



SUBMISSION:

SENATE ECONOMICS COMMITTEE

*OFFSHORE PETROLEUM AMENDMENT
(GREENHOUSE GAS STORAGE) BILL 2008*

AUGUST 2008

A JOINT SUBMISSION BY THE AUSTRALIAN COAL ASSOCIATION
AND THE
MINERALS COUNCIL OF AUSTRALIA

ACA and MCA Submissions on *Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill 2008*

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A. Executive summary

The Australian Coal Association (ACA) and Minerals Council of Australia (MCA) welcome the Commonwealth Government's initiative in the development of a world-first regulatory framework to support offshore injection and storage of greenhouse gas substances (GHGS). The ACA and MCA are pleased to make a joint submission to the Senate Economics Committee (**the Committee**) Inquiry into the *Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill 2008*.

Large scale GHGS injection and storage is the only available means of significantly reducing emissions from fossil fuel based power generation in Australia and elsewhere. With almost 90 per cent of Australia's electricity generated from coal and gas, the rapid deployment of carbon capture and storage (CCS) technologies will be essential if Australia is to meet its climate change objectives without significantly compromising domestic energy security or economic prosperity.

The regulatory framework established by the *Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill 2008* will therefore play a critical role in shaping Australia's response to climate change by providing a platform for the development and deployment of CCS.

The ACA and MCA together represent Australia's black and brown coal industries, whose long term sustainability will be dependent on the availability of carbon storage facilities. In some regional communities, such as Victoria's Latrobe Valley, the development of offshore storage sites is the only available option to mitigate greenhouse emissions from brown coal generation. These and other strategic assets will be stranded in the absence of a policy and regulatory framework which encourages investment in GHGS storage in the Bass Strait and Gippsland Basin.

The ACA and MCA submit that the *Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill 2008* will require amendment to ensure it establishes a solid base of legal rights for this important emerging industry. This submission provides a detailed discussion of recommendations aimed at achieving:

- **legal certainty** for the injection and permanent storage of GHGS, recognising that this will be a prerequisite for investment;
- a transparent process for **adjudication between commercial parties** over whether sequestration exploration, assessment and injection can occur near areas of petroleum production;
- a **level playing field** between all parties when seeking the right to permanently store greenhouse gases;
- consideration of **broader public interests** when balancing rights of petroleum title holders with proposals for GHG injection and storage;
- a **higher standard of remediation** for existing and future petroleum production operations to ensure they are suitable for carbon injection and storage; and
- **recognition of the significance of the legislation** in supporting Australia's climate change objectives through the inclusion of an objects clause and a change in the title of the Act.

Summary of ACA and MCA Submissions

The ACA and MCA recommend the following matters be taken into consideration and amendments be incorporated into the Bill accordingly:

1. The Bill should **rename** the OPA as the 'Offshore Petroleum and Greenhouse Gas Storage Act'.
2. The Bill should make provision for an **objects clause** to be included in the OPA, such as objects to include a certain, transparent, effective and efficient regulatory system for GHGS titles and operations, a contribution to emission reduction, and an effective basis for the sustainability of emissions-intensive and fossil fuel industries (as well as appropriate objects for petroleum operations).
3. The Bill or the regulations should make provision for 'significant risk of significant adverse impact' (**SROSAI**) to be assessed by including reference to **beneficial impacts** to ascertain a net impact, and by reference to **transparent quantitative boundaries**, including a probability assessment even if the probability which triggers a SROSAI remains low. The parties should be entitled to submit evidence for the Minister's consideration in relation to SROSAI determinations, and the Minister must have regard to that evidence.
4. The Bill should make provision for GHGS proponents to have **access to petroleum data** for the limited purposes of assessing and making submissions on SROSAI and the preparation of site plans, subject to confidentiality obligations.
5. To ensure transparency, regulations or guidelines must **detail the relevant factors the Minister must take into account when considering the public interest**. These factors should include the proposed objects of the Act, matters arising from consultations with other (Commonwealth and State) Ministers, the importance of GHGS operations, the availability and proximity of alternative storage sites, and complementarity with other government and industry initiatives.
6. The Bill should be amended to provide **clarity in relation to the declaration of post-commencement petroleum tenements**. The most consistent approach would be to require that all post-commencement petroleum titleholders seek approval for key petroleum operations. Recovery of petroleum should be included in the definition of key petroleum operations. The Bill should also be amended to ensure consistency in relation to approval requirements for key GHG operations and key petroleum operations, and to require the Joint Authority (**JA**) have reference to whether the actions of a PPL holder are the cause of a 'serious situation' in the giving of a direction to the petroleum production licence (**PPL**) holder.
7. Guidelines should be prepared for the circumstances where the Designated Authority (**DA**) may have regard to the principle that plugging or closing off wells should be carried out in a way that **restores or maintains the suitability of a part of a geological formation for the permanent storage of GHGs**, in giving a remedial direction to a current or former holder of a pre-commencement petroleum title. Such directions must be given in all cases (pre- or post-commencement) where the existing petroleum tenement area is located in areas where there is the greatest need for Greenhouse Gas Substance Injection Licence (**GHGS IL**) facilities and services.
8. The Bill should be amended to require the Minister and the JA to give **written reasons for all decisions** which the Minister or JA make pursuant to the provisions of the Bill.
9. The Act should be administered such that **relinquishment requirements** on petroleum tenements are more **strictly enforced** where those tenements may otherwise be of value as GHGS storage sites.
10. The regulations or guidelines should set out the **factors for consideration in the release of GHGS acreage**, and for a petroleum exploration permit (**PEP**) acreage release. In the case of a PEP acreage

release, these factors should include compatibility with GHGS operations. Provision should also be made for the **sharing of petroleum data**, subject to confidentiality obligations, where a party would otherwise have an unfair advantage in the Greenhouse Gas Substance Assessment Permit (**GHGS AP**) bid process.

11. GHGS AP and PEP holders should be able to **share activities under their respective work programs**, where such activities have the potential to advance exploration for both petroleum and GHG storage formations.
12. The Bill should be amended to allow for the area of GHGS titles to be expanded to take in any part of an eligible GHGS storage formation that lies outside the existing GHGS title area, provided it does not lie within the area of a GHGS title held by another party, and for a unitisation regime where eligible GHG storage formations straddle more than one tenement area.
13. The Bill should make provision for **GHGS APs to be renewed**, to allow GHGS AP holders sufficient time to deal with the requirements in relation to approvals of key GHG operations, identify an eligible GHG storage formation and obtain declaration of it as an identified GHG storage formation.
14. The Bill should be amended to make provision for the holder of a GHGS IL to be able to apply for a special GHGS HL in circumstances where there is a temporary lack of supply of GHGS to inject and store, or where the Minister gives a direction where there has been a discovery of commercially viable petroleum in an area of overlap between a GHGS IL and a pre-commencement petroleum title.
15. The Bill should include an **express power for the Minister to grant a GHGS IL** where the Minister is satisfied there is no SROSAI on petroleum exploration or recovery operations or commercially viable petroleum.
16. The Bill should mandate a **process to facilitate agreement making**, and for intervention in the event that agreements are not able to be reached, rather than merely include agreement between the parties as a factor for the Minister's consideration when making determinations under the provisions of the Bill.
17. The Bill should provide that a PPL holder proposing to engage in the business of injection and storage of GHGS, which is not related to the petroleum operations of the PPL holder, must be subject to the same grant processes as any other applicant (that is, the PPL holder should be required to nominate areas for acreage release and bid for a GHGS AP in a competitive process). Otherwise the existing provisions of the Bill in relation to the grant of a GHGS IL to a PEP holder are appropriate.
18. Rather than requiring the holder of a GHGS IL to seek amendment of the GHGS IL each time the GHGS to be injected and stored is proposed to be taken from a new source, the Bill or regulations should provide for a **streamlined process of notification** to the Minister of proposed commercial arrangements with the owners of GHGS sources.
19. The Bill should be amended such that, in circumstances where there is a SROSAI posed by GHGS operations on commercially viable petroleum located in a pre-commencement petroleum tenement which overlaps the proposed GHGS IL area, the Minister **must only refuse to grant a GHGS IL if the petroleum titleholder has not agreed to the grant**, consistent with the Minister's remedial directions powers under the Bill.
20. The Bill, and not the regulations, is the appropriate place to set out any third party access regime. In any event, identified GHG storage formations should not be included in the list of facilities and services in relation to which third party access may be provided for.
21. The Commonwealth should **indemnify GHGS demonstration and commercial projects commencing before 2015** against long-term common law liability, and the Minister should be

required to have regard to the availability and costs of insurance when considering whether to impose a condition on a GHGS title that the holder take out insurance.

