

Assessment Report – Application for Renewal of Petroleum Exploration Licence 285

Parts of this Report are subject to Part 13 of the Petroleum (Onshore) Act 1991 and may be confidential.

1. Introduction

- 1.1. AGL Upstream Investments Pty Limited (AGL) applied to the Minister for Resources and Energy on 14 March 2012 to renew Petroleum Exploration Licence 285 (PEL 285) for a term of six years.
- 1.2. This report sets out the Office of Coal Seam Gas' (OCSG) assessment of the renewal application for the Minister's consideration.
- 1.3. PEL 285 covers an area of approximately 1000 km² in the Upper Hunter region, centred approximately 19 kilometres south of the town of Gloucester (see map at Tab 1).
- 1.4. The Gloucester Gas Project, a major coal seam gas production project, falls within the boundaries of PEL285. The Gloucester Gas Project is projected to produce up to 423 PJ of 2P (proved and probable) reserves and up to 630 of 3P (proved, probable and possible) reserves. Stage 1 of the Gloucester Gas Project was approved by the Minister for Planning and Infrastructure on 22 February 2011. The Commonwealth issued approval for Stage 1 of the Gloucester Gas Project under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) on 11 February 2013.
- 1.5. The Applicant has lodged Petroleum Production Lease Applications No. 11 and 12 for Stage 1 of the Gloucester Gas Project. These applications are yet to be determined by the Minister for Resources and Energy.
- 1.6. Stage 1 production works will include construction of a central processing facility and a transmission pipeline from Stratford to Hexham. Gas field development is scheduled to commence in 2015. AGL has said that it expects to have the Gloucester Gas Project operational and supplying gas to customers in the Hunter and Central Coast by the end of 2016. However, this date is likely to be revised given delays with the Project progress to date.
- 1.7. The Government has identified Stages 2 and 3 of the Gloucester Gas Project as a Strategic Energy Project.
- 1.8. AGL's exploration activities under PEL 285 in the Gloucester region are ongoing. Accordingly, AGL has sought renewal of PEL 285. Exploration activities proposed under PEL 285 also include pilot projects that will provide essential data for operations to be carried out as part of the Gloucester Gas Project.
- 1.9. The assessment of the application has been delayed by various changes to the regulatory and policy settings for coal seam gas in NSW. This is the first renewal application, which the OCSG has recommended the Minister approve.

2. Statutory Considerations

- 2.1. Under section 19 of the *Petroleum (Onshore) Act 1991* (the Act), the Minister may renew a petroleum title or refuse to renew the petroleum title, after considering an application for renewal.
- 2.2. Under the Act, the Minister may refuse to grant a petroleum title on the following grounds, amongst others:
- if the application is not made in accordance with the Act or the *Petroleum (Onshore) Regulation 2007* (the Regulation);
 - if the grant of the title would contravene the Act;
 - if the need to conserve and protect the flora, fauna, fish, fisheries and scenic attractions, and the features of Aboriginal, architectural, archaeological, historical or geological interest, in or on the land over which the title is sought warrants the refusal of the application; and
 - if the Applicant is not a fit and proper person.

In addition, for renewal applications, the Minister must also consider whether:

- all data and reports due under the regulations have been submitted, and
- all data gathered, and operations carried on, during any period not covered in any such report have been made the subject of a full report submitted to the Minister.

The Minister can also consider the public interest, with reference to the nature of the renewal application, in particular, the works and activities proposed to be carried out.

This report addresses these considerations.

3. Administrative requirements

- 3.1. The renewal application has been made in accordance with the administrative requirements in the Act and the Regulation because:
- the application area meets the requirements of the Act; and
 - the application was made in the form approved by the Minister and the manner approved by the Secretary; and
 - the application was accompanied by lodgement fees plans, a proposed work program and evidence of financial standing in accordance with the Act and Regulation; and
 - the application was lodged on 14 March 2012, in accordance with the time limits prescribed by the Act.
- 3.2. The applicant proposes to relinquish an area of 255.45km² of the 1017.662km² presently held in PEL 285. This would relinquish 25.1% of the presently held title area, which complies with the relinquishment requirements under the Act. The OCSG is satisfied that the applicant has no outstanding rehabilitation liabilities in this area.
- 3.3. For these reasons, it is considered that:

- (i) the application is made in accordance with Part 3 of the Act and all other relevant provisions of the Act and the Regulations;
- (ii) the renewal of the title would not contravene the Act.

