

Narrabri Coal Seam Gas Utilisation Project (MP 07_0023)

Modification 5 supporting information

May 2017



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1. Introduction

The Narrabri Coal Seam Gas (CSG) Utilisation Project is located within Petroleum Assessment Lease (PAL) 2 and at the Wilga Park Power Station in the Narrabri region of NSW. Santos NSW (Eastern) Pty Ltd (Santos), the operating subsidiary of the former Eastern Star Gas Ltd (ESG) now owned by Santos Limited, is the operator of PAL 2 and adjoining tenements including Petroleum Exploration Licence (PEL) 238 and Petroleum Production Lease (PPL) 3. Santos NSW (Narrabri Power) Pty Ltd is the operator of Wilga Park Power Station.

Wilga Park Power Station was originally constructed and operated pursuant to a development consent granted by Narrabri Shire Council on 14 November 2002 and subsequent modifications. The consent and modifications allowed the power station to operate up to a capacity of 12 megawatts using gas extracted from the Coonarah Gas Field in PPL 3.

On 2 December 2008 the Minister for Planning approved the Narrabri CSG Utilisation Project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (MP 07_0023).

The approved project includes:

- construction and operation of gas gathering systems at the Bibblewindi and Bohena Coal Seam Gas Pilots
- construction and operation of gas compression facilities at the Bibblewindi and Bohena Coal Seam Gas Pilots
- construction of an approximately 32 kilometre buried gas flow line between the Bibblewindi and Bohena Pilot and the Wilga Park Power Station; and
- the staged expansion and operation of the Wilga Park (base load) gas-fired power station from a capacity of 12 megawatts to 40 megawatts, fuelled by coal seam gas extracted from the Bibblewindi and Bohena Coal Seam Gas Pilots.

Construction of works the subject of the approval commenced in 2009. Further works continued during 2010-2012. The works which have been undertaken under the approval to date include:

- construction of the gas gathering systems at the Bibblewindi and Bohena CSG Pilots
- construction of the gas compression facilities at the Bibblewindi and Bohena CSG Pilots
- construction of the 32 kilometre buried gas flow line between the Bibblewindi and Bohena pilots and the Wilga Park Power Station
- installation of 4 x 3MW gas generators at Wilga Park Power Station together with switch room, gas conditioning skid, auxiliary transformers, ventilation fans, substation upgrade and other related equipment.

The following modifications to the Narrabri CSG Utilisation Project have been approved:

Modification 1:

The Minister for Planning approved a modification to the Narrabri CSG Utilisation Project on 11 February 2011 (MP 07_0023 MOD 1). The modification changed condition of approval (CoA) 2.34 relating to the submission date for the compensatory habitat package required.

Modification 2:

The Planning Assessment Commission approved a further modification to the project on 14 March 2012 (MP 07_0023 MOD 2) allowing the temporary use of the gas flow line to transfer produced water. The approval for this modification allowed the transfer of water until 28 February 2013.

Modification 3:

The Planning Assessment Commission approved a further modification to the project on 18 July 2014 (MP 07_0023 MOD 3) allowing:

1. Installation of a riser on the existing buried gas flow line which would allow materials (gas and liquids) to be diverted to the Leewood Produced Water Facility;
2. Use of the gas flow line to transfer liquids (including fresh water, produced water and brine) between the Tintfield ponds and the Bibblewindi Water Transfer facility and to the Leewood Produced Water Facility; and
3. Use of coal seam gas from existing or future wells within PAL 2 or PPL 3 at the Wilga Park Power Station.

As part of the modification approval the following additional condition was imposed:

1.4A *Gas may only be received for use at the Wilga Park Power Station from wells located within Petroleum Assessment Lease 2:*

- a) *for a period of 3 years from the date of approval of Modification 3, in the case of any existing well; and*
- b) *for a period of 3 years from the date of commencement of such receipt, in the case of any well which is drilled following the date of approval of Modification 3.*

Note: The purpose of this condition is to ensure that the supply of gas to the power station arising from gas flow appraisal at exploration and/or appraisal wells is limited to a reasonable period. Supply of such gas to the power station from wells located within a Petroleum Assessment lease for longer periods would require further modification to this approval.

Modification 4:

Modification 4 was made in August 2016 in relation to the beneficial use of gas in the power station. The application for modification was withdrawn in December 2016.

2. Proposed modification

Santos requests a modification to the project approval for the Narrabri CSG Utilisation Project under section 75W of the EP&A Act, on behalf of the titleholders of PAL 2, Santos NSW Pty Ltd and EnergyAustralia Narrabri Gas Pty Ltd, and the operator of the Wilga Park Power Station, Santos NSW (Narrabri Power) Pty Ltd.

The modification of condition 1.4A of Schedule 2 of the project approval is requested to extend the period of time that gas may be received for use in the Wilga Park Power Station from existing wells located within PAL 2 for a period of three years.

3. Justification for modification

The proposed modification is to enable the ongoing use of natural gas extracted from coal seams in the Wilga Park Power Station whilst continuing to assess and appraise the gas. The ongoing assessment and appraisal of gas from pilot wells will assist in determining the suitability of the resource for development and production and informing decisions around the proposed Narrabri Gas Project.

Applications for four petroleum production leases over an area including PAL 2 were lodged in 2014 and a development application and associated Environmental Impact Statement for the Narrabri Gas Project is currently under assessment under the EP&A Act.

Beneficially using the gas from existing wells within PAL 2 to fuel the Wilga Park Power Station would minimise the flaring of gas and would help meet the demand for electricity in NSW. This would mean that less power has to be generated elsewhere to satisfy demand. As gas-fired power generation produces less greenhouse

gases per unit of energy generated than coal-fired generation, this may result in a net decrease in overall greenhouse gas emissions.

4. Planning and approvals

Part 3A of the EP&A Act was repealed on 1 October 2011 but continues to apply to projects approved under that Part. Under section 75W of the EP&A Act, a proponent may request the Minister to modify a project approval issued under Part 3A. This document supports a request for a modification of project approval MP 07_0023 as outlined above.

5. Consideration of potential impacts and mitigation

The modification application proposes the ongoing use of natural gas extracted from existing wells within PAL 2 within the terms and conditions of the project approval for the Wilga Park power station. This natural gas would otherwise be required to be flared or vented to the environment without beneficial use.

No increase to the approved capacity of the power station beyond 40 megawatts is proposed and therefore this modification would not result in additional noise or air emissions, or environmental impacts beyond those that were considered in the *Narrabri Coal Seam Gas Utilisation Project Environmental Assessment* (the original Environmental Assessment) and the associated assessment and modification documents.

Standard operational and maintenance work associated with the ongoing use of the gas in the power station would continue to occur, consistent with current activity levels.

6. Conclusion

The proposed modification is minor in nature and of minimal environmental impact. The ongoing use of natural gas from wells within PAL 2 in the power station would enable the continued beneficial use of the gas generated by appraisal activities which would otherwise be required to be flared or vented.

The proposed modification would allow the following benefits of the project to continue:

- further developed understanding of the gas resource in PAL 2 and its use to determine its suitability for development and production
- increased reliability of electricity supply to power networks during peak demand periods
- ongoing provision of social and economic benefits to the Narrabri local government area
- continued operation of the Wilga Park Power Station in accordance with the terms and conditions of the project approval
- improved environmental outcomes from lower greenhouse gas emissions per unit of energy output when compared to conventional coal-fired power generation.