22. The issue of a site closing certificate, the successful undertaking of monitoring, measurement and verification (**MMV**), and the current or former GHGS IL holder's compliance with serious situation and remedial directions in accordance with the Bill, should constitute **permanent storage for both the purposes of the Bill and for AETS**.
23. The Income Tax Assessment Act (**ITAA**) 1997 should be amended to provide for the same treatment to be applied to GHGS exploration expenses and depreciation of assets as is applied to oil and gas exploration expenses and depreciation of assets.
24. Further consideration should be give to inter-jurisdictional cooperative measures, to allow for the declaration of identified storage formations that cross domestic jurisdictional boundaries, and for the grant of GHGS titles in such circumstances.
25. The Bill must not be seen as the end solution for all requirements in relation to GHGS injection and storage. The **Commonwealth must continue to pursue other initiatives** such as research funding for the identification of potential GHG storage formations and one or more large-scale CCS demonstration projects, research and development incentives and initiatives to develop and expand Australia's skill base relevant CCS.

The ACA and MCA submit that incorporation of these matters in the provisions of the Bill will ensure that the Bill achieves its legislative and policy purposes, which the ACA and MCA consider is encapsulated in the key policy principles set out in paragraph 3 of section B of this submission.

B. Introduction

1. Perspectives

1.1 Introduction

The ACA and MCA are pleased to make this submission to the Committee, in relation to the Committee's consideration of the Bill.

The Bill seeks to amend the OPA, to introduce a new chapter of the OPA to deal with GHGS titles, and make amendments to provisions in relation to petroleum titles, infrastructure licences and pipeline licences relevant to GHGS titles.

1.2 Australian Coal Association

The ACA represents the Australian black coal industry, which plays a pivotal role in the Australian economy. Member companies currently operate 92 mines representing 99 per cent of both Australia's black coal production and exports. Black coal is Australia's largest commodity export valued at \$22 billion in 2007 and set to increase in 2008, directly employs over 30,000 Australians and a further 100,000 indirectly (the majority of which are in regional areas), and provides 58 per cent of Australia's electricity generation and is vital for iron and steel making and other industrial processes. Together with brown coal, black coal underpins the security, reliability and comparatively low-cost of Australia's coal-based electricity supply (over 80 per cent derived from both black and brown coal). The black coal industry will provide over \$1.8 billion in royalties to State Governments in 2007/08.

The ACA is committed to supporting a global response to managing climate change that will deliver real greenhouse gas emissions abatement that does not undermine Australian industry's competitiveness and promotes real business opportunities.

For many years the industry has been proactive in addressing environmental issues, including GHG emissions in the extraction and use of coal. In 2006 the ACA announced the establishment of the COAL21 Fund as part of a world-first whole-of-industry funding approach to support greenhouse gas abatement. The COAL21 Fund will raise \$1 billion over 10 years from a voluntary levy on coal production to support the pre-commercial demonstration of low emissions technologies in the power generation sector (where over 95 per cent of emissions from coal occur) and supporting R&D.

The deployment of these low emission coal technologies will depend on the availability of carbon storage sites, underpinned by a robust regulatory framework.

In addition to the COAL21 Fund, Australian black coal producers are supporting the development of low emission coal technologies through the Australian Coal Association Research Program (**ACARP**), and through participation in Australian and international initiatives such as the Greenhouse Challenge Plus Program, the International Energy Agency (**IEA**) Clean Coal Centre and the Carbon Sequestration Leadership Forum (**CSLF**).

1.3 Minerals Council of Australia

The MCA represents Australia's exploration, mining and minerals processing industry, nationally and internationally, in its contribution to sustainable development and society. MCA member companies produce more than 85 per cent of Australia's annual mineral output. Mineral product coverage is base metals (Cu, Pb, Zn), precious metals (Au, Ag), coal (thermal, metallurgical, lignite), iron ore, uranium, heavy minerals (Ru, Zr, Il, TiO₂), light metals (Al, Ni, Mn, Mg) – to the stage of primary transformation, e.g. iron ore to pig iron, bauxite to alumina to aluminium. The MCA shares membership of Australia's

large multi-national black coal companies with the ACA and also represents the Australian brown coal industry (largely located in Victoria and providing over 85 per cent of Victoria's power).

In addition to the work of the black coal industry mentioned above, the brown coal industry has numerous initiatives underway to address the greenhouse impacts of coal use. These include application of clean coal technologies such as coal drying and post-combustion carbon dioxide capture, Mechanical Thermal Expression and coal gasification.

The minerals sector accounts, directly and indirectly, for around 8.0 per cent of the Australian economy. In 2006-07, the sector generated exports of \$91 billion, representing approximately 50 per cent of Australia's total merchandise exports and over 40 per cent of total exports of goods and services. The sector accounted for more than 30 per cent of new capital expenditure in 2006-07. Employment in the sector has grown by 54,000 or 66 per cent in the last 5 years. Company tax paid by the mineral sector has increased from \$600 million in 2002-3 to \$5.2 billion in 2006/7.¹ Overall, direct and indirect tax contributions to the Federal and State governments totalled \$9 billion in 2006-7, an increase of 17.4 per cent on the previous year

The MCA's strategic objective is to advocate public policy and operational practice for a world-class industry that is safe, profitable, innovative, environmentally and socially responsible, attuned to community needs and expectations. To this end, the MCA considers the minerals industry can and must contribute directly to solutions to climate change problems within a strategic framework for collective and collaborative action for global solutions to a global problem.

The industry's commitment to continuous improvement in minimising and remediating its environmental impact is a fundamental plank of the industry's broader commitment to sustainable development. This is demonstrable by the MCA's requirement that member companies are signatories to *Enduring Value – the Australian Minerals Industry's Framework for Sustainable Development*. *Enduring Value* provides a program of continuous improvement and encourages companies to achieve sustainable development performance outcomes beyond the minimum standard set by regulation

2. Key Policy Principles

In the review of the Bill and the preparation of this submission, the ACA and MCA's key policy imperatives are:

- (a) The Bill must facilitate the **rapid and wide-scale uptake of GHGS injection and storage**, and **promote a competitive, viable and sustainable GHGS industry**.
- (b) The regime provided by the Bill **must ensure certainty** for GHGS proponents, **and allow for transparency** in relation to regulatory processes, given the significant investment decisions involved in GHGS operations.
- (c) The Bill should provide a **level playing field** between GHGS operations and petroleum operations, should not approach competing interests as an "either/or" situation, and should mandate a **process for GHGS proponents and petroleum proponents to come to the negotiating table**.
- (d) Consideration of the **public interest** for the purposes of decision making under the Bill should extend to consideration of a **wide range of factors**, including public expectations, **the Nation's climate change obligations and objectives**, and the **impact** of take-up (or the absence of take-up) of GHGS operations **on a variety of industries**, including the mining industry, the generation industry and other emitting industries, in addition to the petroleum industry.

3. This submission

Detailed comments on specific aspects of the Bill are set out in the remainder of this submission.

Section C of this submission deals with issues which are relevant across the various aspects of the Bill.

Sections D, E and F address issues specific to GHGS APs, GHGS HLs and GHGS ILs respectively.

Section G addresses issues in relation to site closure.

Section H addresses issues relevant to GHGS operations beyond the provisions of the Bill.

The Schedule to this submission lists the specific sections of the Bill referred to in this submission as posing issues or concerns for the membership of the ACA and the MCA.