4. Proposed work program

4.1. The applicant seeks the renewal of PEL 285 for six years. The proposed work program is reproduced for convenience below.

Year	Exploration/Activities	Expenditure
Year 1 2014-2015	<ul style="list-style-type: none"> • Fracture stimulation of Waukivory Pilot • Hydrological studies 	\$3,500,000
Year 2 2015-2016	<ul style="list-style-type: none"> • Drill and test one (1) production pilot • Drill one (1) core hole • Hydrological studies 	\$5,500,000
Year 3 2016-2017	<ul style="list-style-type: none"> • Seismic survey • Drill two (2) core holes • Drill and test one (1) production pilot 	\$10,000,000
Year 4 2017-2018	<ul style="list-style-type: none"> • Drill reservoir characterisation core hole 	\$1,000,000
Year 5 2018-2019	<ul style="list-style-type: none"> • Drill and test one (1) production pilot 	\$4,000,000
Year 6 2019-2020	<ul style="list-style-type: none"> • Hydrological studies 	\$500,000
TOTAL		\$24,500,000

- 4.2. Given the period of time since the renewal application was lodged, AGL submitted a revised work program for the renewal application at the request of the OCSG. The work program was revised to focus on water studies and pilot work. Drilling and production activity has been decreased, compared to the original work program submitted.
- 4.3. Only low impact exploration activities, such as logging of existing bores, or geophysical surveys, can be carried out under a Petroleum Exploration Licence without the need for further approval from the OCSG. Activities which have a greater impact, such as drilling, seismic surveys or road construction, require additional assessment and approval from the OCSG.
- 4.4. For example, the work program includes the Waukivory Pilot Project, which is currently subject to separate assessment by the OCSG (in consultation with other relevant agencies) under Part 5 of the *Environmental Planning & Assessment Act 1979*. This Project is proposed to provide groundwater modelling data which are required under

the conditions of consent issued¹ for Stage 1 of the Gloucester Gas Project.

- 4.5. One of the purposes of the Act is to enable exploration for petroleum. The work program will appropriately continue exploration of PEL 285 through acquisition of seismic and magnetics data, drilling new core and stratigraphic holes and production testing pilot wells based on current and future exploration results. The OCSG considers that the proposed work program should be supported.

5. Conservation and Protection of Environment

- 5.1. The Gloucester region has significant flora, fauna, fish, fisheries and scenic attractions. There are also features of Aboriginal, architectural, archaeological, historical or geological interest. Barrington Tops National Park and Chichester State Forest are to the west of the title area and the Glen Nature Reserve and Gin-Doo-Ee Reserve lie to the south-east of the title. The Hunter Water Catchment is to the immediate south west of the title area. However, it is important to note that PEL 285 does not traverse any of these natural features. There are also no biobanking sites within PEL 285.
- 5.2. The OCSG considers that the renewal of PEL 285 will not adversely affect the conservation and protection of these values for several reasons and that the applicant has in place a comprehensive groundwater monitoring program to model and monitor groundwater impacts.
- 5.3. Firstly, only minor activities such as geophysical surveys and logging of existing bores are able to be carried out immediately upon renewal of PEL 285 without further activity approval. A separate and rigorous activity approval regime applies to activities with more significant potential impacts. Drilling, seismic surveys, road construction and other activities with similar potential impacts require further assessment (under Part 5 of the EP&A Act) and approval from the OCSG. As part of the assessment process the OCSG obtains advice from the Environment Protection Authority, the NSW Office of Water, the Office of Environment and Heritage and the Department of Primary Industries.
- 5.4. Major exploration activities that meet the criteria under *State Environmental Planning Policy (State and Regional Development) 2010* also require State Significant Development consent from the Minister for Planning.
- 5.5. Secondly, and as noted above, the applicant has in place a comprehensive groundwater monitoring program to model and monitor groundwater impacts. The applicant currently has over 45 monitoring bores in the Gloucester Basin, and the number is gradually increasing. While the monitoring data is not long term, it is comprehensive. The applicant has nested monitoring bores that intersect the alluvium and the deeper underlying coal and interburden layers. Monitoring of nested sites within the different systems is important to fully understand system

