated in Dalton. The proponent confirmed that it will include a condition in its contract with the manufacturer that the turbines must meet the noise criteria" (PAC, 2012, p6).

There are two sources of noise from open cycle gas fired power stations: the turbines; and the stacks. Residents at Uranquinty have said it is the stacks that have caused the low frequency noise problems there. In the Environmental Assessment URS/AGL assumed that the noise from the stacks would not exceed the criteria. . The proponent needs to confirm that it will include a condition in its contract with the manufacturer that the power station as a whole (turbines in combination with stacks when operating at full capacity) must meet the noise criteria.

Issues with the original approval specifically with regard to stack height and adverse weather modelling, mean that the existing lapse date needs to be enforced.

5. Enormous risk and uncertainty with modelling the environmental impacts

Noise is possibly the biggest environmental problem with open cycle gas fired power stations.

Open cycle gas fired power stations are at the top of the list of low frequency noise emitting industries.

Proponents wanting to build open cycle gas fired power stations have a bad track record in accurately predicting noise produced by these power stations.

In 2015 Wellington Council unanimously voted to oppose an open cycle gas fired power station being built close to that town. They referred to:

a. Hilly terrain and the proponent, ERM, admitting this undermines the accuracy of noise predictions;
b. Low level cloud cover and fogs typical in the area in the winter months being expected to amplify noise;
c. An emerging strength of their local economy being to attract people wanting affordable housing and a quiet country lifestyle. This would be undermined with the presence of a power station; and
d. Mistakes, errors and omissions occurring when predicting noise levels as seen at Uranquinty.

The Wellington Council concluded the "risks of the project.....outweigh any likely economic benefit to the community".

There are close of parallels between Wellington and Dalton: undulating terrain; cloud cover in winter in the Dalton valley; people escaping Canberra's expensive property market and moving to the quiet country towns of Dalton and Gunning; and enormous uncertainty about the accuracy of noise predictions.

There are a number of examples where the proponents have got noise predictions wrong. In summary:

1. In the case of Uranquinty, a 640MW power station, 3km from the town, 10 families have abandoned their homes because they couldn't live with the noise. Uranquinty residents comment they can feel vibrations through the ground and that windows rattle even as far as 4 to 5km away. The proponent spent $60m fitting prongs in the stacks to reduce the noise but made the noise problem worse.

2. Residents near the Ron Goodin power station at Alice Springs raised complaints about the noise. A total of $800,000 was spent on noise abatement measures. They didn't work so they picked the power station up and moved it 25km out of town.

3. ActewAGL proposed to build a data storage warehouse powered by a very small 210MW open cycle gas fired power station. The Noise Assessment said the power station would produce 87dBa but the a real world example (Ron Goodin, Alice Springs above) found the turbines produced levels somewhere between 99.2 and 103.1dBa and couldn't get anywhere near the 87dBa ActewAGL predicted.

4. Laverton North power station was ordered by the Victorian Civil and Administrative Tribunal to remain shutdown in 2007 on weekdays between 8am and 5pm, due to the neighbouring offices being affected by noise and vibration. The order followed complaints by office workers near the plant about the level of noise and vibration emanating from the unmanned station. The office staff reported headaches, nausea, ear aches and other adverse health effects from the plant.

A more detailed discussion of the open cycle gas fired power stations noise emission problems can be found in Appendix A.

Errors and omissions with modelling

AGL have **assumed** that the stacks and turbines will have noise levels that meet noise limit criteria. They say they will include a condition in its contract with the manufacturer that the turbines must meet the noise criteria. But contracts have been breached before – at Uranquinty for instance.

Therefore the community needs to know with some confidence that a real world example of this power station can comply with noise limits under adverse weather conditions.

> The NSW INP says that "Certain meteorological conditions may increase noise levels by focusing sound-wave propagation paths at a single point. ... These meteorological effects typically increase noise levels by 5 to 10 dB, and have been known to increase noise levels by as much as 20 dB in extreme conditions, thereby causing a significant noise impact on residents"
> http://www.environment.nsw.gov.au/resources/noise/ind_noise.pdf, p 31.

