

17 November 2020

Department Ref: SSD-8847
APA Ref: 445389

Lander Robinson
Senior Environmental Assessment Officer
Department of Planning Infrastructure and Environment

Dear Lander,

**Dunedoo Solar Farm on Public Exhibition
Lot 37 & 80 of DP754309**

Thank you for the opportunity to review and provide comment on the State Significant Development proposal for the Solar Farm near Dunedoo.

APA Group (APA) is Australia's largest natural gas infrastructure business. APT O&M Service Pty Ltd (APA Networks) operates the Central Ranges Pipeline which is located on an east-west alignment through subject Lot 37 & 80 on DP754309. APA Transmissions is the asset owner and APA Networks are the operator of the Central Ranges Pipeline (see Table 1 for details):

Table 1: Transmission gas pipeline in the area of consideration

Pipeline	Pipeline License	Easement Width (m)	Diameter (mm)	Measurement Length (m)
Central Ranges Pipeline	PL27	15	200	191
Note: measurement length is applied to either side of the pipeline.				

APA's Statutory Obligations

As a Licensee under the *Pipelines Act 1967*, APA is required to operate pipeline in a manner than minimises adverse environmental impacts and protects the public from health and safety risks resulting from operation of our high pressure gas transmission pipelines (**HPGTP**). Once a HPGTP is in place, APA is required to constantly monitor both the pipeline corrido and also a broader area within which we are required to consider land use changes and development and to assess what such changes means to the risk profile of the HPGTP.

APA has a number of responsibilities and duties to perform under a complex framework of legislation, standard and controls across Federal, State and Local Government landscapes. In particular, the *Pipelines Act 1967*, cites Australian Standard 2885 (**AS 2885**) as a mandatory safety standard for the design, construction, operation and maintenance of transmission pipelines. In discharging our regulative responsibilities, APA needs to continuously review what is happening around its assets, what land use changes are occurring and what development is taking place to ensure it remains in a position to comply with applicable operational and safety standards and legislation whilst meeting its commercial obligations and imperatives.

Pipeline Risk Profile and Measurement Length

In managing gas transmission pipelines and considering encroachments and land use changes, APA must focus on that area geographically defined by AS 2885 as the Measurement Length (**ML**). The ML area is the heat radiation zone associated with a full-bore pipeline rupture. APA is mandated to consider community safety in the ML due to the high consequences of pipeline rupture to life, property and the economy.

The ML is determined by the design criteria of the pipe (driven by the surrounding environment at the time of construction) and the Maximum Allowable Operating Pressure (**MAOP**) of the pipe. APA must consider any

changes of land use or encroachment within the ML area to determine the effect of a new use on the risk profile of the pipeline. Due to the factors above the ML can vary significantly, and in the case of the subject area the ML (maximum) is approximately 191m either side of the pipeline.

Pipeline Corridor Management

APA is the beneficiary of a pipeline easement in which the Central Ranges Pipeline is located. To ensure compliance with the safety requirements of AS 2885, APA needs to ensure the pipeline is managed to an appropriate standard. This includes;

- Ensuring the pipeline is maintained free of inappropriate vegetation and structures.
- Placement of warning signs at various mandated points along the pipeline route, including any change in property description/ boundaries.
- Maintain a constant line of sight between warning signs.
- Undertake physical patrols and inspections.

APA will not accept outcomes that do not enable us to achieve our safety responsibilities to the surrounding community. Crossing of the pipeline should be minimised as much as possible.

Any works within three metres of the pipeline must be approved by APA Networks throughout Third Party Works Authorisation process. This process will ensure that all works are undertaken in a safe manner that does not physically impact on the pipeline. If you are seeking to undertake works on property containing a pipeline, or are seeking details on the physical location of the pipeline, please contact Dial Before You Dig on 1100 or APA directly at IntegrityQLD@apa.com.au.

Proposed Development

APA's submission has been provided following review Section 3 and Figures 3-1 & 3-2 of the Dunedoo Solar Farm Scoping Report prepared by NGH Consulting, dated March 2020. APA notes that all solar farm buildings including panels are not located near the transmission pipeline. APA is supporting of the proposed layout subject to further review of the proposal during the detailed design phase. The information provided below and conditions of approval, have been provided to assist in this regards.

APA's preference is to avoid any works within the pipeline easement, including any improvements or installations. However, we are willing to accept such works are necessary for the proposed plans provided they will not impact on the pipeline. Details of all proposed crossings and works within the pipeline easement, must be submitted to APA for consideration. No crossings may occur without the prior approval of APA, and must be completed in accordance with any conditions imposed by APA.

