6 December 2018

Ms Rose-Anne Hawkeswood
Senior Environmental Assessment Officer
NSW Planning and Environment
GPO Box 39
Sydney NSW 2001

Dear Ms Hawkeswood

RE: Port Kembla Gas Terminal EIS Exhibition

I refer to the EIS exhibition of the proposed Port Kembla Gas Terminal project which involves the construction of a new berth at Port Kembla to accommodate Liquified Natural Gas (LNG) carriers, a floating LNG storage and regasification unit, wharf infrastructure, and a 6 km gas pipeline to connect to the east coast gas network.

We thank you for the opportunity to comment on this major project at an early stage. It is prudent for major infrastructure projects to have early engagement with utility providers to understand risks and scope of work required.

Endeavour Energy owns and operates the electricity distribution network that supplies the Illawarra region including Port Kembla. We have completed a preliminary assessment of the project with respect to impacts on the electricity network. Our assessment has included a discussion with engineering consultant, Worley Parsons, who are designing the pipeline on behalf of Australian Industrial Energy (AIE).

Proposed pipeline and potential clashes with the electricity network

The proposed 6km gas pipeline is of particular interest as the proposed route comes into close proximity with our existing sub-transmission and distribution lines, a map of approximate location of our assets relative to the proposed pipeline is provided in Attachment 1.

If required, approval for relocations of Endeavour Energy assets can be facilitated by our Network Connections branch. Asset relocations are contestable and customer funded, the proponent may arrange for relocations by engaging an Accredited Service Provider (ASP). We encourage the proponent to avoid the need to relocate Endeavour assets where possible, in particular transmission cables and lines are more costly and difficult to move.

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Endeavour Energy has a number of 11kV distribution cables originating from Inner Harbour Zone Substation within the port which may clash with the proposed pipeline route, refer to Attachment 2 for a list of assets. There are also electricity assets which are not owned by Endeavour Energy, these belong to high voltage customers in the port. Attachment 2 also provides a list of privately owned assets that Endeavour Energy has knowledge of. The proponent will need to confirm the existence of all other privately owned electricity assets as part of their due diligence.

The proposed pipeline route runs parallel to our existing underground 33kV transmission cable (Feeder 7018) in Springhill Rd. The final location for the pipeline needs to provide sufficient clearances for workers and plant to ensure safe access to the 33kV cable in the case of future repair or maintenance work. This will also be a consideration any overhead pole or tower structures that may be close to the proposed pipeline.

As the proposed pipeline is metallic, the proponent will need to carry out studies in accordance with relevant Australian Standards to address risks that arise from being in close proximity to our 33kV cable and 132kV overhead lines. This includes but is not limited to AS4853 (Electrical Hazards on Metallic Pipelines) which will require assessment on risks such as Low Frequency Induction and Earth Potential Rise which can result in hazardous voltages along the pipeline.

These issues do not imply that the pipeline cannot be installed, but rather that risk mitigation measures are likely to be required such as ensuring a safe separation distance to the underground 33kV cable or modifications to the pipeline construction.

Power Supply Requirements

The electrical power demand requirements for Inner Harbour berthing facility have not yet been provided to Endeavour Energy, however in discussions with Australian Industrial Energy representatives it is understood that the ships are self-powered and that power supply requirements will be not be large. These requirements are likely to be met by extension of the 11kV distribution network from our Inner Harbour Zone Substation. Similar to our relocation process, the proponent can engage an Accredited Service Provider and make application for a new connection of load via our Network Connections Branch.

Implementation

There are risks that need to be managed during the design phase as identified in this letter. It is also important that care needs to be taken during the construction phase to avoid inadvertent contact/damage to existing electrical assets which pose a significant safety risk to construction workers. The Australian Pipelines and Gas Association has produced a relevant reference document titled “Guidelines for Management of Electrical Hazards in Pipeline Construction”.

We encourage the proponent to obtain Dial Before You Dig information as part of their due diligence processes. Endeavour Energy is happy to supply AIE with relevant GIS data on our assets.

Endeavour Energy would be happy to support more detailed feasibility studies which can be arranged via a formal Technical Review Request. There will be costs to the proponent based on our regulated Ancillary Network Services fees administered by our Network Connections Branch.

Overall Endeavour Energy has no objection to the proposed LNG Terminal and proposed pipeline, however there are a number of technical issues that the proponent would need to address to ensure safe installation of the pipeline.

We trust this advice will assist NSW Planning & Environment in their assessment of the Port Kembla Gas Terminal Project.

Should you have further queries please do not hesitate to contact Jason Lu, Capacity Planning Manager, directly on 02 9853 5003.

