

ASSESSMENT REPORT

Wilga Park Power Station

Beneficial Use of Gas from Exploration Wells (MP 07_0023 Mod 6)

1. BACKGROUND

The Wilga Park Power Station (the project) is located within the Narrabri local government area. The project comprises the gas fired Wilga Park Power Station, gas compression facilities and gas gathering lines at the Bibblewindi and Bohena CSG pilot wells, and a 32 kilometre (km) buried gas flow line (see Figure 1). Santos NSW (Eastern) Pty Ltd (Santos) operates the project, while Wilga Park Power Station is operated through Santos' subsidiary, Santos NSW (Narrabri Power) Pty Ltd.

The power station is currently approved to take gas sourced from a number of petroleum title areas including Petroleum Assessment Lease (PAL) 2 and Petroleum Production Lease (PPL) 3. Santos also undertakes exploration activity within the Petroleum Exploration Licence (PEL) 238 area (see Figure 2).

Operation of Wilga Park Power Station and associated gas infrastructure is undertaken under two development consents granted by the then Minister for Planning in 2008 and the Narrabri Shire Council in 2002 (see Table 1).

Council Consent

In November 2002, Narrabri Shire Council approved a development consent under Part 4 of the EP&A Act for the construction and operation of a 12-megawatt (MW) power station supplied with gas from the Coonarah gas field, a conventional gas field located in PPL 3. The development consent also included construction of the wells and gas gathering system at Coonarah, and the pipeline to the power station site.

This approval was modified by Narrabri Shire Council in November 2003 to change the location of the power station site from near the Narrabri landfill to the Wilga Park site. A further modification to the consent was issued in 2008 to include an additional stratigraphic core hole in the Coonarah gas field.

Part 3A Approval

In December 2008, the project was approved by the then Minister for Planning under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The approval has been modified on four occasions and allows Santos to:

- generate up to 40 MW at Wilga Park Power Station using CSG sourced from the Bibblewindi and Bohena CSG pilot wells and from other wells within PAL 2 or PPL 3; and
- transfer gas and water from the Bibblewindi facility and Tintfield ponds to the Leewood water treatment facility along the gas flow line.

The project was physically commenced in 2009 with construction of the gas gathering system, pipeline and compression facilities. New electricity generators have also been installed at the power station which currently has a generating capacity of 16 MW. However, Santos is currently operating the power station below 12 MW generating capacity, using gas sourced from the Bibblewindi CSG pilot wells.

While the use of gas at the power station from existing or future wells within PAL 2 and PPL 3 is approved, all wells within PPL 3 are either plugged and abandoned or in the process of being plugged and abandoned, and there is no active gas production from this gas field.