¹ Gloucester Gas Stage 1 Project Approval (08_0154) (approved 22 February 2011) (NSW); Gloucester Coal Seam Methane Gas Project Approval, Gloucester Region, New South Wales (EPBC 2008/4432) (approved 11 February 2013) (Cth)

dynamics and the potential vertical connectivity. This in turn enables impacts to be predicted, and to measure if they actually occur.

- 5.6. The applicant monitors water levels using automatic data level recorders and the data is logged 6 hourly. The applicant also undertakes routine water quality testing. The applicant publishes reports on its groundwater monitoring assessments online.
- 5.7. Thirdly, the recommended conditions on the renewal of PEL 285 provide for the conservation and protection of these environmental values. These conditions include:
- Compliance with the NSW Codes of Practice for Well Integrity and Fracture Stimulation;
 - Prevention/minimisation of environmental harm;
 - Erosion and sediment control;
 - Groundwater Monitoring and Modelling Plan;
 - Produced Water Management Plan;
 - Use of chemicals and fuel;
 - Noise;
 - Vegetation clearing;
 - Fire prevention;
 - Roads and tracks;
 - Topsoil management;
 - Drilling;
 - Waste Management;
 - Compliance and Rehabilitation;
 - Environmental Incident Reporting; and
 - Stock and Wildlife.
- 5.8. Fourthly, coal seam gas activities also require an Environmental Protection Licence from the Environment Protection Authority. A condition is recommended to be placed on PEL 285 to ensure that the conditions of the Environmental Protection Licence prevail to the extent of any inconsistency with the title conditions.
- 5.9. Finally, given the applicant's environmental performance during previous exploration activity under PEL 285 as well as the 2011 and 2014 audit findings as referred to below, the OCSG considers the applicant has shown due consideration to the potential environmental impacts of exploration activities.

6. Public interest

- 6.1. The Minister may have regard to the public interest in considering whether to refuse to grant, renew or transfer a petroleum title, or to cancel or suspend operations under a petroleum title.

- 6.2. To date, the NSW Government has highlighted the importance of protecting the public interest by ensuring only appropriate people hold petroleum titles in NSW. The applicant is a public company, wholly owned by AGL. AGL has a reputation for proper conduct within the energy industry and generally within the community.
- 6.3. The OCSG also believes that the renewal of PEL 285 would be in the public interest in a broader socio-economic sense.
- 6.4. The Australian Energy Market Operator has indicated that NSW potentially faces gas supply shortfalls in the future. AGL's Gloucester project could supply around 15 percent of NSW's gas needs by 2017-18. Improving gas supply security from domestic production will help create energy security and choice for NSW consumers and industry into the future.
- 6.5. The primary economic sectors in the PEL 285 area are agriculture, mining and tourism. In particular, resource development already makes a substantial contribution to the Gloucester economy with the Yancoal operating two open-cut mines at Stratford and Duralie, south of Gloucester.
- 6.6. It is considered that petroleum exploration will build on the existing contributions of the mining industry to the region. AGL presently employs 11 people in the Gloucester area in connection with exploration activities carried out in the title area. Ongoing operational employment generation in the Gloucester region arising as a result of the Gloucester Gas Project is likely to boost economic activity in the Gloucester region. The Applicant has indicated that the Gloucester Gas Project will employ up to 465 personnel during construction and between 30-40 personnel during the Project operation phase. Further exploration activity in the title area is likely to lead to further production activity and commensurate employment generation in the region. AGL has also indicated that the project involves a capital investment of \$276 million which would further bolster the local economy and provide indirect employment benefits to the community.
- 6.7. The PEL 285 area overlies nine existing mining title areas (see map at Tab 1) granted under the Mining Act 1992.
- 6.8. Although the applicant stated it has obtained the right to carry out petroleum exploration activity within these mining leases, a condition is proposed to be included requiring the applicant to make every reasonable effort to enter into a cooperation agreement with mining titleholders. Further, only once an agreement or similar is signed by the mining lease holder will the applicant be able to operate within a mining lease area.
- 6.9. The agriculture sector is significant in the region and includes traditional beef and dairy industries and emerging niche and boutique type farm industries including goats, alpacas, aquaculture, organics, grapes, wine and herbs.
- 6.10. The tourism sector in the Gloucester region is underdeveloped but growing, based on the natural environment of the region such as rainforests and grasslands such as Barrington Tops, the Bucketts Range and the river system.
- 6.11. The Government has introduced a number of strategic policy and regulatory initiatives in order to manage potential conflicts that may arise