The EA report says that adverse conditions scenarios for noise impacts have been examined. The results generally show a 3 to 4 dB increase in noise levels, with one case (Receptor J – Scenario D) showing a 5 dB increase in adverse conditions. This is well below what would be expected.

NSW Treasury's *Economic Appraisal Principles and Procedures Simplified* states

"International research on major infrastructure projects has found evidence of systemic bias in project appraisals, ...

The research suggests a tendency for the costs of major projects to be underestimated and for demand forecasts to be inflated. These conclusions are based on case studies of several hundred major infrastructure projects in over 20 nations and 5 continents.....

The most appropriate way of addressing the issue,... is to ensure that the cost and benefit assumptions and data used in the analysis are reasonable, when compared with actual data from broadly similar projects undertaken in the past, or similar projects completed inter State or overseas. The analysis should also incorporate adequate sensitivity analysis."

The sensitivity of the results to assumptions about adverse impacts was presented in our submission to PAC. For Stage 1, ALL receptor showed exceedance.

As a critical infrastructure Part 3A project "*.....only the Planning Minister or the Director-General of Planning can give an administrative order relating to the enforcement of the EP&A Act or the Part 3A planning approval.*

The EP&A Act also excludes anyone from taking enforcement proceedings in the Land and Environment Court (Class 4 proceedings) to enforce the conditions of a critical infrastructure approval, or to remedy or restrain a breach of the EPA Act or any other environmental law in relation to the project, unless the proceedings are brought or approved by the Planning Minister." (*Part 3A Major Projects (Now Repealed)*, EDO, August 2013, p5).

As the community has no ability to take action to enforce conditions of consent of the DPP as a transitional Part 3A project and the fact that there is significant risk and uncertainty with the environmental impacts, it is vital therefore that the lapse date not be extended.

6. Misleading statements by AGL at the recent Community meeting

At the Community meeting on April 5, 2017 AGL said that they can't answer for what has been said or done in the past, but to judge them on what they say and do from this point forward.

Below is a review of AGL's recent statements to the Community.

a. Time of operation

They said at the meeting their approval is for operation 15% of the time.

NOT COMPLETELY TRUE

This isn't completely true. It is 15% of the time unless directed to operate more by the Electricity Market Operator. This means if it looks 'like the lights are going to go out in NSW' even if they have already run it for 15% of the year, they can run it more.

And what they don't tell you is what 15% of the time means for you. You might think.....15% of the time isn't that much. I can put up with that.

But what they don't tell you is that the power station will be mainly running between 6-9am in the morning and 6-9pm at night on week days. If you work out of town it will be running when you get up in the morning and when you get home at night. When you are awake and at home on week days it will be running pretty much 100% of the time.

b. Water

They said they had conservatively measured how much water the project will need – i.e. they claim they have overestimated rather than underestimated water take. They said the reason that they assumed the plant would only be running 5% of the time when estimating water usage, is that water is only needed sometimes when the plant is running.

NOT TRUE

In the Environmental Assessment (EA) they say

> As noted in **Section 2.5**, the normal operation of the plant is expected to be approximately 260 hours (3% of the year). This is the historical average for the operation hours for AGL's peaking plants. However, this has quite a wide variance. Some years it can be as low as 1% (90 hours) or as high as 5% (450 hrs). AGL is seeking the flexibility to operate the Facility for up to 15% of the year to allow for rare and extreme events. Therefore calculations for water use have been based on the reasonable peak runtime of 5% of the year.

Although the plant can be run without water, there is nothing about water only being required 1/3 of the time its running. Rather they knew water would be an issue and decided to model that bit at 5% operation.

They say they estimate they will need 22ML/year but this is if the plant operates 5% of the time. If it operates 15% of the time they will need 66ML/year. (The Department of Water Resources may have looked at the adequacy of water to meet 22ML but they haven't for 66ML/year. And it is not clear that they have considered the sustainability of this take in a drought year).