Yours faithfully

Ty Christopher
General Manager
Asset Management

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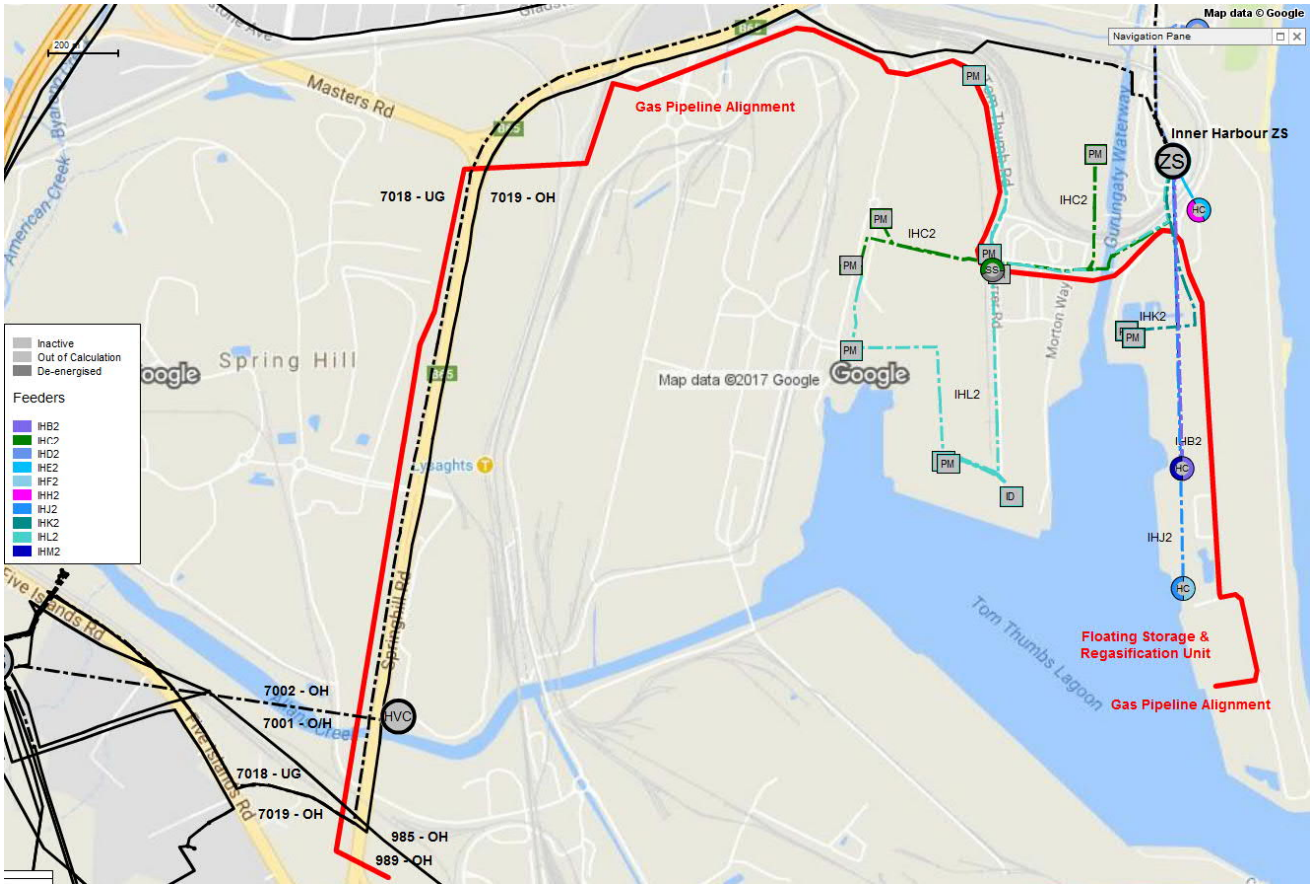
Attachment 1

Map of Endeavour Energy assets and Proposed Gas Pipeline.

Note: This diagram provides approximate location of assets and cannot be relied on for detailed design or construction.



Attachment 2

Electricity Asset Clashes

Endeavour Energy – Potential Asset Clashes

1. 11kV feeders - Inner Harbour ZS

    - IHC2, IHK2 & IHL2 – (Tom Thumb Rd)

2. 33kV feeders

    - 7019 'overhead line' – (Springhill TS to Inner Harbour)
        - Pipeline crosses south of intersection of Masters and Springhill Rd. 7019 - located on eastern side of Springhill Rd.
        - Pipeline crosses 7019 located on the northern side of BHP Centenary Park.
    - 7018 – 'underground cable' – (Springhill TS to South Wollongong ZS)
        - Pipeline crosses south of intersection of Masters and Springhill Rd. 7018 – located on western side of Springhill Rd and east of tree line.
        - Pipeline runs parallel to 7018 cable from southern side of intersection of Masters and Springhill Rd through to northern side of BHP Centenary Park.
        - Pipeline crosses 7018 located on the northern side of BHP Centenary Park.
    - 7002 & 7001 – 'overhead lines' – (Springhill TS to Lysaghts)
        - Pipeline crosses. 7002 & 7001 – located on southern side of Allan's Creek.

3. 132kV Feeders

    - 985 & 989 – 'overhead twin circuit line on steel lattice towers' – (Springhill TS to Outer harbour TS)
        - Pipeline crosses 985 & 989 located on the northern side of BHP Centenary Park.

Private Customer – Potential Electrical Asset Clashes

1. Port Kembla Coal terminal
    - IHB2 & IHJ2

2. Bluescope Steel

    - High Voltage overhead lines on red steel structures located on the western side of Springhill Road and on Bluescope land between Masters Rd and 400m north of Dump 21 Entry Road. These private HV lines are located west of Endeavour Energy's underground 33kV feeder 7018.