C. General Issues

Recommendations:

1. *The Bill should rename the OPA as the 'Offshore Petroleum and Greenhouse Gas Storage Act'.*
2. *The Bill should make provision for an objects clause to be included in the OPA, such as objects to include a certain, transparent, effective and efficient regulatory system for GHGS titles and operations, a contribution to emission reduction, and an effective basis for the sustainability of emissions-intensive and fossil fuel industries (as well as appropriate objects for petroleum operations).*
3. *The Bill or the regulations should make provision for SROSAI to be assessed by including reference to beneficial impacts to ascertain a net impact, and by reference to transparent quantitative boundaries, including a probability assessment even if the probability which triggers a SROSAI remains low. The parties should be entitled to submit evidence for the Minister's consideration in relation to SROSAI determinations, and the Minister must have regard to that evidence.*
4. *The Bill should make provision for GHGS proponents to have access to petroleum data for the limited purposes of assessing and making submissions on SROSAI and the preparation of site plans, subject to confidentiality obligations.*
5. *To ensure transparency, regulations or guidelines must detail the relevant factors the Minister must take into account when considering the public interest. These factors should include the proposed objects of the Act, matters arising from consultations with other (Commonwealth and State) Ministers, the importance of GHGS operations, the availability and proximity of alternative storage sites, and complementarity with other government and industry initiatives.*
6. *The Bill should be amended to provide clarity in relation to the declaration of post-commencement petroleum tenements. The most consistent approach would be to require that all post-commencement petroleum titleholders seek approval for key petroleum operations. Recovery of petroleum should be included in the definition of key petroleum operations. The Bill should also be amended to ensure consistency in relation to approval requirements for key GHG operations and key petroleum operations, and to require the JA have reference to whether the actions of a PPL holder are the cause of a 'serious situation' in the giving of a direction to the PPL holder.*
7. *Guidelines should be prepared for the circumstances where the DA may have regard to the principle that plugging or closing off wells should be carried out in a way that restores or maintains the suitability of a part of a geological formation for the permanent storage of GHGs, in giving a remedial direction to a current or former holder of a pre-commencement petroleum title. Such directions must be given in all cases (pre- or post-commencement) where the existing petroleum tenement area is located in areas where there is the greatest need for GHGS IL facilities and services.*
8. *The Bill should be amended to require the Minister and the JA to give written reasons for all decisions which the Minister or JA make pursuant to the provisions of the Bill.*
9. *The Act should be administered such that relinquishment requirements on petroleum tenements are more strictly enforced where those tenements may otherwise be of value as GHGS storage sites.*

1. Title of the Act

1.1 OPA

The Bill takes the approach of amending the OPA, rather than creating a separate legislative regime dealing specifically with GHGS injection and storage.

As a consequence, the GHGS injection and storage provisions of the Bill are from the outset seen as subsidiary to those parts of OPA which deal with petroleum tenements.

1.2 Submission

The ACA and the MCA submit that the title of OPA be changed to the '*Offshore Petroleum and Greenhouse Gas Storage Act*' to reflect the dual purposes of the Act, and to reflect that neither purpose should take priority over the other.

2. Objects

2.1 Objects clause

Neither the Bill nor the OPA make provision for an objects or purposes clause. This is unlike:

- (a) other Commonwealth legislation, for example the *National Greenhouse and Energy Reporting Act 2007* (Cth) section 3 or the *Renewable Energy (Electricity) Act 2000* (Cth) section 3; and
- (b) petroleum legislation in other Australian jurisdictions, such as the *Petroleum and Gas (Production and Safety) Act 2004* (Qld) (the **Qld P&G Act**) section 3 or the *Petroleum Act 1998* (Vic) section 3.

2.2 Submission

The ACA and the MCA submit that the Act, once amended by the Bill, should **clearly set out its objects**. This is especially important in light of the purpose of GHGS operations as part of the broader response to combating climate change.

Large scale GHGS injection and storage is the only available means of significantly reducing GHG emissions from fossil fuel based power generation in Australia and elsewhere. The importance of GHGS injection and storage in this context has been acknowledged widely, including recently in Australia in both the National Emissions Trading Taskforce's (NETT) December 2007 *Possible design for a national greenhouse gas emissions trading scheme: Final framework report on scheme design (NETT Final Design Report)*¹ and in the Garnaut Climate Change Review March 2008 *Emissions Trading Scheme Discussion Paper*².

In Australia over **80 per cent of electricity generation is coal based**. Australia is unique in this regard and our fossil fuel industries are vital to our ongoing energy security, trade competitiveness and economic growth. It is clear that for the foreseeable future at least, coal and other fossil fuels will need to continue to play a pivotal role in underpinning global energy security and economic growth through the provision of competitively priced electricity.

The major economic benefit of **GHGS injection and storage** is that it **potentially enables continued utilisation of Australia's abundant fossil energy resources whilst allowing Australia to reduce its GHGS emissions**. This is particularly so in relation to coal, although it should be stressed that GHGS

¹ National Emissions Trading Taskforce *Possible design for a national greenhouse gas emissions trading scheme: Final framework report on scheme design*, December 2007, at pages 38 and 213

² Garnaut Climate Change Review *Emissions Trading Scheme Discussion Paper*, March 2008, at pages 54 and 55

injection and storage will also need to be applied to natural gas-fired power generation and natural gas processing, if greenhouse abatement targets being suggested by the Inter-governmental Panel on Climate Change (IPCC) are to be met. It can with time also potentially be applied to heavy industry (e.g. smelting, refining, foundry and forging emissions). The **domestic and also global economic implications of any abrupt curtailment of the use of fossil energy**, in the absence of viable alternative energy sources would be **economically and socially damaging**, given that there is no near term potential for renewable capacity to replace coal capacity.

As a major coal and gas using and exporting country, Australia has a lot at stake if GHGS injection and storage is not pursued, including the potential **stranding of most of our current electricity generation assets** and our largest and most important fossil energy resources. Uncertainty over GHGS titleholders' rights and obligations, such as those outlined in paragraph 8 of this section C, will **discourage investment** in projects and cause delays in the widespread deployment of step-change technologies.

Therefore the ACA and the MCA submit that the Bill should be **amended to include a new objects provision**, as set out below. This should be accompanied by appropriate object provisions for petroleum, potentially similar to the provisions in Queensland and Victorian legislation referred to above.

The objects of this Act are:

...

- (a) *to create a certain, transparent, effective and efficient regulatory system for the carrying out of exploration for potential greenhouse gas storage formations and the injection and storage of greenhouse gas substances;*
- (b) *to contribute to Australia's international obligations in relation to the reduction in emissions of greenhouse gases;*
- (c) *to create an effective basis for sustainability, consistent with a reduction of emissions of greenhouse gases, for Australia's:*
 - (i) *emissions-intensive industries; and*
 - (ii) *fossil fuel industries.*

3. Significant risk of significant adverse impact

3.1 Overview

The concept of SROSAI is employed numerous times throughout the Bill, including in relation to the Minister's:

- (a) assessment of proposed key GHG operations under GHGS APs, and GHGs HLs;
- (b) assessment of proposed key petroleum operations under PEPs, petroleum retention leases (PRLs) and PPLs;
- (c) assessment of the impacts test, in relation to the grant of a GHGS IL and a post-commencement PPL;
- (d) consideration whether to grant a site closing certificate; and
- (e) direction making powers.

Primarily, the significant adverse impact for assessment is applied in relation to operations by GHGS titleholders, to petroleum exploration and recovery operations (both existing and future), recovery of petroleum or its commercial viability, a geological formation that contains or is likely to contain a

petroleum pool, or could otherwise compromise the exploitation of any petroleum that occurs as a natural resource.

The SROSAI on navigation, fishing, any activities being lawfully carried on, or that could be lawfully carried on, by way of the construction or operation of a pipeline, or the enjoyment of native title rights, the conservation or exploitation of natural resources, the geotechnical integrity of the geological formation or structure, the environment or human health or safety, is also required to be the subject of Ministerial consideration in relation to the issue of a site closing certificate.