To put 66ML into context.....if you were running sheep or cattle on that property that AGL own you would need 2-3ML/year. So 66ML/year is equivalent to about 20-30 farms.

This may not always be a problem but in a hot dry summer it will be. These peaking plants tend to operate more during hot dry summers (droughts) because Snowy power is less available. If there is a drought there will be real issues for access to water for farmers in the area. In droughts bore levels drop and farmers tend to destock because of lack of feed, and so there is less of a drain on precious water resources. Just when everyone else is conserving precious water to survive the drought, this will be when AGL will be ramping up water use. The threat to the community's fragile water resource is a real and valid concern despite what AGL say.

c. Air quality

They were right about the modelling of air quality – they have assumed it runs continuously.

TRUE

> 4 Assessment Methodology
>
> For modelling purposes it has been assumed that all turbines will operate continuously for all hours of the year, under all meteorological conditions. Given the use of a Lagrangian puff model, where emissions from sequential hours are tracked and have the potential to co-contribute to ground level concentrations within a single hour, the assumption of continuous operation is considered conservative, particularly for startup scenarios where, in reality, the Facility will not startup in sequential hours.

BUT

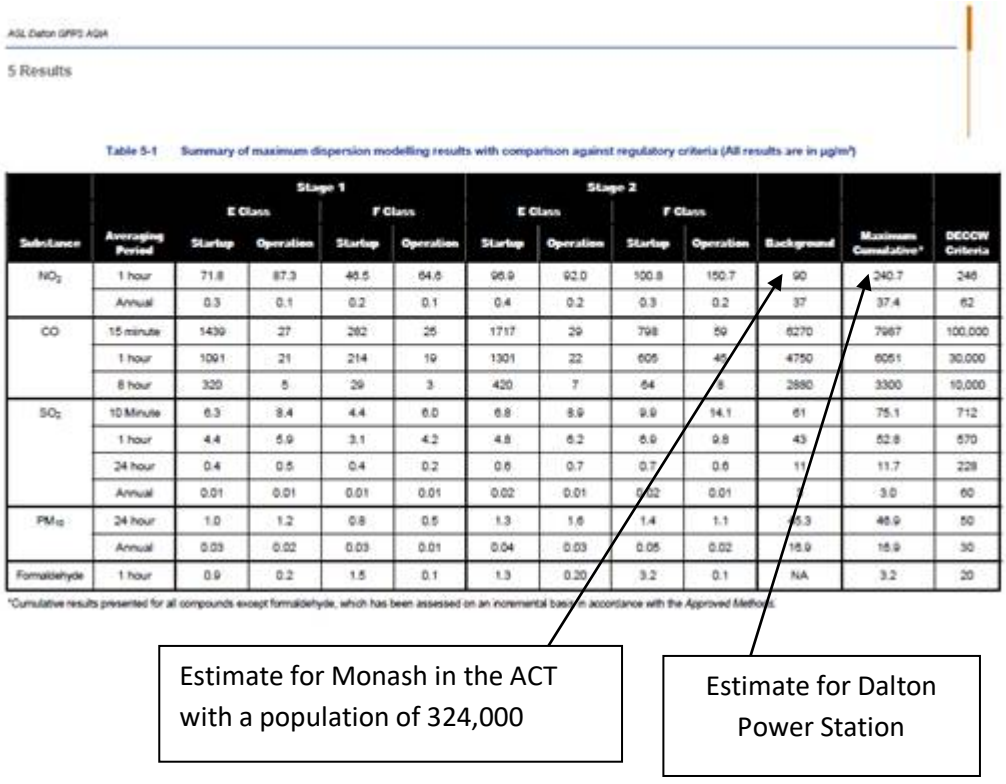
But it is not possible to tell what 'co-contribution' happens in the model from this assumption. Like everything thing AGL say, it's not clear they are being completely honest. Certainly the EPA requires they assess air quality in this way and sets the criteria accordingly.