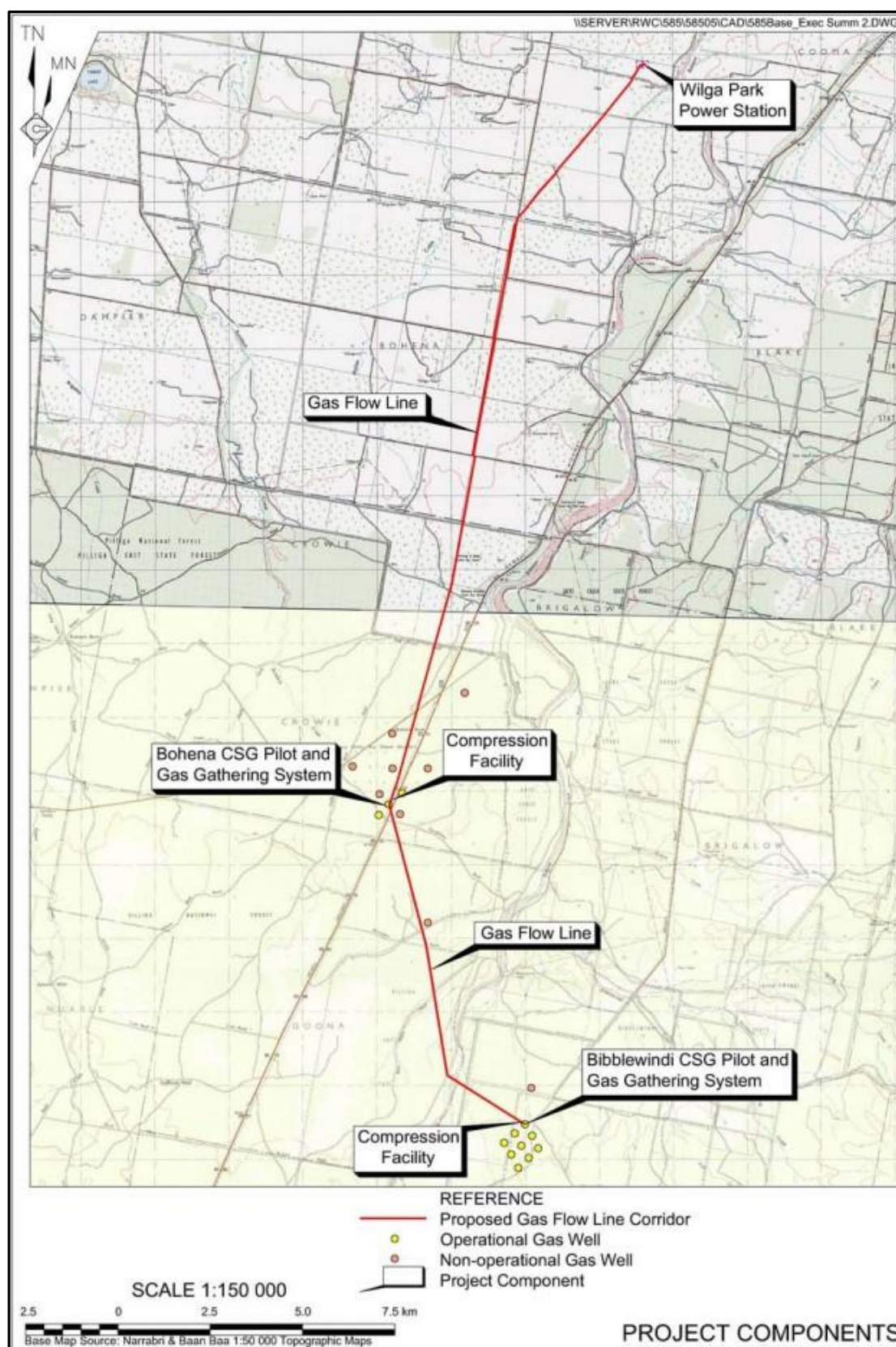


Figure 1: Approved Project

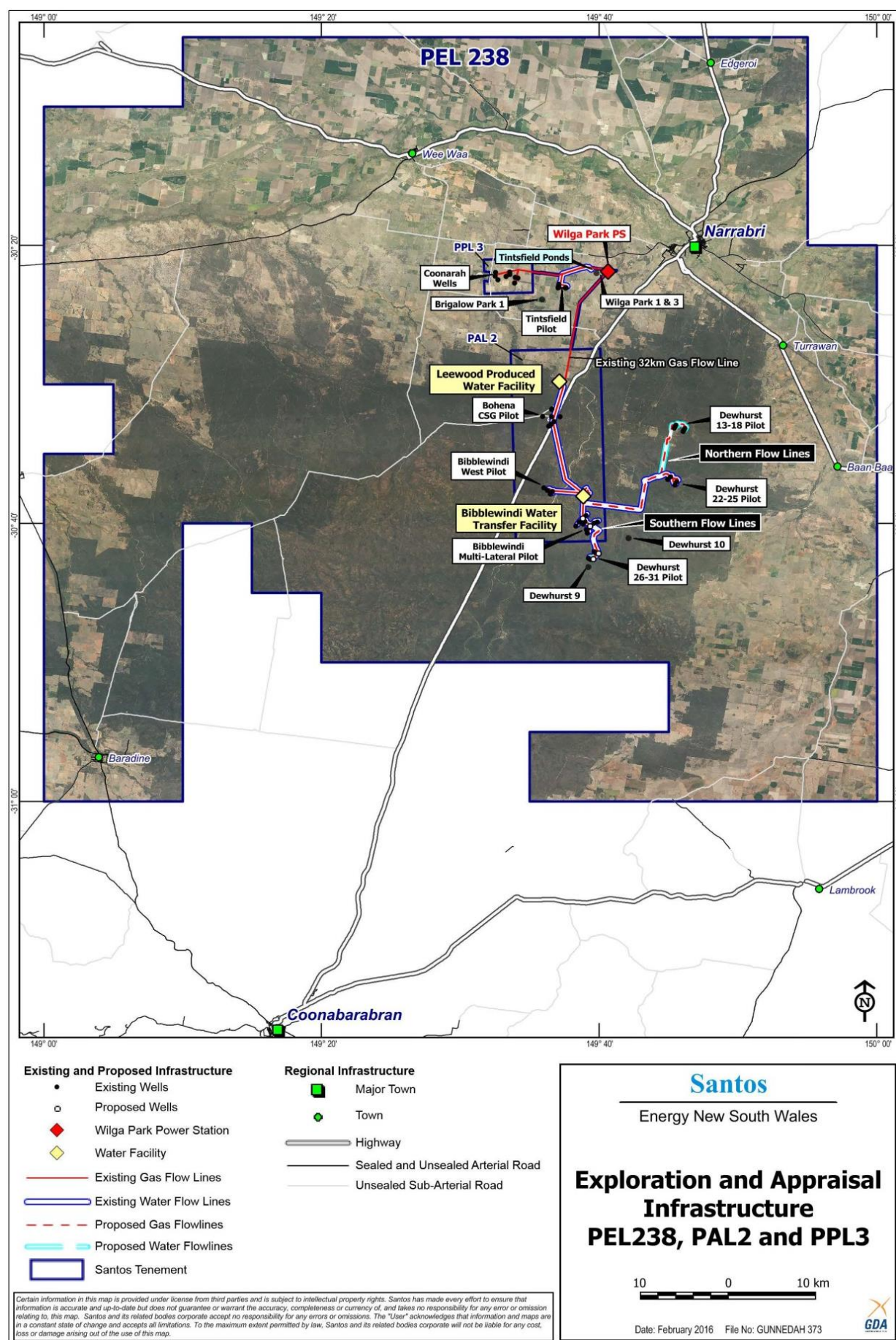


Figure 2: Gas exploration areas and infrastructure

Other Approvals

Santos also operates CSG infrastructure within its title areas through approvals issued by the Division of Resources and Geosciences (DRG) within the Department of Planning and Environment under the *Petroleum (Onshore) Act 1991* following assessment under Part 5 of the EP&A Act.

A number of the CSG pilot wells were also approved as State Significant Development (SSD) by the independent Planning Assessment Commission under Part 4 of the EP&A Act in July 2014.

A summary of the existing approvals under the EP&A Act for various gas infrastructure (see Figure 2) is provided in Table 1, with the Wilga Park Power Station project's infrastructure components highlighted.

Table 1: Summary of Approvals

Gas infrastructure	EP&A Act	Consent/ Approval Authority
<ul style="list-style-type: none"> • Wilga Park Power Station • 32 km gas flow line • Bibblewindi gas gathering system • Bohena gas gathering system 	Part 3A	Minister for Planning
<ul style="list-style-type: none"> • Dewhurst 13-18 pilot • Dewhurst 26-31 pilot 	Part 4 (SSD), Part 5 ¹	Planning Assessment Commission DRG
<ul style="list-style-type: none"> • Bibblewindi multi-lateral pilot 	Part 4 (SSD), Part 5 ¹	Planning Assessment Commission DRG