The consequences of SROSAI range from requirements that the Minister must not approve certain operations, or may approve them with conditions, must not approve the grant of a tenement, may alter the conditions of an existing tenement or suspend or cancel its operation, or delay the surrender of a tenement. All of these have the potential to significantly impact on the rights of titleholders and the ongoing feasibility of their operations.

The use and meaning of the term **SROSAI** is all the more important given that it is, **in many cases, the only consideration which stands between the grant of a GHGS IL or the carrying out of key GHG operations, and a 'veto' of same by competing tenement interests.** This includes the requirement that the Minister have regard to whether an agreement is in place:

- (a) for the undertaking of key GHG operations; and
- (b) for the grant of a GHGS IL,

where there is a SROSAI on the operations of the holders of pre-commencement PEPs and PRLs, pre-commencement and post-commencement PPLs, or any future pre-commencement petroleum titles.

Whilst similar rules apply in relation to the approval of key petroleum operations and the grant of post-commencement PPLs, in practice the ramifications of SROSAI will be much higher for GHGS tenement holders or applicants. This is because of the geographic locations where the GHGS tenements are likely to be granted. DRET officials have acknowledged that the GHGS grants will, for a reasonable period into the foreseeable future, be made over areas which are the subject of pre-commencement petroleum titles.

3.2 Significant risk

The term 'significant risk' generally accompanies the concept of 'significant adverse impact' throughout the Bill (although there are instances where the Minister need consider merely 'the risk').

There is very little commentary available in the Bill in relation to the meaning of the term 'significant risk'. The one provision that does give some assistance provides that a risk is taken to be a significant risk even if the probability is low.

3.3 Significant adverse impact

There is no definition of the term 'significant adverse impact' in the OPA Amendment Bill. In briefings on the Bill, DRET officials have given some insight into the Department's present understanding of the term, namely that:

- (a) impacts on operating and capital costs will be relevant in all cases;
- (b) the impact on petroleum production rates and ultimate recovery will be relevant when considering key GHG operations and the grant of GHG injection licences; and
- (c) impacts on GHG rates of injection and storage capacity will be relevant when considering key petroleum operations and the grant of post-commencement production licences.

The overall phrase of SROSAI has also been described as 'low probability, high consequence'.

The phrase 'significant adverse impact' is employed in other Commonwealth, State and Territory legislation including, for example, the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), the *Fisheries Management Act 1991* (Cth), the *Murray-Darling Basin Agreement Act 2007* (ACT) and the *Transport Infrastructure Act 1994* (Qld) (**TIA**). None of those four Acts specifically define the phrase, however it has received judicial consideration in respect of a provision of the TIA, where it was interpreted to mean an 'important or notable' adverse impact.³

Because of the differing policy contexts, however, other legislative frameworks may not hold much weight in interpreting the Bill provisions. In any event, it is important to note that, an assessment of 'significant adverse impact' is typically a matter of opinion for the responsible Commonwealth Minister.

3.4 Favourable impacts

The focus of the Bill when considering the concept of SROSAI is on adverse impacts. The Bill is silent on the implications of favourable consequences flowing to petroleum titleholders from operations under GHGS tenements. An example of this would be increased production rates by PPL holders, due to increased pressure in petroleum reservoirs due to the injection of GHGs nearby.

The term SROSAI as used in the Bill is not, on its face, capable of being considered on a net basis, such that favourable impacts are considered together with adverse impacts, to reach a conclusion on the actual effects on petroleum operations.

3.5 Submission

The Bill, or the regulations, **should make provision for the assessment of SROSAI to be carried out in such a way that beneficial impacts are also taken into consideration**, such that there is a **netting of the relevant impacts**.

Either the Act or the regulations should provide that the **applicant is entitled to submit evidence** in relation to the Minister's determination, and that the **Minister must have regard to that evidence** (without requiring the Minister to accept the evidence). Further discussion on this point is set out in paragraph 4 of this section C.

It is important that **more transparent provision** is made for what is meant by SROSAI, either in the regulations or in departmental guidelines.

The ACA and MCA submit that some **quantitative boundaries ought to be put around the term**, assuming that it is to be retained.

For example, in determining what is a significant adverse impact on petroleum operations, it might be reasonable to suggest that the following types of impact could be considered:

- (a) reduction or increase of recoverable reserves of oil or gas;
- (b) increase or decrease in cost of recovering oil or gas;
- (c) increase or decrease in rate of recovery of oil or gas; and
- (d) delay to the ability to recover oil or gas.

The size of the impact, in the case of each of these measures, could be assessed as a percentage. Obviously, impacts which are positive will not be significant adverse impacts.

³ *Arlenby Marketing Pty Ltd v Chief Executive of the Queensland Department of Transport & Ors* [1997] QPELR 137 per Skoien SJDC at 14; *Arlenby Marketing Pty Ltd v Chief Executive of the Queensland Department of Transport & Ors* [1997] QPELR 137 per Skoien SJDC at 14.

The other part of the measurement of SROSAI is the measurement of the likelihood of the risk occurring. Again, a percentage assessment of the risk should be possible. Multiplying the percentage assessment of the risk with the percentage assessment of the size of the impact will give a single figure, which could be used as the benchmark for assessment of whether or not a SROSAI exists.

For example, if a risk has an X per cent chance of occurring, and would reduce recoverable reserves by Y per cent, then multiplying X times Y will give a single figure which could be compared against a benchmark figure prescribed in the regulations or departmental guidelines. If that benchmark figure were exceeded, a SROSAI would exist. Separate benchmark figures could be set for each of the types of impact described above.

In setting the benchmarks, it might be appropriate to have regard to the uncertainty of the estimates of the measures described above. If the percentage impact on the measure would result in the central estimate of the measure still falling within the uncertainty range, it is submitted that a SROSAI would not be said to exist. For example, if a petroleum tenement holder assessed their reserves at X plus or minus 5 per cent, and the impact of the GHGS operations was less than 5 per cent, then the central estimate, taking into account the impact would still fall within the range already identified by the petroleum tenement holder.

We note that the Bill suggests that risks of impacts which are of low probability may be still be regarded as significant. We submit that the approach we have proposed is consistent with this view, as the greater the potential impact, the lower the possible risk which would trigger a SROSAI. Whatever approach is ultimately taken, the ACA and MCA submit that greater clarity is required around this issue, to make it clear that a **probability assessment remains relevant, even if the probability which may trigger a SROSAI is low**. In other words, even if the probability is low, an assessment of the probability is still fundamental to determining if a SROSAI exists.

If the proposed method were employed, the assessment would remain subjective to the extent that parties may reasonably differ in their assessments of both the magnitude and likelihood of risks. However, the **Minister would at least be provided with a set of benchmarks against which the ultimate decision could be made**.

4. Accessibility of petroleum data for the consideration of SROSAI and the preparation of site plans

4.1 Relevance of petroleum data

Whilst the Minister will have at his or her disposal all of the available data for the purposes of assessing SROSAI, it is reasonable to expect that the parties (GHGS titleholders or applicants and petroleum titleholders and applicants), will seek to make their case to the Minister in relation to whether or not there is in fact a SROSAI. This poses an **unevenness in the playing field in relation to access to data, tilted significantly in favour of the petroleum title holder** where the matter for determination is whether there is a SROSAI on a petroleum titleholder's operations.

Access to the data of petroleum titleholders would also be particularly beneficial for the preparation of GHG site plans. According to the RIS, site plans will need to demonstrate, to the satisfaction of the Minister, that the site and its management would result in 'safe and secure' storage. Accordingly, the site plan would need to identify relevant risk factors and demonstrate how these risks have been reduced to the lowest practicable level. The regulator would then have to decide whether these risks, taking into account potential mitigation and remediation strategies, were acceptable.

Site plans will also have particular significance in relation to the site closure process in that a site-closing certificate may be refused if, among other things, the Minister is not satisfied that the injected GHGS is behaving as predicted in the approved site plan.

4.2 Submission

It is imperative that GHGS title holders and applicants have reasonable access to the data of petroleum title holders that may be impacted upon by GHGS operations. A lack of access to data not only poses the potential for the procedural rights of GHGS holders and applicants to be diminished in the various processes involving an assessment of SROSAI and the site plan process, but could also leave the GHGS titleholder exposed to losses and liabilities in the future in the event the issue of a site-closing certificate is deferred.