The fact of the matter is, it is a 1 hour average criteria. Not a total annual criteria. So it's the amount of pollution in any one hour which sort of makes AGL's claim that it has been modelled running continuously irrelevant (unless the model captures the 'co-contribution' well which we doubt). We suspect the 1 hour average is more about the weather than the continuous operation. The point is they have assessed it this way and it comes up with NO2 level of 240.7. The background level is 90 from Monash with has a population 324,000. Therefore a level of 240.7 is like a population of 864,000 (or let's just call it 1 million).

ALSO

The modelling hasn't used weather from the region. It has used Goulburn weather to estimate air quality effects. The weather at Dalton is a lot different to the weather at Goulburn and stronger more frequent temperature inversions can be expected making the modelling results an under estimate of the actual impacts.

Estimate for Monash in the ACT with a population of 324,000



AGL Dalton GPPS AQIA

5 Results

Table 5-1 Summary of maximum dispersion modelling results with comparison against regulatory criteria (All results are in µg/m³)

Substance	Averaging Period	Stage 1 E Class Startup	Stage 1 E Class Operation	Stage 1 F Class Startup	Stage 1 F Class Operation	Stage 2 E Class Startup	Stage 2 E Class Operation	Stage 2 F Class Startup	Stage 2 F Class Operation	Background	Maximum Cumulative*	DECCW Criteria
NO_2	1 hour	71.8	87.3	46.5	64.6	98.9	92.0	100.8	150.7	90	240.7	246
	Annual	0.3	0.1	0.2	0.1	0.4	0.2	0.3	0.2	37	37.4	62
CO	15 minute	1439	27	282	25	1717	29	798	59	6270	7987	100,000
	1 hour	1091	21	214	19	1301	22	605	45	4750	6051	30,000
	8 hour	320	5	29	3	420	7	64	6	2880	3300	10,000
SO_2	10 Minute	6.3	8.4	4.4	6.0	6.8	8.9	9.9	14.1	61	75.1	712
	1 hour	4.4	5.9	3.1	4.2	4.8	6.2	6.9	9.8	43	52.8	570
	24 hour	0.4	0.5	0.4	0.2	0.6	0.7	0.7	0.6	11	11.7	228
	Annual	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.01	3	3.0	60
PM_{10}	24 hour	1.0	1.2	0.8	0.5	1.3	1.6	1.4	1.1	45.3	46.9	50
	Annual	0.03	0.02	0.03	0.01	0.04	0.03	0.05	0.02	16.9	16.9	30
Formaldehyde	1 hour	0.9	0.2	1.5	0.1	1.3	0.20	3.2	0.1	NA	3.2	20

*Cumulative results presented for all compounds except formaldehyde, which has been assessed on an incremental basis in accordance with the *Approved Methods*.

d. Air quality within Limits set by Government

AGL say that the air quality for Dalton is within the limits set by government.

NOT TRUE

The maximum cumulative 1 hour level of 240.7 µg/m^3 NO_2 for the Dalton power station significantly breaches the 1 hour level temperature-adjusted Australian standard as well as the level the WHO considers safe for human health.

AGL are arguing that the 240.7 micrograms/m3 is below the 246 criteria. (And they are not telling you a result of 240.7 is like living in a city with 1 million people).

BUT

The 2003 World Health Organisation (WHO) guideline values for NO_2 are a 1-hour level of 200 µg/m^3 and an annual average of 40 µg/m^3 http://www.euro.who.int/__data/assets/pdf_file/0005/112199/E79097.pdf).

So this exceeds what the WHO considered safe.