<ul style="list-style-type: none"> • Northern flow lines • Southern flow lines • Dewhurst 9-10, 22- 25 • Brigalow Park 1 • Wilga Park 3 • Tintsfeld pilot, ponds and flare • Bibblewindi West pilot • Leewood water treatment facility • Bibblewindi water transfer facility • Dewhurst Southern Water and Gas Flow Lines 	Part 5	DRG
<ul style="list-style-type: none"> • Coonarah gas field • Wilga Park Power Station • Pipeline from Coonarah to Wilga Park Power Station 	Part 4 (Local Development)	Narrabri Shire Council

Note 1: Separate infrastructure components of the Dewhurst 13-18, Dewhurst 26-31 and Bibblewindi multi-lateral pilot were approved as SSD by the Planning Assessment Commission, and under Part 5 by DRG.

Narrabri Gas Project

In February 2017, Santos lodged a development application and supporting Environmental Impact Statement (EIS) for the Narrabri Gas Project. That project would involve the progressive development of a coal seam gas field comprising up to 850 new gas wells on up to 425 well pads over 20 years, and the construction and operation of gas processing and water treatment facilities.

The Narrabri Gas Project would also include ongoing operation of existing and approved wells within PAL 2, PEL 238 and PPL 3.

The Narrabri Gas Project is the subject of a separate assessment process, and the Department is currently undertaking a detailed assessment of the merits of the project.

