Australian Government
Department of Defence
Estate and Infrastructure Group

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Mandana Mazaheri
Senior Environmental Assessment Officer
Department of Planning, Industry and Environment
GPO Box 39
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Dear Sir/Madam

RE: SSI 9837 SUBMISSIONS REPORT – NEWCASTLE POWER STATION, 1940 PACIFIC HIGHWAY, TOMAGO NSW 2322

Further to AGL Energy Ltd's letter dated 6 March 2020 and continued consultation to progress the abovementioned matter the Department of Defence (Defence) has re-assessed the potential impact of the plume associated with the proposal on aviation safety for the operations at RAAF Base Williamtown and Newcastle Airport.

Based on the additional information provided, subject matter advice from government bodies and Defence stakeholder input Defence agrees that it is appropriate that the Critical Plume Extent (CPE_ (mAHD) be based on the 99.9% percentile statistic of hourly results and a Critical Plume Velocity (CPV) of 6.1 m/s. A notional perimeter of 250 metres diameter from the centre of the power plant is also considered appropriate to define the horizontal extent of the plume.

To minimise the risk to safety of aircraft operations it is Defense's preferred position that the design of the Newcastle Power Station (NPS) incorporate reciprocating engines. The predicted CPE would be 135 mAHD using the accepted emission parameters. This would not penetrate the Outer Horizontal Surface of the Obstacle Limitation Surfaces (OLS) (156.5 mAHD) at a dangerous vertical velocity nor infringe the PANS-OPS Surfaces.

Alternatively, the use of the gas turbine option in the design of the NPS would infringe both the OLS and PANS-OPS Surfaces. Using the accepted emission parameters the predicted CPE would be 285m AHD, therefore penetrating the Outer Horizontal Surface of the OLS by 128.5 m and the PANS-OPS Surfaces.

With regards to both design options and Visual Flight Rules (VPR) Operations the Aerodrome Operator (AD OPR) will need to publish notices and put restrictions on the RAAF Base Williamstown Airspace due to inconsistency on the peaking power generation model.

Should AGL Energy choose to proceed with the gas turbine option, then in accordance with Instrument Flight Rules (IFR) Operations the Radar Terrain Clearance Chart (RTCC) for RAAF Base Williamtown will be need to be amended by Aeronautical Information Service - Air Force as a mitigation measure. In addition, Global Airspace Solutions will need to amend the descent profile of the Distance Measuring Equipment (DME) or Global Navigation Satellite Systems (GNSS) Arrival procedure – WMD to WLM track also as a mitigation measure.

It is therefore requested by Defence that if the NSW Department of Planning, Industry and Environment issue an approval for the relevant Critical State Significant Infrastructure (CSSI) application that the proponent be advised on such approval to liaise with and provide information on the final design and emission parameters to the following organizations so then required mitigation measures can be put in place.

- Department of Defence – Land Planning and Regulation Branch;
- RAAF Base Williamtown;
- Aeronautical Information Service - Air Force
- Air Services Australia;
- Newcastle Airport Pty LTD; and
- Global Airspace Solutions;

Should you wish to discuss the content of this advice further, my point of contact is Mr Anthony Deustchmann contactable at land.planning@defence.gov.au or by telephone on (02) 6266 8686. Please also note our new Defence group email address for all land planning matters.

Yours sincerely

A Deutschmann

for

Charles Mangion
Director Land Planning & Regulation

19 June 2020