AND

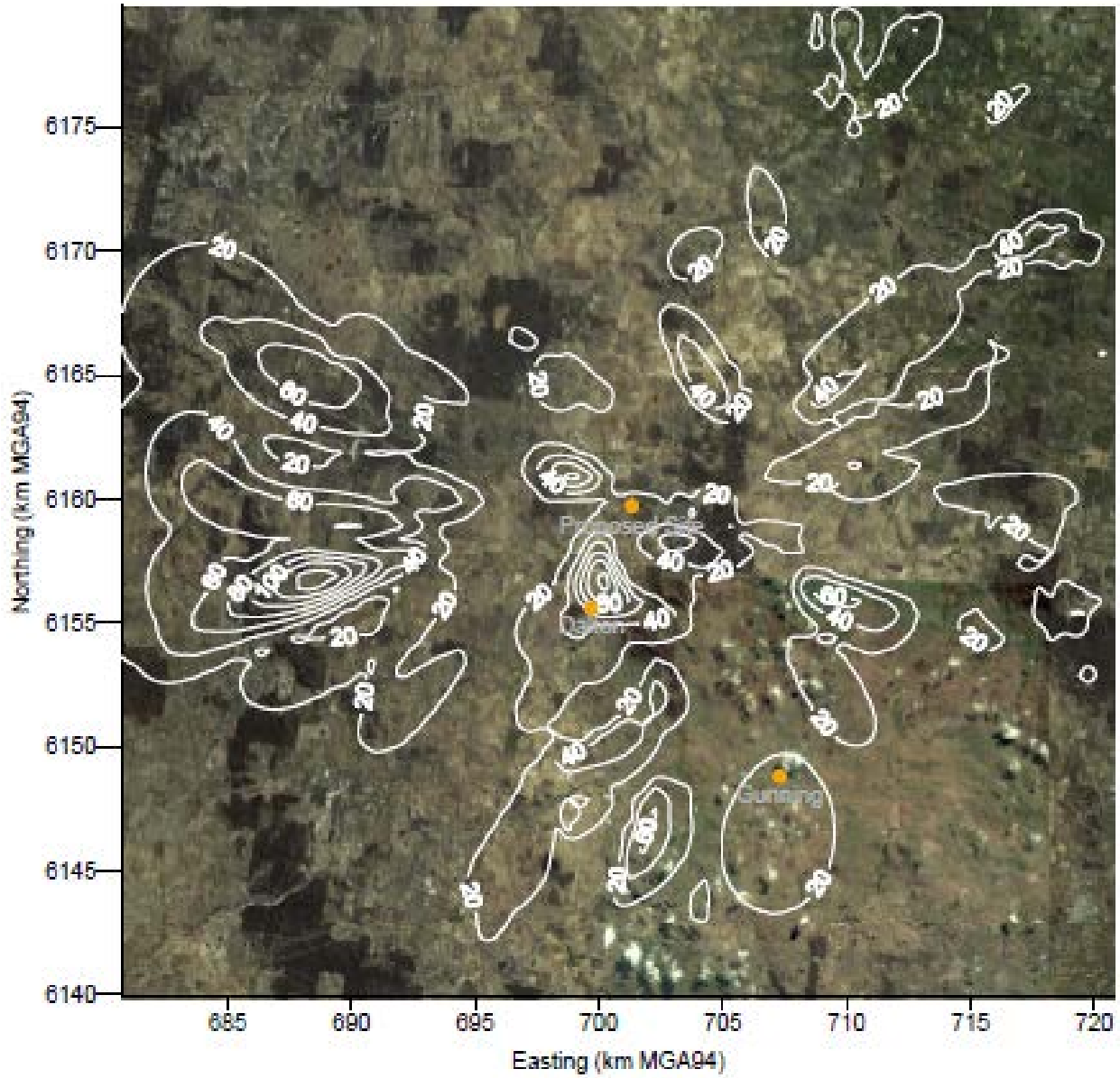
The submission by Canberrans for Power Station Relocation (CPR) Inc to the Tuggeranong 210MW gas turbine power station states that "The Australian standard for exposure to Nitrogen Dioxide for a maximum of 1-hour per annum was introduced in 1998 and is set in a different unit of measurement –parts per million (ppm). When this limit (0.12ppm) is converted to micrograms per meter cubed at 25 degrees centigrade, this converts to a limit of 225µg/m^3, not 246µg/m^3.". They go on to say if you take into account maximum summer time temperatures of 40 degrees centigrade, the National air quality standard is reduced to 214µg/m^3. They also say the WHO standard would be lowered when taking into account summer temperatures. http://canberrapowerstation.info/ftp/CPR-ACTPLA-Submission-27-5-08%20Final.pdf

So the maximum cumulative 1 hour level of 240.7 µg/m^3 NO_2 for the Dalton power station significantly breaches the 1 hour level temperature-adjusted Australian standard as well as the level the WHO considers safe for human health. The annual level is only just below the WHO standard to prevent adverse health effects. Also the manufacturer says for the turbines GE 9FA, NOx emissions exceed 25 ppm.[1] AGL says all manufacturers guarantee emissions of 25 ppm when operating at over 50% load (AGL and URS 2011, p3-62).