2. PROPOSED MODIFICATION

The recently commenced *Petroleum (Onshore) Regulation 2016*¹ allows the holder of a petroleum exploration licence or assessment lease to beneficially use recovered gas which would otherwise have been flared or released into the atmosphere. Clause 16 of the 2016 Regulation relevantly states:

- (1) *For the purposes of section 28B (1) (a) of the Act:*
 - (a) *all assessable prospecting operations authorised by an exploration licence or assessment lease, and by an activity approval, may be carried out to enable the beneficial use of gas, and*
 - (b) *all operations authorised by an exploration licence or assessment lease in relation to which a relevant development consent is in force authorising works that facilitate the beneficial use of gas may be carried out to enable the beneficial use of gas.*

Following an amendment in December 2015, clause 28B(1) of the *Petroleum (Onshore) Act 1991* confers the right to carry out operations to enable beneficial use of gas recovered from the land within an exploration licence or assessment lease, as described in the subordinate regulation.

The Regulation provides opportunity for beneficial use of gas that would otherwise be flared or released, in recognition of environmental benefits associated with generating energy from the gas.

Consistent with this amendment, Santos is proposing a further modification to the project approval to allow gas from two wells sets within PEL 238 to be used at Wilga Park Power Station. The proposal includes the use of gas from the Tintsville pilot, which includes the Tintsville 2, 3, 4, 5, 6 and 7 wells, and from the Dewhurst South 26-31 pilot, which includes the Dewhurst 26, 27, 28, 29, 30 and 31 wells².

The proposal would not involve the construction of new pipeline or power generation infrastructure at the Tintsville wells, except for minor work to connect the wells into the Coonarah gas pipeline for transfer to the Wilga Park Power Station.

It is important to note that the impacts associated with gas gathering/compression systems and the construction of the Tintsville wells have already been assessed and approved under Part 5 of the EP&A Act.

Gas from the Dewhurst 26-31 pilot wells would be transferred to the Bibblewindi multi-lateral pilot, and from there to the power station.

Gas and water flow lines were approved between the Dewhurst 26-31 pilot and the Bibblewindi multi-lateral pilot in September 2003 as part of the Dewhurst Southern Water and Gas Flow Lines project. The water flow line was installed in March 2014, however the gas flow line was not installed at that time.

Santos has lodged a separate application with the Resources Regulator to modify an approval under the *Petroleum (Onshore) Act 1991* for the Southern Water and Gas Flow Lines project, to allow the gas pipeline to be retro-fitted and operated. The proposed works are located within the previously approved disturbance corridor, adjacent to the existing water pipeline.

Transfer of gas from the Bibblewindi multi-lateral pilot to the power station would be along existing gas flow lines. Apart from the gas flow line between the Dewhurst 26-31 pilot and the Bibblewindi multi-lateral pilot, no other infrastructure would be required to connect the Dewhurst pilot wells to the power station, and no other changes to existing approved activities are proposed. The proposal does not seek to increase the capacity of the power station beyond the already approved 40 MW. No other changes to existing approved activities are proposed.

The proposed modification is described in the Environmental Assessment (EA) which accompanied the application (see **Appendix A**).

¹ The *Petroleum (Onshore) Regulation 2016* commenced in August 2016 and replaced the since repealed *Petroleum (Onshore) Regulation 2007* which was itself amended in December 2015 in conjunction with the amendment to the *Petroleum (Onshore) Act 1991* to include clause 28B to allow beneficial reuse of gas.

² Santos proposed a similar modification in late 2016. That proposal included the beneficial use of gas from *all* exploration wells within PEL 238 rather than just the Tintsville and Dewhurst South Pilot wells. That application was later withdrawn by Santos.

3. STATUTORY CONTEXT

The project was originally approved under Part 3A of the EP&A Act.

Under clause 6 of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, the project was transitioned to State Significant Development (SSD) by order, which took effect by publication in the NSW Government Gazette on 15 June 2018.

A modification application under section 4.55 (1A) for a modification involving minimal environmental impact was submitted to the Department on 18 June 2018.

Based on its assessment, the Department considers that the application can be characterised as a modification involving minimal environmental impacts as the proposal:

- would not significantly increase the environmental impacts of the project as approved;
- is substantially the same development as originally approved;
- allows for improved environmental performance in generating power rather than flaring gas; and
- would not change the approved power generation capacity or surface disturbance of the existing Wilga Park Power Station.