The ACA and MCA acknowledge the commercial value and sensitivity of data held by petroleum title holders. However it is possible to safeguard the commercial value and sensitivity of the data as well as allow GHGS title holders and applicants access necessary for their purposes. The ACA and MCA recommend the Bill make **provision to allow the GHGS party access to the petroleum data for the limited purposes of assessing and making submissions on SROSAI and the preparation of site plans**. This should also be made **subject to the GHGS party having signed a strict confidentiality agreement** in relation to the petroleum data.

This issue is further discussed in relation to the acreage release process, at paragraph 1 of section D.

5. Public interest

5.1 Meaning of 'public interest'

The Bill employs the term 'public interest' in various provisions, including in relation to:

- (a) the approval by the Minister of key GHG operations under a GHGS AP or GHGS HL. The Minister must have regard to the public interest in considering the impact of key GHG operations on petroleum operations under an existing or future petroleum title;
- (b) the approval by the Minister of key petroleum operations under declared post-commencement petroleum titles. The Minister must have regard to the public interest in considering the impact of those key petroleum operations on GHGS operations under an existing GHGS tenement or future GHGS tenement in the same series;
- (c) the grant by the Minister of a GHGS IL. The Minister must not grant a GHGS IL if the Minister is not satisfied it is in the public interest to do so, if the Minister considers there is a SROSAI on petroleum operations under an existing post-commencement PEP or PRL, or a future PPL in the same series;
- (d) the grant by the JA of a post-commencement PPL. The JA must not grant the PPL if it is not satisfied that it is in the public interest to do so, if the JA considers there is a SROSAI on an existing GHGS AP or GHGS HL or future GHGS IL, where there is an identified GHG storage formation;
- (e) the deferral by the Minister of an application for a GHGS IL where an application for a post-commencement PEP is being considered by the JA. The Minister must defer taking action in relation to the application for the GHGS IL if the Minister considers it would be in the public interest to do so until the PEP application is finalised; and
- (f) the deferral by the JA of an application for a PPL where an application for a GHGS AP is being considered by the Minister. The JA must defer taking action in relation to the application for the PPL if the JA considers it would be in the public interest to do so until the GHGS AP application is finalised.

The ability of the Minister (or the JA in relation to petroleum titles) to have reference to the public interest is not limited to the circumstances in which there is express provision for this in the Bill. The Bill

provides that the Minister or the JA may have reference to the public interest when making *any* decision under the OPA.

In some instances the Bill provides that the public interest includes the extent to which there is agreement between the relevant title holder or applicant and an impacted interest. This does not mean that refusal, for example, by an impacted petroleum tenement holder to agree is determinative of the public interest, but simply that it must be taken into account.

When considering the public interest, the Minister must also take into account those matters that will be the subject of regulations. As to what the content of the regulations and guidelines on this point may be, there is some insight in the RIS, as follows:

Allowing the regulator to make decisions on which industry should proceed in cases where they cannot co-exist allows the relative merits of the two competing opportunities to be taken into account (the 'public interest' model). It also allows for flexibility if the relative importance of petroleum and greenhouse gas operations change. It also enables commercial agreements between the parties to be taken into account, which could lead to acceptable compromise solutions. This could be done through a public interest test in which the regulator would consider the relative merits of the two competing proposals. Criteria could include social, economic and environmental factors.

5.2 Submission

Transparency requires that regulations or guidelines make clear the relevant factors to be taken into account by the Minister when considering the public interest. This is all the more important due to the potentially all-pervading opportunities for the Minister to have reference to the public interest when making decisions under the OPA.

The ACA and MCA submit that in determining whether a particular matter is in the public interest, the Minister **should have regard to the objects of the Act** (as proposed in paragraph 2 of this section C)

The Minister could be required to **consult with other relevant Ministers** in considering the public interest. The Minister should also be able to take account of the views of the relevant State Minister, for example, in relation to the maintenance of energy security.

The ACA and MCA submit that regulations or guidelines in relation to the meaning of public interest should explicitly **address the importance of GHGS operations**. In considering the relative weight of GHGS operations, the ACA and MCA submit that key factors are:

- (a) the desire of the Australian Government and the Australian community that Australia be a global leader in advancing the demonstration and deployment of CCS technologies, and in promoting the uptake of these technologies internationally;
- (b) the imminent introduction of an AETS;
- (c) the ongoing commercial operations of emissions-intensive generation and industrial processes, both in relation to sovereign risk for existing operations and the viability of future operations which provide for the most optimal use of fuel sources;
- (d) assuring a viable future for Australia's emissions intensive industries, in particular those which are large point sources of emissions capable of capture; and
- (e) the importance of a secure, reliable source of base load energy for the production of electricity for Australian homes and businesses.

In assessing specific GHGS applications, the public interest test should also require consideration of the **availability and proximity of alternative storage sites for an identified source of emissions**. Where

there is no suitable alternative, the broader consequences of failing to abate those emissions should be balanced against the potential impact on petroleum tenements.

Further, it is imperative that the provisions of the Bill not be counter-productive to other government and industry initiatives. The Federal Government has committed \$500 million to fund clean coal technologies, with the intent that clean coal will contribute to Australia's energy mix in a carbon constrained future. That investment, and the coal industry's investment of \$1 billion on research, development and demonstration of low emissions coal technology through the COAL21 Fund, is based upon the assumption that suitable injection and storage sites will be located and available for use. To the extent that power stations are unable to access suitable injection and storage locations, that assumption will not be realised.

Therefore the ACA and MCA submit that what is meant by public interest should also extend to outcomes that **complement other government and industry initiatives**.

6. Declared petroleum tenements and key petroleum operations

6.1 Declaration

“Declared” petroleum tenement holders must obtain approval for key petroleum activities. A declared petroleum tenement is one where the Minister is satisfied that there is significant risk of any key petroleum operations having significant adverse impacts on operations under an existing or future GHG tenement. Where key petroleum operations pose a SROSAI on an existing GHGS IL, the Minister must not approve the key petroleum operations unless the GHGS IL holder agrees to the conduct of these operations. The Minister must also have regard to public interest.

6.2 Submission

The **process in relation to the declaration of a post-commencement petroleum tenement is not clear**. Similarly unclear are the processes to be put in place for the proactive assessment of SROSAI on GHGS operations arising from key petroleum operations, before a declaration is made. There is a level of redundancy in the current drafting in that, the Minister must first determine whether there is a SROSAI in relation to GHGS operations, then declare the petroleum tenement, then go through the process of considering SROSAI again together with agreements and public interest as applicable.

Based on the existing provisions of the Bill, a post-commencement PEP, PRL or PPL holder can go about key petroleum operations without regard to any impact upon the operations of any GHGS titleholder (subject to the requirements of the Bill in relation to work practices), unless and until the petroleum tenement is declared by the Minister. This is **unlike key GHG operations where these automatically require Ministerial approval**.

The ACA and MCA submit that the Bill should be amended to clarify the process by which the Minister declares post-commencement PEPs, PRLs and PPLs. One remedy would be provision for automatic deeming of such tenements as declared upon grant if they are within the proximity (the exact nature of which should be determined on a case by case basis) of a GHGS tenement, or the later deeming of such PEPs, PRLs and PPLs upon the grant of a GHGS title within a proximity (again to be determined on a case by case basis) of such petroleum titles. However this would not account for the fact that PEPs, PRLs and PPLs are also to be declared with reference to the SROSAI on operations under future GHGS titles. Accordingly the Minister should also have regard to whether the petroleum titles are granted over areas suitable to be accessed by emissions sources, or where there is the best suitability of GHGS storage formations.

These provisions of the Bill require significant reconsideration, with **potentially the only workable solution being the application of requirements for approval of key petroleum operations to all post-commencement petroleum titles**.

A further issue in relation to key petroleum operations is that they do not (subject to this being made the subject of regulations) include the recovery of petroleum. **Recovery of petroleum** may pose a SROSAI upon GHGS operations and **should be included within the definition of key petroleum operations**.