from the proximity of coal seam gas development with high quality agricultural land and other land uses. These initiatives include:

- amendments to the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP), which provide for coal seam gas exclusion zones and buffer zones;
- identification of critical industry clusters for the equine and viticulture industries and mapping of Biophysical Strategic Agricultural Land to identify high quality agricultural land of strategic importance;
- the release of the Strategic Regional Land Use Policy and associated plans for the Hunter Region and New England Northwest, which puts a framework into place to protect Strategic Agricultural Land using a Gateway process. This provides independent scientific assessment of the impacts of coal seam gas development proposals on strategic agricultural land and its water resources.

- 6.12. Attached at Tab 2 is a map that identifies coal seam gas exclusion zones within PEL 285. These zones are residential areas, areas identified for future residential development and the 2km buffer zone around such area. No exploration activity has been approved in relation to these areas and the terms of the Mining SEPP prohibit approval of future petroleum exploration development in these areas.
- 6.13. It is considered that these strategic initiatives will satisfactorily manage and mitigate land use conflicts in relation to coal seam gas exploration activity in the title area to the extent that these conflicts may arise within the area of PEL 285.
- 6.14. For these reasons, the OCSG believes the renewal of PEL 285 would be in the public interest.
- 6.15. ***Community engagement***
- 6.16. The OCSG is also of the view that the applicant has made genuine efforts to consult with and engage the local and broader community in relation to its exploration and proposed production activities in the Gloucester Valley. These efforts to September 2013 are summarised in the *Waukivory Pilot Project Review of Environmental Factors* at pages pp.13-26.
- 6.17. In addition, the applicant has participated willingly and constructively in the Gloucester Dialogue, in particular providing detailed information in relation to the Waukivory Pilot Project, including proposed fracture stimulation activities. The Dialogue provides an opportunity for the Gloucester Shire Councils and community members to obtain information from regulators and the applicant about exploration and production projects in the Gloucester Valley.
- 6.18. A condition is recommended to be placed on PEL 285 in relation to community consultation which requires the licence holder to comply with the *Guideline for community consultation requirements for exploration* (NSW Trade & Investment, 2012) and to report annually on community consultation.