Consequently, the Department considers that the proposed modification is within the scope of Section 4.55(1A) of the EP&A Act.

The Minister for Planning is the approval authority for the modification application. However, under the Minister's delegation dated 11 October 2017, the Executive Director, Resource Assessments and Business Systems, may determine the application.

4. CONSULTATION

The Department made the modification application and accompanying information publicly available on its website from 26 June 2018 and consulted with the Environment Protection Authority (EPA), Division of Resources and Geoscience (DRG) and the Resource Regulator within the Department of Planning and Environment, and Narrabri Shire Council.

The **Resource Regulator** did not comment on the proposal but advised that it is assessing a separate application from Santos to modify the Dewhurst Southern Water and Gas Flow Lines project.

DRG supported the proposal as an effective use of a resource that would otherwise be flared, noting that the provisions of the *Petroleum (Onshore) Regulation 2016* would apply.

The **EPA** raised no concerns but advised that Santos would need an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* if the operating capacity of the power station is increased above 30 MW or pipeline modifications extend beyond the Wilga Park Power Station premises.

Narrabri Shire Council raised no concerns.

Agency advice is attached as **Appendix B**.

While the modification was not formally exhibited as it is a project involving minimal environmental impact under section 4.55 (1A) of the EP&A Act, the Department received representations from 10 members of the public.

Key concerns raised by the community representations include that the use of gas for exploration is production by stealth, that the request is not clearly restricted to the nominated exploration wells, that royalty payments would be avoided, and that the modification should not be considered until the Narrabri Gas Project was determined.

The Department is aware that these concerns are shared by other members of the community and has addressed these issues in Section 5 of this report.

5. ASSESSMENT

In assessing the merits of the proposal, the Department has considered the:

- EA for the proposed modification;
- existing conditions of approval;
- community views;
- the *Petroleum (Onshore) Act 1991* and the *Petroleum (Onshore) Regulation 2016*, in regard to beneficial use of gas;
- relevant environmental planning instruments, policies and guidelines; and
- requirements of the EP&A Act, including the objects of the Act.

Table 2 summaries the key assessment issues and consideration by the Department for the modification application.

Table 2: Key assessment issues

Issue	Consideration
Production by Stealth	<ul style="list-style-type: none"> • Section 33 of the <i>Petroleum (Onshore) Act 1991</i> allows the holder of an exploration lease to recover petroleum while assessing the viability of commercial production from its exploration and assessment activities. • Clause 28B(2) of the <i>Petroleum Regulation</i> currently limits the right to beneficial use of gas from exploration wells to 1,000 days (whether or not consecutive) per well. • The limited number of CSG wells (12) and the restricted timeframe that the wells can be used for power generation (1,000 days) is consistent with NSW Government policy for the beneficial use of gas from exploration activity. • The Resource Regulator is responsible for ensuring that Santos complies with the 1,000-day restriction. • Even if the modification were not approved, Santos could continue to flare the gas from these wells in accordance with existing approvals. • The proposed modification would minimise the venting or flaring of gas and associated environmental impacts, such as light pollution impacts on the Siding Springs Observatory and fire risks within the Pilliga State Forest. • Furthermore, using the gas from wells within PEL 238 to fuel the power station would mean less power would need to be generated elsewhere, thereby assisting to meet electricity demand in NSW. • The use of gas at Wilga Park Power Station remains subject to the existing approved 40 MW capacity. • Gas in excess of that required to operate the power station at 40 MW could not be used without further planning approval. • Accordingly, the Department does not believe the modification would facilitate commercial production under the guise of an exploration lease. • The recommended notice of modification restricts the gas from wells located in PEL 238 that can be used to supply the Wilga Park Power Station to only the 12 wells nominated in the modification application.
Royalty Payments	<ul style="list-style-type: none"> • In recognition of the potential benefits from beneficial use of gas for power generation rather than the flaring or venting of gas, under clause 16 of the <i>Petroleum Regulation</i>, a petroleum lease holder is not required to pay royalties for gas extracted during exploration activities, where it is authorised under a development consent. • In relation to concerns that the use of gas from exploration activities would not attract royalty payments and there would be no financial benefit to the people of NSW, it is important to note that beneficial use of gas instead of venting or flaring in this instance would provide a better environmental outcome. • If the modification were not approved, there would be no royalty payments from the flaring of the gas, and the environmental benefits from generating power would not be realised.