There is also a level of **inconsistency in relation to how key petroleum operations are treated when compared with key GHG operations**. Key GHG operations must not be approved where these pose a SROSAI on petroleum operations under any pre-commencement petroleum title (including PEPs and PRLs) and post-commencement PPLs, if there is no agreement to the key GHG operations in place with the petroleum tenement holder. The key petroleum operations only afford such a level of protection to the holder of an existing GHGS IL. Existing GHGS AP and GHGS HL holders are not afforded the level of protection that pre-commencement PEP and PRL holders are. The Bill should be amended to ensure that existing GHGS AP and GHGS HL holders have a commensurate level of protection.

Restricting the requirements in relation to key petroleum operations to post-commencement petroleum titles exposes GHGS titleholders to the risk of adverse impacts on injected GHGS, such as pressure changes within the storage formation leading to migration which is inconsistent with earlier modelling. This may lead to a "serious situation" as defined in the Bill, and therefore the GHG operator may become liable to act on the directions of the Minister, and potentially to the suspension or cancellation of the GHGS title. In these circumstances the ACA and MCA submit that at the very least the JA should use its powers of direction under section 162 of the OPA. Section 162(3) of the OPA should be amended to reflect that **impacts of rates of recovery of petroleum on GHGS tenement operations, causing a 'serious situation' is an issue for consideration by the JA in deciding whether to give a direction** under that section.

7. Remediation

7.1 Remediation requirements on petroleum title holders

The OPA empowers the DA to direct a petroleum titleholder to plug or close off, to the satisfaction of the DA, all wells made in the title area by any person engaged or concerned in the petroleum operations. The Bill amends this remedial directions provision by stating that, in attaining the relevant state of satisfaction, in relation to a declared petroleum title, the DA must have regard, and otherwise may have regard, to the principle that plugging or closing off wells should be carried out in a way that restores or maintains the suitability of a part of a geological formation for the permanent storage of GHGS. The Bill makes the same provision in relation to directions given to former petroleum tenement holders.

The Bill also provides that approval of key petroleum operations may be given subject to a requirement that all wells, or one or more specified wells, be made in a manner and to a standard that will facilitate the plugging or closing off of the wells in a way that restores or maintains the suitability of a part of a geological formation for the permanent storage of GHGs.

Similar obligations are placed upon GHGS titleholders, for example for the purposes of ensuring that the Minister is satisfied, before giving consent to the surrender of a GHGS IL, that plugging or closing off wells has been carried out in a way that minimises damage to the petroleum-bearing qualities of geological formations.

The Bill also makes provision for regulations to provide for securing, regulating, controlling or restricting the restoration or maintenance of a part of a geological formation for the:

- (a) permanent storage of GHGS; and
- (b) recovery of petroleum.

7.2 Submission

The ACA and MCA support the provisions of the Bill referred to in paragraph 7.1 of this part C. These provisions are imperative for ensuring the long-term viability of GHG injection and storage operations and the integrity of GHG storage formations.

The ACA and MCA submit that consideration be given to the preparation of **guidelines for the circumstances where the DA may (as opposed to must) have regard to the principle that plugging or closing off wells should be carried out in a way that restores or maintains the suitability of a part of a geological formation for the permanent storage of GHGs, in giving a remedial direction to a current or former holder of a pre-commencement petroleum title.** The ACA and MCA submit that such **directions must be given in all cases (pre- or post-commencement) where the existing petroleum tenement area is located in areas where there is the greatest need for GHGS IL facilities and services,** being areas most suitably located in relation to emissions sources, or where there is the best suitability of GHGS storage formations.

If appropriate remediation is not undertaken, then a significant resource, namely a GHG storage formation, may effectively be lost. The requirement to remediate may be equated with the requirements imposed on mine owners, who must remediate their mines so that a resource, namely the land on which the mine is located, is not lost. These remediation requirements may change over the life of the mine, as community standards and expectations change. Obviously, new mines (or by analogy, post-commencement titleholders) will be established with current remediation requirements as a baseline built into any economic modelling.

8. Certainty

8.1 Ministerial discretion

In numerous situations the Bill confers a **wide discretion on the Minister** for the purposes of making decisions relating to GHG tenements and operations and their interaction with petroleum tenements and operations.

These situations include the Minister's discretionary powers to release acreage and grant GHGS APs in the first place. But, more importantly, they also include discretions which may **impact on the ongoing commercial viability of a GHGS venture once it has been committed to** by the proponent, including discretionary powers to:

- (a) approve key GHG operations beyond the circumstances in which the Minister must not approve key GHG operations (the Bill specifically excludes any positive right a GHG tenement holder may have to the approval of key GHG operations), and to approve key GHG operations subject to conditions;
- (b) issue an offer document for the renewal of a GHGS HL;
- (c) impose new or vary existing conditions of a GHGS IL;
- (d) vary or revoke the declaration of an identified GHG storage formation;
- (e) cancel a GHGS tenement where a relevant ground for cancellation exists, including where the Minister has revoked the declaration of an identified GHG storage formation;
- (f) vary, suspend or exempt a GHGS title holder from all or any of the title conditions;
- (g) give directions generally to eliminate, or where it is not possible to eliminate, to mitigate, manage or remediate risks, and to vary the conditions of a GHGS IL to reflect the requirements of such a direction, or in the case of direction to protect commercially viable

petroleum in the area of a pre-commencement petroleum title, to suspend or cancel a GHGS IL;

- (h) suspend a GHGS AP or GHGS HL on the basis of the 'national interest';
- (i) require, or require additional, securities; and
- (j) defer action on an application for a site closing certificate until such time as the Minister considers appropriate.

8.2 SROSAI, public interest and reaching agreement

There is **uncertainty surrounding the application of the terms SROSAI and the public interest**, as discussed in paragraphs 3 and 5 of this part C. The extent to which a GHGS titleholder will be able to reach agreement with a petroleum titleholder in applicable circumstances is also not able to be predicted. This is discussed further in paragraph 2 of part F.

8.3 Minister must defer application on GHGS IL

The Bill provides that the Minister must defer taking action on a GHG injection licence application if an application for a post-commencement petroleum exploration permit is being considered by the Joint Authority and it is in the public interest to make such a deferral until the petroleum exploration permit application is finalised. Whilst this mirrors similar obligations on the JA in relation to the grant of a PPL whilst the Minister is considering a GHGS AP, this creates the potential for uncertainty and delay in relation to the GHGS IL application.

8.4 Limited appeal opportunities

The OPA provides for the internal review of certain '*reviewable delegated decisions*' and for applications to be made to the Administrative Appeals Tribunal in respect of '*reviewable Ministerial decisions*'. The latter term includes a number of specific matters listed in the OPA and its regulations as well as any decision of the responsible Commonwealth Minister that:

- (a) is made under the OPA or the regulations; and
- (b) is not a decision of a delegate of the responsible Commonwealth Minister; and
- (c) *is made in the performance of the functions, or the exercise of the powers, of the Joint Authority, or the Designated Authority, in relation to the offshore area of an external Territory.*

The requirement in (c) effectively excludes from the concept of '*reviewable Ministerial decision*' many of the decisions that the Minister may make under the Bill in relation to GHG titles and operations.

The definition of '*reviewable Ministerial decision*' is not amended by the Bill except to include specific decisions by the Minister in relation to the release of certain documentary information or eligible samples.

8.5 Submission

The MCMPR Guiding Principles provide that surface and subsurface rights for CCS should provide certainty to titleholders of their entitlements and obligations.

The ACA and MCA are generally concerned that the **potential uncertainty** associated with the above matters may have **detrimental consequences for the viability of GHGS operations**. The investment required to develop a commercial storage site is anticipated to be several hundred million dollars, yet at various points, GHGS proponents are faced with the **prospect that they may not be able to proceed to the next phase**. This may **preclude GHGS AP and GHGS HL holders, and even GHGS IL holders, from realising any commercial return on their investments**, irrespective of whether a title area includes an eligible GHG storage formation.