7. Fit and proper person

- 7.1. The Minister may also have regard to whether a person is a fit and proper person in considering whether to refuse to grant, renew or transfer a petroleum title, or to cancel or suspend operations under a petroleum title (s.24A of the Act).
- 7.2. In determining whether a person is a fit and proper person the Minister may have regard to the financial capacity of the applicant. The Minister may also have regard to the technical competency of the applicant. Each of these matters is considered below.
- 7.3. *Financial capacity***
- 7.4. PEL 285 is held by AGL Upstream Investments Pty Limited (ABN 58 115 063 744). AGL Upstream Investments Pty Limited is a public company established on 1 July 2005.
- 7.5. The applicant has made a significant financial investment in exploration activities under PEL 285 to date, and proposes further significant investment over the next six years. The applicant is a wholly owned subsidiary of AGL Limited, a public company listed on the Australian Stock Exchange. AGL Limited provides financial support for the applicant's investment in PEL 285 as well as the ongoing development of the Gloucester Gas Project. Evidence of the applicant's financial standing is attached at Tab 3.
- 7.6. This evidence of financial standing comprises the AGL Energy Limited and controlled entities' Interim Financial report for the half year ended 31 December 2013.
- 7.7. The OCSG is of the view that this financial information shows the applicant has substantial financial means. For example, the AGL Energy Limited and controlled entities Interim Financial report for the half year ended 31 December 2013 indicates that its profit for the period (half year ending 31 December 2013) is \$261 million. That report also indicates that its total equity is \$7.5 billion.
- 7.8. The OCSG is therefore of the view that the applicant has the financial capability to support investment in the exploration activities proposed in its work program.
- 7.9. *Technical capacity***
- 7.10. Exploration activities carried out to date in relation to PEL 285 by the applicant (since 2008 when AGL group companies took transfer of the title) include:
- completion of 17 wells and core holes;
 - 13 exploration wells plugged and abandoned;
 - 45 water monitoring bores drilled;
 - five separate water studies;
 - 3D seismic survey over the Stage 1 Gloucester Gas Project area;
 - 154km² of 2D seismic survey;
 - an aeromagnetic survey.

- 7.11. The OCSG has examined the technical capability of the applicant to comply with the provisions of the Act and the Regulation in relation to PEL 285. The OCSG has also considered the resume of Andrew Parker, Acting Head of Exploration Upstream Gas. PEL 285 will contain a condition that requires the licence holder to ensure an appropriately qualified technical manager conducts its operations. The name and contact details of this manager must be provided to the Minister prior to any prospecting operations taking place.
- 7.12. In compliance with the existing conditions of PEL 285, Annual Reports have been received for 2009 to 2013 and an End of Work Program report has been received for the completion of previous approved work programs. The OCSG considers all data and reports due under the Regulation have been submitted, and that all data gathered, and operations carried on during any period not covered in any such report have been made the subject of a full report submitted to the Minister.
- 7.13. A 2011 audit of PEL 285 found some low-risk non-compliances with existing licence conditions.
- 7.14. A yet to be finalised 2014 audit of PEL 285 has found some further low-risk non-compliances with existing licence conditions. These non-compliances are considered administrative in nature and include the late submission of reports. The OCSG will work with the applicant to improve non-compliant processes.
- 7.15. A review of the applicant's safety compliance by the OCSG in 2013 indicates the well suspension approval on 4 pilot wells has expired. The applicant has been notified and a response was received by the OCSG on 4 December 2013. Otherwise performance to safety regulatory requirements is considered satisfactory.
- 7.16. The applicant's previous exploration efforts have been diligent and appropriate. The OCSG believes the applicant has and will continue to have the technical capability to carry out the proposed work program.

8. Conclusions and recommendations

- 8.1. The OCSG is satisfied that:
- (a) the applicant has satisfied the statutory requirements arising from the Act and Regulation in relation to renewal of a petroleum title;
 - (b) the applicant's financial and technical capabilities are sufficient to effectively and diligently carry out the proposed exploration activities;
 - (c) the nature and extent of the applicant's proposed work program will contribute to the effective and diligent exploration of the coal seam gas resources within the title area;
 - (d) the grant of the renewal application is in the public interest; and
 - (e) the applicant is a fit and proper person.
- 8.2. The OCSG recommends the renewal of PEL 285 for a further term of six years from the date of this decision, subject to the conditions attached to the proposed instrument of renewal attached to this Report.

- 8.3. Renewal for the full term of six years is recommended on the basis of the performance of the applicant and ongoing investment and exploration in the title area with a view to progressing Stages 2 and 3 of the Gloucester Gas Project and given the significance and extent of the gas resources in the area of the PEL.
- 8.4. Accordingly it is recommended that the Minister:
- (a) consider the matters contained in this assessment report, including all associated attachments;
 - (b) having considered all relevant matters under the Act in accordance with recommendation (a) above, renew PEL 285, subject to the recommended conditions, for a term of six years, by signing and dating the Instrument of Renewal.



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