When you Google what a NO2 measure of 200 plus means it say 'stay indoors and avoid physical exercise'. Not very helpful for farmers working outdoors and doing physically strenuous work!

See below the areas impacted by the air pollution.

[1] http://www.china-power-contractor.cn/GE-9FA-255mw-Gas-Turbine-Generator.html



e. Earthquakes

AGL say that they have looked at earthquakes and they are not a problem.

NOT TRUE

The EA looks at Geotech issues and says caution.

Table 3-15 Alternate Site Preliminary Environmental Assessment

Site	Air Quality	Noise	Visual	Water Quality	Traffic	Flora and Fauna	Geotech
Dalton	✓	✓	✓	✓	✓	✓	●
Nowra	✓	✓	✓	✓	●	●	✓
Moss Vale	✓	●	✓	✓	✓	✓	✓
Wagga Wagga	✓	✓	✓	✓	✓	✓	✓
Central Coast	✓	✓	✓	✓	✓	✓	✓

This Table also indicates there are better sites than Dalton – sites with more ticks.....being Wagga Wagga and the Central Coast.

f. The Dalton Power Station is further away from the town than other Power Stations so noise won't be an issue

AGL say the Dalton Power Station is further away from the town than other Power Stations so noise won't be an issue

NOT TRUE

The Uranquinty power station is 3km for the town. The Dalton power station will be approximately 3.7km from town. It's ridiculous to say a few hundred metres is going to make all the difference to the noise. The Uranquinty power station is 640MW and Dalton has approval for 1000MW.

The fact is the Dalton power station is a lot bigger. Also at Uranquinty they used the quieter used E class turbines. At Dalton they are using noisier F class turbines.

The big problem with these power stations is the low frequency noise. Low frequency noise is less attenuated by distance. AGL know this so it is misleading and dishonest to say there will be less of a problem with noise at Dalton.

At Uranquinty windows rattle 5 km away. That means 5 km in all directions there is potential impact. That is an impact zone 10km across.

In 2015 Wellington Council objected to a proposed power station there being within 8km of the town. This means they see noise impacts up to 8km away and implies a noise zone 16km across. This is a huge industrial noise impact zone. That was for a 225MW station – tiny compared to the 1000MW monster at Dalton.

At Alice Springs their power station was too noisy. They tried to modify the plant to reduce the noise. It didn't work so they picked it up and moved it 25km out of town.

g. AGL have a new philosophy of sustainable development

AGL say they have a new corporate culture and they now have a commitment to sustainable development.

NOT TRUE

If that were true they would revisit the Environmental Assessment of the Dalton Power Project. This project has major environmental impacts and has real potential to destroy Dalton as a place to live.

Adhering to the existing lapse date will allow AGL the opportunity to resubmit the EA and demonstrate their new commitment to sustainable development.

Conclusion

The application to extend the lapse date should be denied for many reasons.

AGL has been found guilty of making undisclosed political donations during the DPP assessment which invalidates the existing approval and certainly invalidates any application to extend the lapse date.

Extending the lapse date will extend the project as a transitional Part 3A project. This is contrary to the commitment made to the people of NSW by the Liberal government to get rid of Part 3A projects back in 2011.

If there are environmental failures, the community will have no power to enforce the conditions of consent if the project continues as a Part 3A transitional project.

More over extending the lapse date puts the lives of the people of Dalton and Gunning in a state of flux for another 2 years.