This has obvious **ramifications for GHGS proponents' ability to obtain finance** for their operations. It will also have **significant consequences for the ongoing viability of existing plant** in the electricity generation sector. For example, a key concern is the implications for emitters in Victoria, particularly generation in the Latrobe Valley, if GHGS proponents are denied access to the Gippsland Basin for GHGS injection and storage

In addition, the current provisions of the Bill may have significant impacts on investor certainty in power stations, and coal mines fuelling those power stations, where the power station is designed to enable CCS, if the power station operator cannot have confidence that it will ultimately have a means of storing the captured GHGS. This will decrease the likelihood that power stations will be constructed or retrofitted to provide CCS capabilities. Further, if power stations are constructed or retrofitted to allow for CCS, those power stations and coal mines may become **stranded assets** if subsequently a decision is taken to cease to permit storage of the captured GHGS. The ACA and MCA proposals for amendments to the Bill or provisions in regulations and guidelines, as proposed throughout this submission, will serve to alleviate much of this uncertainty.

In addition, the **Minister** (and where applicable the JA) **should be required to give written reasons** for all decisions which the Minister makes regarding key GHG operations, key petroleum operations, GHGS IL grants, post-commencement PPL grants, and in relation to the giving and content of directions.

Furthermore, the requirements of the Bill are such that uncertainty is greater where GHGS operations have the potential to impact upon pre-commencement petroleum titles. As the vast majority of petroleum titles are likely to be pre-commencement for some time, it is **important that the relinquishment requirements of the OPA be appropriately enforced**. To date, relinquishment requirements have not been strictly enforced in relation to where conditions relating to work on petroleum tenements have not been complied with. While this may be of lesser importance if no other potential tenement holder is actively seeking access to the tenement to undertake petroleum exploration, it is of relevance if the tenement might be better used for GHGS storage than petroleum production. This is a question of putting the tenement to its highest and best use. Strict adherence to relinquishment provisions would ensure that a greater proportion of petroleum tenements are post-commencement, which would lead to more equal treatment of GHGS titleholders and petroleum titleholders.

Accordingly, the ACA and MCA submit that a stricter enforcement regime in relation to petroleum title relinquishments be conducted where those tenements may otherwise be of value as GHGS storage sites.

D. GHGS Assessment Permit

Recommendations:

10. *The regulations or guidelines should set out the factors for consideration in the release of GHGS acreage, and for a PEP acreage release. In the case of a PEP acreage release, these factors should include compatibility with GHGS operations. Provision should also be made for the sharing of petroleum data, subject to confidentiality obligations, where a party would otherwise have an unfair advantage in the GHGS AP bid process.*
11. *GHGS AP and PEP holders should be able to share activities under their respective work programs, where such activities have the potential to advance exploration for both petroleum and GHG storage formations.*
12. *The Bill should be amended to allow for the area of GHGS titles to be expanded to take in any part of an eligible GHGS storage formation that lies outside the existing GHGS title area, provided it does not lie within the area of a GHGS title held by another party, and for a unitisation regime where eligible GHG storage formations straddle more than one tenement area.*
13. *The Bill should make provision for GHGS APs to be renewed, to allow GHGS AP holders sufficient time to deal with the requirements in relation to approvals of key GHG operations, identify an eligible GHG storage formation and obtain declaration of it as an identified GHG storage formation.*

1. Acreage release process

1.1 Factors for consideration in release

Release of acreage for work-bids for GHG assessment permits. DRET officials have indicated that whilst potential proponents will be able to nominate areas for acreage release, the factors for consideration in releasing acreage may include:

- (a) prospective storage formations;
- (b) regional geological formations which match the need for migration control;
- (c) activities compatible with other resource usage (citing especially petroleum);
- (d) source sink matching (storage capacity and injectivity, source volume and proximity to sources); and
- (e) impact on likely industry structures.

1.2 Awarding of bids

Applications for work bid GHGS APs must be accompanied by the applicant's proposal for work and expenditure in relation to the block or blocks specified in the application. The Minister may give an offer document to the applicant which in the Minister's opinion is the most deserving of the grant. Conditions of the work bid GHGS AP may include conditions requiring the GHGS AP holder to carry out work in, or in relation to, the permit area (including conditions requiring the GHGS AP holder to carry out the work during a period of 12 months or longer, or during periods each of which is 12 months or longer), and conditions relating to the amounts that the GHGS AP holder must spend in carrying out such work.

The Bill also makes provision for the grant of GHGS APs based on a cash bid process. The ACA and MCA understand that cash bid PEPs have not been granted under the *Petroleum (Submerged Lands) Act 1967 (PSLA)* since the early 1990s.

1.3 Submission

The considerations set out in paragraph 1.1 of this section D are not proposed to be formalised in guidelines or in the regulations. This therefore poses the potential for significant latitude in the decision making of Geoscience Australia and, in turn, the Minister in relation to acreage release. The specific references to compatibility with petroleum resource usage leaves open the **potential for acreage to be denied to GHGS AP applicants before a bid process is even commenced.**

The ACA and MCA submit that **this process requires greater transparency.** The factors for consideration in a GHGS acreage release should be set out in publicly available guidelines, or prescribed by regulations. Where a potential applicant nominates an area for acreage release, the Minister should be required to release his or her statement of reasons in reaching the decision to release the acreage or not.

Similarly, the **factors for consideration in the release of acreage for PEPs in the future should include compatibility with other resource usage, and cite especially GHGS operations.** A similarly transparent regime should apply to petroleum acreage release.

A major obstacle to the creation of a 'level playing field' in relation to work bids is the availability of data. If the petroleum tenement holder wishes to bid for a GHGS AP, in competition with a third party who does not have access to site data, the petroleum tenement holder will have a significant informational advantage.

This gives the petroleum tenement holder, which has obtained its tenement for the purpose of operating in the oil and gas exploration and production market, a competitive advantage to entry into the GHGS injection and storage market. This runs counter to general competition principles, and creates a significant barrier to entry into the GHGS injection and storage market.

It is important that that barrier to entry be recognised, and that the Minister be expressly required to consider the informational advantage when evaluating competing bids for a particular site.

One way in which this information barrier problem might be addressed is to require that if a petroleum tenement holder requests that the Minister have regard to particular information in evaluating the bid of that petroleum tenement holder, where that information is available to the petroleum tenement holder as a result of their holding of that tenement, that **information must be shared with other bidders**, subject to a confidentiality agreement.

This would leave the petroleum tenement holder with the option of not seeking to use the information if they did not wish the information to be disclosed, which would also assist to level the playing field.

In relation to work bids and work plans, the Bill in its present form and existing OPA regulations make no **provision for shared activities between GHGS AP holders and PEP holders.** The ACA and MCA submit that provisions should be made in the Bill or in the regulations for activities which have potential to advance exploration for both petroleum and GHG storage formations, such as seismic surveys, to be conducted jointly and count within the work plans of both the GHGS AP holder and the PEP holder. Similarly there should be provision in the regulations to acknowledge interpretation of historical petroleum data by GHGS AP holders, for the purposes of work bids and work plan requirements.

The ACA and MCA note that **cash bidding processes may be appropriate in certain circumstances.** An opportunity for cash bidding may lie where a PPL area is approaching the end of its commercial life. Given much of the relevant data will already be prepared, and will become publicly available upon relinquishment of the PPL, a cash bidding process may be the only way to separate bids in these circumstances.

2. Identified GHG storage formation

2.1 GHG storage formation

The Bill provides that application for a declaration of an identified GHG storage formation, the part of the geological formation that is an eligible GHG storage formation must be wholly situated in the GHG titleholder's existing title area.

Furthermore, an application for a GHG injection licence may only be made if there is one or more identified GHG formations wholly situated within the applicant's GHGS AP, GHGS HL or PPL.

2.2 Submission

It is conceivable that eligible GHG storage formation may traverse licence boundaries, leaving **formations partially outside a tenement area or straddling more than one tenement area**. The Bill does not make provision for this issue, as the drafting intention in the Bill is that the spatial area of an identified GHG storage formation be based upon modelling of where the GHGS will migrate to during the term of the GHG IL, and not upon the reservoir space itself which may extend outside the tenement area.

