

Statement of Reasons

TERRITORY GENERATION – CHANNEL ISLAND SECOND GAS PIPELINE

PROJECT

Territory Generation (the Proponent), submitted the Notice of Intent (NOI) for the Channel Island Second Gas Pipeline (the Project) to the Northern Territory Environment Protection Authority (NT EPA) on 11 September 2017 for consideration under the *Environmental Assessment Act* (EA Act).

The Project proposes to install an underground gas pipeline near Darwin. The pipeline would be approximately 7.5 km in length, from the Wickham Point gas pipeline to the Channel Island Power Station. The purpose of the Project is to provide an alternate gas supply to the Power Station for use when existing supply is not available, and as an alternate emergency gas supply in place of the existing diesel system. The Project would also provide the ability to source gas from both the Darwin LNG and the Ichthys LNG plants as an alternative source to the current Amadeus Gas Pipeline.

The primary construction method for the majority of the route would be conventional open trenching. Trenching would be to a nominal depth of 900 mm. Stringing and welding of the pipeline would occur within the pipeline right of way (ROW), and then lowered into the trench and backfilled.

The Proponent is undertaking a Front End Engineering Design (FEED) study to inform the decision as to whether the pipeline will cross the channel between the mainland and Channel Island using a Horizontal Directional Drill (HDD) method or by suspension beneath the existing bridge.

The construction footprint would be between approximately 15.5 ha and 17 ha depending on the final channel crossing chosen. This would require the removal of approximately 14.5 ha of vegetation. Following reinstatement and rehabilitation of the pipeline route, 0.11 ha of vegetation would be permanently lost to Project facilities (e.g. offtake metering station).

Construction would be undertaken over a three month period during the 2018 Dry season. The pipeline has a design life of 40 years.

The Project is located within the Darwin Harbour Site of Conservation Significance. The Power Station borders the Channel Island Conservation Reserve. The Reserve and surrounding rocky reef is a declared heritage area. Darwin Harbour is also listed as a wetland of national significance.

The Project is within the Darwin Harbour Region, and the Elizabeth and Howard Rivers Region Groundwater beneficial use areas, declared under the *Water Act*.

CONSULTATION

The NOI has been reviewed as a notification under the EA Act in consultation with Northern Territory Government (NTG) advisory bodies and the responsible Minister, in accordance with clause 8(1) of the Environmental Assessment Administrative Procedures.

JUSTIFICATION

Review of the NOI identified the following potential impacts to Terrestrial Environmental Quality; Terrestrial Flora and Fauna; and Marine Environmental Quality, as the key environmental factors.

Terrestrial Environmental Quality

Objective: To maintain the quality of land and soils so that environmental values are protected.

The land is generally flat and areas to the south of Channel Island Road are low-lying and subject to periodic tidal inundation. The majority of the project area is characterised by shallow gravelly soils. Saline muds and clays occur where the pipeline route traverses mudflats, salt flats and mangroves.

The Project has the potential to impact on terrestrial environmental quality through soil erosion and the exposure of acid sulfate soil (ASS).

The Proponent has identified the *Code of Environmental Practice: Onshore Pipelines*, produced by the Australian Pipelines and Gas Association (APGA), as the minimum acceptable standards to be applied to the Project and the Proponent's construction contractor would be required to develop a Construction Environmental Management Plan (CEMP) prior to works commencing. The Proponent would review the CEMP and monitor compliance under its Environmental Management System Environmental Project Risk Management Procedure.

The NOI identified that approximately 3 km of the proposed pipeline route occurs in areas where there is moderate risk of potential acid sulfate soils. The Proponent has committed to undertaking further investigations to inform the preparation of an Acid Sulfate Soils (ASS) Management Plan which would detail testing, treatment and validation requirements. The ASS Management Plan would comply with accepted ASS guidelines and be approved by a suitably qualified specialist with experience in ASS management in the Darwin region.

The Proponent has also committed to preparing an Erosion and Sediment Control Plan (ESCP) for the Project. The ESCP would be developed by a certified professional in erosion and sediment control (CPESC) and conform to the requirements of the *Best Practice Guidelines for Erosion and Sediment Control*.

The Project will require authorisation under the *Energy Pipelines Act*, and the NT EPA is satisfied that potential impacts and risks to terrestrial environmental quality can be adequately managed through regulatory requirements and the implementation of measures identified in the NOI and CEMP. The NT EPA considers that the potential impacts and risks to Terrestrial Environmental Quality are unlikely to be significant, and the NT EPA's environmental objective is highly likely to be met.

Terrestrial Flora and Fauna

Objective: To protect the NT's flora and fauna so that biological diversity and ecological integrity are maintained.

Darwin Harbour supports a range of estuarine, freshwater and terrestrial environments including extensive areas of tidal mudflats and one of the largest and most diverse areas of mangroves in the Northern Territory. The coastal and mangrove environments are backed by savanna woodlands and patches of monsoon rainforest.