Issue	Consideration
Determination of the Narrabri Gas Project	<ul style="list-style-type: none"> The Narrabri Gas Project is currently under assessment and if approved, would facilitate the transition from exploration to production. The Narrabri Gas Project is a separate State Significant Development (SSD) application, and the Department is legally obliged to assess the modification application to the Wilga Park development consent on its merits, in accordance with applicable NSW Government policies and guidelines
Disturbance footprint	<ul style="list-style-type: none"> The Tintsville pilot wells are connected by a gas gathering line to the Tintsville flare, located on the Wilga Park property. Connection from the flare infrastructure into the existing Coonarah gas flow pipeline would require only minor modifications to the piping (with an additional valve to be installed) to allow gas to be pumped to the power station. These modifications would be restricted to previously disturbed areas at the Tintsville flare. Construction of a 4.5 km gas pipeline approved in 2013 under the <i>Petroleum (Onshore) Act</i> as part of the Southern Water and Gas Flow Lines project connecting Dewhurst pilot wells into existing gas pipeline infrastructure has not commenced. In 2014, a water pipeline was constructed under this activity approval, along the same alignment. Santos is seeking a modification of this activity approval to permit an extension of time for the construction and operation of the gas pipeline within the originally approved construction footprint. This modification is currently being assessed by the Resource Regulator. Minor piping modifications would be required at the Dewhurst pilot to connect to the existing flare to the gas flow line. However, these would be within the previously disturbed areas. Consequently, the Department is satisfied that there would be no significant increase to the environmental impacts that have already been assessed and approved for the Wilga Park Power Station.

6. RECOMMENDED CONDITIONS

The Department has prepared a notice of modification and consolidated project approval for the modification (see **Appendices C and D**) to allow Santos to supply gas to Wilga Park Power Station from the 6 Tintsville pilot wells and the 6 Dewhurst South pilot wells.

7. CONCLUSION

The proposed modification would allow the beneficial use of gas generated by exploration and appraisal activities that would otherwise be vented or flared.

The modification proposes the beneficial use of gas from 12 approved wells, with gas only from the Tintsville 2-7 pilot wells and the Dewhurst 26-31 pilot wells to be transferred to the Wilga Park Power Station.

Under the current NSW regulatory regime of the *Petroleum (Onshore) Regulation 2016*, the maximum duration of supply from each well would be 1,000 days. The Department considers that the modification is consistent with NSW Government policy and statutory framework for beneficial use of gas, that would otherwise be flared, from the exploration and appraisal stages of petroleum projects.

The Department considers the modification to be minor in nature as no additional infrastructure would be required for the Wilga Park Power Station and there would be no disturbance beyond the existing disturbance footprint.

The Department also believes fuelling the power station from gas that would otherwise be wasted would be a positive environmental outcome; not only would the gas be used beneficially, it would mean less power may have to be generated elsewhere to meet the demand for electricity.

Consequently, the Department is satisfied that the proposed modification is in the public interest and should be approved.

8. RECOMMENDATION

It is recommended that the Acting Executive Director, Resource Assessments and Business Systems, as delegate of the Minister for Planning:


- **consider** the findings and recommendations of this report;
- **determine** that the modification request falls within the scope of section 4.55 (1A) of the EP&A Act;
- **modify** the approval (07_0023); and
- **sign** the attached notice of modification (**Appendix C**).

Recommended by:

 18/7/18

Rose-Anne Hawkeswood
Senior Planner
Resource and Energy Assessments

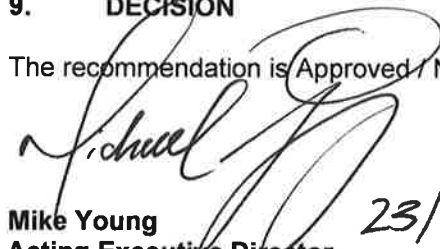
Recommended by:

 18/7/18

Stephen O'Donoghue
Acting Director
Resource and Energy Assessments

9. DECISION

The recommendation is Approved / Not approved by:

 23/7/18.

Mike Young
Acting Executive Director
Resource Assessments and Business Systems
as delegate of the Minister for Planning

APPENDIX A – ENVIRONMENTAL ASSESSMENT

Please see: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8010

APPENDIX B – AGENCY ADVICE

Please see: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8010

APPENDIX C – NOTICE OF MODIFICATION

Please see: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8010

APPENDIX D – CONSOLIDATED PROJECT APPROVAL

Please see: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8010