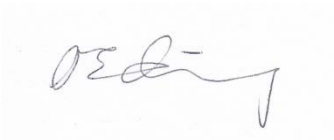
Things have changed in the electricity market and things have changed in Dalton and Gunning. The region is a growth area for the Upper Lachlan Shire with new people relocating to the area from Sydney and Canberra in search of affordable housing. Tourism is a growth industry that is providing jobs and income to people in the area. The DPP is incompatible with the Dalton and Gunning region growing tourism and being a desirable rural location for people escaping the housing crisis.

There are serious existing and new risks associated with this project. There are risks associated with the stack height, the noise, the air quality, available water, earthquakes and traffic. These open cycle gas fired power stations have massive environmental impact zones – 10 to 16km across. The environmental impacts need to be recognised so the size can be limited and they can be located well away from communities.

The changes that have occurred since the last environmental assessment, as well as the on-going issues of risk and uncertainty with the project, demand that the lapse date be enforced. Any continuation of the project should be subject to a new environmental assessment.

Dalton and Gunning are peaceful rural areas with growing populations which is rare in country NSW. We urge you to deny the application to extend the lapse date of the DPP and so keep these tranquil rural valleys for generations to come.

Yours sincerely,



Andrea Strong
On behalf of the Community for Accurate Impact Assessment of the Dalton Power Station (CAIAD)

Appendix A

In our original submission in 2011 objecting to the DPP project application we detailed the instances of other open cycle gas fired power stations where noise emissions exceeded levels predicted by environmental assessments. These cases are described below.

The Uranquinty case

A large number of families for this small community in a 2.5km radius have been bought out by the recently commissioned Uranquinty gas fired power station because of intolerable low frequency noise levels. At the time we wrote our submission in response to the Dalton EA, five families neighbouring the Uranquinty gas fired power station had gone, two more families were in negotiation to go, and another two were being paid compensation. More recent reports put the loss of families to the district at 10.

Uranquinty residents comment they can feel vibrations through the ground and that windows rattle even as far as 4 to 5km away.

They say:

> “The vibrations are often felt separately to the low frequency noise. They can be noticed through the rattling of windows or felt through the body. If you stand in certain parts of our house you can feel the vibration reverberate through your body from the floor. It is quite an unpleasant feeling when a combination of both vibration & low frequency is felt. Neighbours with 'hearing loss' (which is many of the male farmers) are affected more by the low frequency emissions than those with 'full hearing'”.

The EA for the Dalton power project didn’t assess vibrations from the plant. It said "Gas turbine plant operate at high rotational speed and are very sensitive to vibration and hence very well balanced preventing vibration at levels that could be intrusive to surrounding receptors." (AGL and URS 2011, p12-7).

When we discussed the reports of vibrations from Uranquinty power station with the EPA they said although residents thought they were feeling vibrations, the vibrations were in fact most likely a manifestation of the low frequency noise. No assessment as to whether low frequency noise would cause a vibration sensation was undertaken in the EA for Dalton.

Residents at Uranquinty talked about feeling the need to escape the noise and that they would get in their cars and drive into town to get away from the noise, walking the streets aimlessly and hoping the power station that operates in periods of peak demand would have ceased operating by the time they got home. They discussed the sensation of low frequency noise as something indefinable. The effects however were more tangible and included symptoms of nausea, faintness and "vertigo".

The affected residents at Uranquinty are bound by confidentiality agreements having won a legal battle over noise with the plant operator. The lawyer for the residents said he had never seen a case like it. Stoic farmers, not easily troubled, having endured droughts and bushfires, were coming into his office one after another and breaking down because of the impact the power station had had on their family and health. In some cases their farms had been in the family for four generations but the family was finding the noise intolerable and wanted to leave.

The Uranquinty power station at 640MW is less than half the size of what was initially proposed at Dalton (a 1500MW power station), and less than two thirds the size of the approved 1000MW Dalton power station. Nevertheless Uranquinty has not been able to meet the EPA noise limits once commissioned despite retro fitting noise abatement measures. When we lodged our submission in response to the EA of the Dalton power station, the owner of the Uranquinty power station was in litigation with the turbine manufacturer and had spent $60m on abatement measures which seemed to make the problem worse rather than better.