The pipeline route would traverse terrestrial woodland, monsoon vine forest, salt flat and mangrove forest habitats. Monsoon vine forest and mangrove forest are considered to be sensitive vegetation types and the clearing of approximately 4.9 ha of mangrove habitat and 1.9 ha of coastal monsoon vine forest habitat would be required. Indirect impacts to mangroves outside of the clearing footprint may occur from trenching activities altering drainage patterns. The Project also has the potential to introduce and spread weed species.

The proposed pipeline route is adjacent to existing utility and road easements which reduces the amount of clearing required by allowing for the use of existing access tracks and previously disturbed areas. Where the clearing of mangroves and monsoon vine forest is unavoidable the pipeline right of way (ROW) has been reduced from 30 m to 15 - 18 m to reduce the amount of clearing required. Advice from the Department of Environment and Natural Resources (DENR) is that the loss of mangrove and monsoon vine forest vegetation is relatively small and disturbed areas should recover over time. A development permit for land clearing will be required under the *Planning Act*.

The Proponent recognises that the ESCP prepared for the Project will need to detail management actions that minimise the mobilisation of silt and ensure natural drainage patterns are maintained or reinstated, to minimise impacts to mangroves outside of the immediate disturbance footprint.

A number of weed species have been identified as being within or nearby the pipeline route. Some (e.g. Gamba grass) are Weeds of National Significance and subject to Statutory Weed Management Plans under the *Weeds Management Act*. The Proponent has identified that a project specific Weed Management Plan will be required.

DENR advised that the risk to threatened fauna species is very low due to the small linear footprint and the lack of any critical habitat. Overall, DENR consider risks to significant biodiversity values to be low.

The Project will require authorisation under the *Energy Pipelines Act* and the *Planning Act*, and the NT EPA is satisfied that potential impacts and risks to terrestrial flora and fauna can be adequately managed through regulatory requirements and the implementation of measures identified in the NOI. The NT EPA considers that the potential impacts and risks to Terrestrial Flora and Fauna are unlikely to be significant, and the NT EPA's environmental objective is highly likely to be met.

Marine Environmental Quality

Objective: To maintain the quality and productivity of water, sediment and biota so that environmental values are protected.

Based on monitoring undertaken by DENR, the overall water quality of Darwin Harbour is considered to be in very good condition. The Project has the potential to impact on marine environmental quality through pollution from trench dewatering, hydrotest water and horizontal directional drilling (HDD) waste.

The hydrostatic testing process would flush approximately 570 kL of waste water. The water would potentially contain oxygen scavenger, biocide and trace levels of iron oxide and dust. Disposal of the hydrotest water would be either through existing evaporation ponds at the Power Station or via a licensed waste management contractor. The evaporation ponds at the Power Station are currently licensed via a Waste Discharge Licence under the *Water Act* and an amendment to this licence would be required should this disposal option be preferred. Should the HDD method be used for the channel crossing, approximately 330 kL of drilling mud and fluid would require disposal. The waste material would consist of cuttings, bentonite and other drilling additive components. Hydrocarbons from the drilling equipment may also be present. The waste would be removed off-site by a licensed waste management contractor.

To supplement the CEMP, the Proponent has committed to developing a Hydrotest Water Management Plan and a HDD Management Plan to detail the measures employed for the containment, testing, treatment and disposal of wastes generated by those activities. Relevant waste classification guidelines would be applied, as would the services of appropriately licensed waste transporters and facilities.

The Project will require authorisation under the *Energy Pipelines Act* and potentially the *Water Act*, and the NT EPA is satisfied that potential impacts and risks to marine environmental quality can be adequately managed through regulatory requirements and the implementation of measures

identified in the NOI. The NT EPA considers that the potential impacts and risks to Marine Environmental Quality are unlikely to be significant, and the NT EPA's environmental objective is highly likely to be met.

Conclusion

The NT EPA considers that potential environmental impacts and risks associated with the Project can be adequately managed through regulatory processes under relevant legislation and implementation of mitigation measures detailed in the NOI, which includes the preparation of a CEMP and detailed management plans.

The NT EPA considers that the environmental impacts and risks associated with the Project are not significant and that the Project does not require assessment under the EA Act.

Comments from NTG advisory bodies have been provided to the Proponent to ensure that potential impacts on the environment are minimised and obligations under relevant legislation can be met.

DECISION

The proposed action, which was referred to the NT EPA by Territory Generation, has been examined by the NT EPA and preliminary investigations and inquiries conducted. The NT EPA has decided that the potential environmental impacts and risks of the proposed action are not so significant as to warrant environmental impact assessment by the NT EPA under provisions of the *Environmental Assessment Act*. However, the proposed action will require assessment and approvals under the *Energy Pipelines Act*, the *Planning Act*, and the *Water Act*, to ensure the environmental issues associated with the proposed action are effectively managed.

This decision is made in accordance with clause 8(2) of Environmental Assessment Administrative Procedures, and subject to clause 14A the administrative procedures are at an end with respect to the proposed action.



DR PAUL VOGEL
CHAIRMAN

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

12 DECEMBER 2017