

Objection: Proposed 750MW gas fired power station

I object to the proposed establishment of two gas fired powered stations. The proposal seeking an early establishment of the power station using diesel as the fuel is also not supported due to the higher levels of air pollution. This has not been justified by the proponent. Additional pollution controls for diesel combustion have not been developed.

My primary objection is the failure to correctly apply the Noise Policy for Industry (NPfI) as outlined below.¹

Inadequate background noise level assessment - intrusiveness

The noise assessment report provides insufficient information to conduct a thorough assessment of the existing acoustical environment. Periods of the data were excluded due to wind noise. One week's worth of valid data was not obtained for each site. No justification was provided to support the claim that each site represented the potentially most affected residence. The data was not accompanied by hand held data during each measurement period with a description of ambient noise sources. No detailed commentary was provided of what the existing noise environment consisted of. For example, the Loxford Park Speedway could have been operating at some times during the noise survey. What contribution was made by cicada noise? What is the contribution of distant industrial noise or is the existing environment dominated by distant traffic noise from the Highway and Hunter Expressway? Were temperature inversions present during the background noise measurements? The NPfI states that the rating background noise level in an RU2 area can be expected to be less than 35dB(A) at night. The acoustic report makes no attempt to interpret the limited ambient noise level data against the expected noise level information provided in the NPfI. The acoustic report is not satisfactory for the determination of rating background noise levels and hence establishing the intrusiveness level.

Noise Assessment and residential land affected by traffic noise - amenity

The subject site is adjacent to an area for which there is an existing application for rezoning to allotments as small as 450m². The acoustic report claims that the entire new residential area can be classified as being "urban" under the NPfI. This claim has not been critically assessed. Proposed residential areas remote from the major roads fit more clearly with the "suburban" definition. The acoustic report provides insufficient information to support its claim that all areas rezoned to residential fit the "urban" classification. The ambient noise monitoring data does not include justification for this claim.

From the ambient noise data, the results suggest that the proposed residential rezoning will create an environment where future residents will be subjected to higher noise levels than might be expected for a residential zone. L_{A90} background sound pressure levels of almost 50dB(A) during the early hours of the morning are very high for a new residential area. For locations distant from the Hunter Expressway, the amenity noise level at night in a suburban residential area is 40dB(A) in the NPfI.

Some of these proposed new residential allotments are assumed to be located close to the Hunter Expressway and be subjected to significant levels of traffic noise. Residential areas in this location

¹ The author was an environmental noise and environment engineer with the NSW State Pollution Control Commission and Environment Protection Authority for many years. During that time he was a noise specialist and very involved with the development of noise policy in NSW.

would fit within the “urban” definition. Applying the EPA’s NPfI, noise levels at these residences must be assessed using the criteria:

Amenity noise level= $L_{Aeq, period(traffic)}$ minus 15dB(A)

The proponent has not performed this assessment. The reason this element was included in NPfI was to ensure that residents affected by traffic noise are not subjected to additional noise from new industry. The proponent must undertake an assessment of existing traffic noise levels in proposed residential areas adjacent to the Hunter Expressway. After completing this assessment for the worst affected residents, the above calculation can be performed and the amenity noise level determined. The proponent has not undertaken this assessment and conclusions about the extent of noise intrusion and required noise reduction have not been conducted using NPfI.

The acoustic report does not contain any analysis of the proposed residential site which constitutes the “reasonably most-affected point.” This location is not identified on any of the maps.

Source Sound Power Levels (PWLs)

The proponent has not provided 1/3 octave band PWLs and provided justification for the claimed PWLs. The acoustic report only contains presumably Linear, C and A weighted values. This is not satisfactory. One third octave band PWLs were provided for the gas receival station (although this was not part of the this development), so why were data provided for the gas turbines to the same standard and referenced to a data source?

Although the proponent has identified low frequency noise content, the proponent has not addressed whether a tonal noise weighting is also applicable.

Project trigger noise levels and noise residuals

The PTNLs determined in the acoustic report are not accepted. It is necessary for the proponent to supply additional information as outlined above. The noise level residuals are also not accepted.

The assessment of reasonable and feasible noise control measures provided in the report is very limited and lacking in detail. The noise impact arising from the operation of the two gas fired turbines will significantly impact the acoustic amenity of the proposed residential area. The low frequency noise in particular will be very dissimilar to existing ambient sources. The magnitude of this impact cannot be confirmed by the sketchy information provided by the proponent.

Air quality assessment

The proponent has not assessed the cumulative impact of air emissions from the proposed gas turbines with the air pollution from the Hunter Expressway. The rezoning of land to residential use in this locality has not been considered. Ambient pollution levels are based on those obtained by the State’s monitoring scheme. The proponent has not undertaken existing air quality levels at the locality. Whether air quality at Beresfield is the same as at Kurri Kurri has not been verified.

The claim that a small increase in air pollution is reasonable is based on the view that the effect of additional health impacts on residents is minor and of no consequence. This view is contrary to the view that polluters should pay reflective of the costs of reducing that pollution. This is the principle of the NSW Load Based Licensing (LBL) Scheme. The proponent has not identified pollution controls that would achieve an equivalent reduction in the pollution caused by the operation of the gas turbines. LBL charges should be based on pollution control costs. The review of the LBL scheme is still taking place.