Our concern at Dalton is that if Uranquinty couldn't meet noise limits with a smaller number of the quieter E class turbines, and AGL proposes to construct with a larger number of the larger noisier F class turbines, then it would seem impossible to prevent unacceptable adverse noise impacts on neighbouring properties.

AGL argued that they had done a better job than the Uranquinty gas fired power station at buying surrounding properties to ensure a better buffer between impacted neighbours. There are three reasons why AGL's argument that they "have done a better job" is incorrect: 1. Low frequency noise is not attenuated effectively by distance so distance from residences is less important than using quieter technology; 2. Dalton is much bigger than Uranquinty and is using noisier technology; and 3. There are in fact a number of dwellings in close proximity to the proposed site.

There are three dwellings less than 2.5km from the Dalton site and many a little further out, including the town of Dalton 3.7km away. As residents 2.5km away have been forced from their homes in the case of the smaller Uranquinty power station, it would seem the proposed AGL power station, being much larger, will cause significant adverse noise impacts. A map showing the location

of residences near the Dalton power station site was shown in Appendix B of our previous submission in response to the Dalton EA. Also included in that submission, was a map showing the location of residences near the Uranquinty power station site, where families have left their homes, are in negotiations to leave, or are being paid compensation for noise.

The inability of the Uranquinty gas fired power stations to meet noise controls once in operation isn't an isolated incident.

The Alice Springs case

The submission by Canberrans for Power Station Relocation (CPR) Inc to the development proposal for the Tuggeranong 210MW gas turbine power station says the proposed Titan 130 turbines when installed actually produced 103.1 dBa rather than the 87 dBa as claimed in the Tuggeranong Noise Assessment. They say that ..

> the Titan 130, installed at the Ron Goodin Power Station (RGPS) in Alice Springs, "produces 103.1 dBa and they apparently cannot get it anywhere near the suggested 87dBa. This is detailed in the comprehensive report which was published in January 2007 (Full report - http://www.powerwater.com.au/news/media_releases/2007/1001_noise_report_ron_goodin_power_station.htm)
>
> On page 7 of the RGPS report it states: This real world example indicates that a Titan 130 produces levels somewhere between 99.2 and 103.1 dBa which is much higher than Bassett's base data of 87dBa. This once again, calls into serious question the quality of the Noise Assessment.
>
> This situation is even more extraordinary when you consider that the above report was commissioned AFTER approximately $800,000 was spent in an effort to reduce the noise to an acceptable level.
>
> They failed, so the generator is being moved 25 km out of Alice Springs. Full details can be found here:
>
> http://www.powerwater.com.au/news/ron_goodin_power_station.htm ....."

The Laverton case

The original licence for the Laverton North power station only allowed the power station to operate for 10% of the year, but in May 2007 the Victorian Civil and Administrative Tribunal ordered that the plant remain shutdown on weekdays between 8am and 5pm, due to the neighbouring offices being affected by the level of noise and vibration. The restriction on operation was removed in July 2007 because of the drought which was impacting on alternate hydro peaking capacity.

Herald Sun, May 11, 2007:

"**A POWER station that supplies extra energy in the summer peak has closed in business hours because of health risks. By** Wayne Flower

The Snowy Hydro gas-fired power station in Laverton North will halt at 8am today after Victorian Civil and Administrative Tribunal deputy president Helen Gibson issued an interim enforcement order.

The order follows complaints by office workers across the road from the plant about the level of noise and vibration emanating from the unmanned station.

Metroll Victoria general manager Frank Collett said most of the company's 20 office staff had reported headaches, nausea, ear aches and other adverse health effects since the plant fired up last November.

The order, which will remain in place until at least July 29 when the matter heads back to VCAT, means the plant will be unable to operate between 8am and 5pm on weekdays."

http://www.heraldsun.com.au/news/victoria/health-risk-to-close-power-plant/story-e6frf7kx-1111113511468