Crossings of underground services must accord with APA requirements, particularly minimum separation distances. Where vehicle crossings occur during construction these will need to be agreed crossing points.

Electrical works in the vicinity of the pipeline (including crossings) have the potential to impact on the pipelines safe operations and studies in accordance with AS 4853 are necessary. The cost of these studies and any necessary mitigation must be borne by the proponent. Obviously, the further that electrical works can be kept from the pipeline the better, but if this cannot be avoided mitigation works may be required. There are specialist consultants who can complete the necessary studies/ modelling. The safe separation distance depends on how far the electrical power lines follow the route of the pipeline and earthing bed separations, so it is impossible to say what a safe separation distance would be. We are happy to discuss further and provide feedback on the proposed design, however, the technical studies are the only way to know for sure if there will be an issue, and what (if any) mitigation measures will be required.

All proposal plans must clearly show APA's pipeline, labelled as *'high pressure gas transmission pipeline – no work works without prior approval of APA'*.

Comments

On the basis of the information provided, APA does not object to the proposed substation subject to the following conditions being included with any approval issued for the proposal:

Conditions of Approval

1. No Improvements within Easement

Buildings, structures, roadways, pavement, pipeline, cable, fence, on-site waste treatment (or irrigation area), or any other improvement on or under the land within the gas transmission pipeline easement must not be constructed without prior consent in writing from APA. No structure or vegetation will be permitted on the easement that prohibits maintenance on line of sight along the pipeline easement.

2. Risk Assessment Required

Prior to the development commencing, and to inform the detailed design, the applicant must conduct an electrical hazards studies in accordance with (the requirements of) Australian Standard 4853 – 2012 (for Low Frequency Induction and Earth Potential Rise threats for personnel and pipe corrosion). The applicant must address any relevant requirements and any recommendations and/or actions must be implemented to the satisfaction of APA. All cost associated with the study, and implementing its recommendations and/or actions are to be borne by the applicant. The applicant must complete validation testing upon completion of construction.

3. Electrical Interference Studies

The applicant must conduct electrical interference studies in accordance with the requirements of AS 2832 once detailed design is complete.

4. Design to Comply with Australian Standards

The applicant must design to comply with the applicable Australian Standard as required and provide copies of the electrical interference studies and electrical hazard studies to APA.

5. High Voltage Powerlines

The applicant must make good (at the applicant's cost) any hazards or risks to the Central Ranges Pipeline (including cathodic protection systems), caused by any powerlines.

6. Construction Management Plan

Prior to the commencement of any works on the land within 50 metres of the pipeline easement, a construction management plan must be submitted to and approved by APA. The plan must:

- Prohibit the use of rippers or horizontal direction drills unless otherwise agreed by APA.
- Avoid significant vibration, heavy loadings stored over the pipeline and heavy vehicle / plant crossings of the pipeline within the easement.
- Be endorsed by APA where the works are within or crossing the pipeline alignment.

7. Easement Delineation On Plans

All plans for the electrical transmission line to Essential Energy Substation must have the gas pipeline easement clearly identified with hatching on the full width of the easement. The easement must also be clearly labelled as *'high pressure gas pipeline easement – no works to occur without the prior authorisation of the pipeline operator'*.

8. Pipeline Operator Access

The ability of the pipeline operator to access the pipeline easement must be maintained at all times to facilitate prompt maintenance and repairs. APA field officers will undertake any necessary site induction to facilitate unaccompanied access.

Note: If you are planning on undertaking any physical works on the property containing or proximate to a pipeline, or are seeking details on the physical location of a pipeline, please contact Dial Before You Dig on 1100 or <https://www.1100.com.au/>, or APA directly on IntegrityQLD@apa.com.au.

Note: Any improvements within the transmission pipeline easement by third parties is at the risk of the proponent who will remain liable. APA will not be liable for any cost associated with the reinstatement of any vegetation and/or infrastructure on the easement.

APA does not seek to unnecessarily inhibit future works proximate to our assets and is happy to work with third parties to achieve mutually acceptable and compliant outcomes. Any interested parties are strongly encouraged to contact APA early to discuss the process of integrating APA assets into future developments.

Should you wish to discuss the contents of this correspondence, or have any further queries, please contact the Integrity team at IntegrityQLD@apa.com.au.

Yours sincerely,

Kahil Parsons
Integrity Compliance Engineer