However the ACA and MCA query whether this will result in the optimum use of potential resources. The ACA and MCA submit that the Bill should make **provision for a unitisation regime** to overcome the issue where eligible GHG storage formations straddle more than one GHGS title area. The ACA and MCA also submit that the Bill should make provision for the **area of GHGS titles to be expanded to take in any part of an eligible GHGS storage formation that lies outside the existing GHGS title area, provided it does not lie within the area of a GHGS title held by another party**. Such a process is made possible by the availability of GHGS special authorities.

Provision for a unitisation regime, and expansion of the area of GHGS titles would in some cases serve to mitigate against the severity of pre-closure notice requirements on GHGS IL holders and the risk of remedial directions after the title is surrendered. By allowing for a treatment which is not entirely dependent upon the boundaries of the titles, where those boundaries do not match the boundaries of natural formations, it becomes easier to properly monitor and maintain storage in a particular area.

3. Sufficiency of term

3.1 GHGS AP term

The Bill provides that the maximum term for a GHGS AP is 6 years. There is no provision for renewal (although there is provision for an extension in circumstances where the permit has been suspended by Ministerial direction).

3.2 Submission

In light of the various other regulatory obligations on a GHGS AP holder, such as approvals for key GHG operations, the need to enter into agreements with petroleum title holders to conduct same, and the actual carrying out of the assessment activities, **it is questionable whether 6 years will be sufficient for a GHGS AP holder to identify an eligible GHG storage formation and obtain declaration of it as an identified GHG storage formation**.

The ACA and MCA submit that **the Bill should make provision for GHGS APs to be renewed**, in the same manner as PEPs may be renewed under the OPA. However the ACA and MCA do not propose that renewals of GHGS APs be subject to relinquishment requirements.

E. GHGS Holding Lease

Recommendations:

14. *The Bill should be amended to make provision for the holder of a GHGS IL to be able to apply for a special GHGS HL in circumstances where there is a temporary lack of supply of GHGS to inject and store, or where the Minister gives a direction where there has been a discovery of commercially viable petroleum in an area of overlap between a GHGS IL and a pre-commencement petroleum title.*

1. Special GHG HL

1.1 Grant of special GHGS HL

The Bill makes provision for the grant of a special GHGS HL in circumstances where the holder of a GHGS AP or a GHGS HL makes application for a GHGS IL and the Minister refuses to grant the GHGS IL on the grounds that the application does not satisfy the impacts test in relation to petroleum exploration or recovery operations or commercially viable petroleum, or the Minister is not satisfied that the applicant's technical qualifications, technical advice and financial resources are adequate.

1.2 Reversion to GHGS HL by GHGS IL holder

The Bill provides that the holder of a GHGS IL may apply to revert to a GHGS HL within 5 years of the commencement of the GHGS IL. Presumably the policy driver for this is in circumstances where a commercially viable GHGS stream does not become, or ceases to be, available within the first five years of the GHGS IL term.

This is important given that a GHGS IL may be cancelled by the Minister if GHGS injection operations have not been carried on under the licence at any continuous period of at least 5 years, unless this occurred due to a circumstance beyond the GHGS IL holder's control. The Bill provides that a failure to obtain GHGS for injection into an identified GHG storage formation is not a circumstance beyond the GHGS IL holder's control.

Similarly, the Bill provides that where operations for the injection of a GHGS into an identified GHG storage formation have ceased, the GHGS IL must make an application for a site closing certificate.

1.3 Submission

The ACA and MCA submit that the circumstances in which the grant of a special GHG HL should be broader than currently provided for in the Bill. The Bill's focus on a single trigger point for application, being the Minister's refusal to approve the grant of a GHGS IL, is too narrow and **provision should be made for the holder of a GHGS IL to revert to a special GHGS HL.**

Given the limitations on the ability to revert to a GHGS HL, namely that it can only be done in the first 5 years of the GHGS IL term, and is subject to the limited term of a GHGS HL, it would be of benefit to GHGS IL holders to be able to apply for and be granted a special GHGS HL **in the event that there is a temporary lack of supply of GHGs to inject and store.** The ACA and MCA submit that the Bill should be amended to make provision for this.

This should also be considered in the context of the Minister's directions powers. The Bill provides that the Minister must give a direction **where there has been a discovery of commercially viable petroleum in an area of overlap between a GHGS IL and a pre-commencement petroleum title**, if the GHGS IL operations pose a SROSAI on operations to recover the petroleum or the commercial viability of recovering the petroleum, and the petroleum titleholder has not agreed to the GHGS IL holder carrying on

the operations. The Minister's powers of direction include that the GHGS IL holder take action to eliminate, mitigate, manage or remediate the risk, or suspend or cancel the licence.

In these circumstances the GHGS IL holder may seek to revert to a GHGS HL, until such time as the SROSAI has passed. However, this has the limitations referred to above. The ACA and MCA submit that a more appropriate option would be for the GHGS IL holder to be able to seek the grant of a special GHGS holding lease, given the term of such a title is indefinite (i.e. it could be held **until the SROSAI on petroleum recovery has passed**). The Bill should also be amended to allow for a GHGS IL holder to apply for and be granted a special GHGS HL in these circumstances.

These proposed amendments are safeguarded against misuse by the fact that the Bill presently provides that the Minister may request that a special GHGS HL holder apply for a GHGS IL, and may cancel the special GHGS HL if the holder fails to do so.

F. GHGS Injection Licence

Recommendations:

15. *The Bill should include an express power for the Minister to grant a GHGS IL where the Minister is satisfied there is no SROSAI on petroleum exploration or recovery operations or commercially viable petroleum.*
16. *The Bill should mandate a process to facilitate agreement making, and for intervention in the event that agreements are not able to be reached, rather than merely include agreement between the parties as a factor for the Minister's consideration when making determinations under the provisions of the Bill.*
17. *The Bill should provide that a PPL holder proposing to engage in the business of injection and storage of GHGS, which is not related to the petroleum operations of the PPL holder, must be subject to the same grant processes as any other applicant (that is, the PPL holder should be required to nominate areas for acreage release and bid for a GHGS AP in a competitive process). Otherwise the existing provisions of the Bill in relation to the grant of a GHGS IL to a PEP holder are appropriate.*
18. *Rather than requiring the holder of a GHGS IL to seek amendment of the GHGS IL each time the GHGS to be injected and stored is proposed to be taken from a new source, the Bill or regulations should provide for a streamlined process of notification to the Minister of proposed commercial arrangements with the owners of GHGS sources.*
19. *The Bill should be amended such that, in circumstances where there is a SROSAI posed by GHGS operations on commercially viable petroleum located in a pre-commencement petroleum tenement which overlaps the proposed GHGS IL area, the Minister must only refuse to grant a GHGS IL if the petroleum titleholder has not agreed to the grant, consistent with the Minister's remedial directions powers under the Bill.*
20. *The Bill, and not the regulations, is the appropriate place to set out any third party access regime. In any event, identified GHG storage formations should not be included in the list of facilities and services in relation to which third party access may be provided for.*

1. Power to grant

1.1 Relationship to SROSAI

The provisions for the grant of a GHGS IL are based exclusively upon circumstances in which the Minister is satisfied that there is a SROSAI on petroleum titleholders' operations. In those circumstances, the Minister's capacity to grant the GHGS IL is subject to other factors being satisfied (such as the public interest and agreement with the petroleum titleholder). **There is no express provision for the grant of a GHGS IL in circumstances where the Minister is satisfied that there is no SROSAI.**

1.2 Submission

This deficiency is obviously an oversight, and it may be arguable that the Minister would have an implied authority to grant a GHGS IL in circumstances where there is no SROSAI on petroleum exploration or recovery operations or commercially viable petroleum.

However, given that the Minister has an express power to grant in circumstances where there is a SROSAI subject to all other relevant factors being satisfied, the ACA and MCA submit that **the Bill**

should be amended to give the Minister the express power to grant a GHGS IL where the Minister is satisfied there is no SROSAI on petroleum exploration or recovery operations or commercially viable petroleum.

In these circumstances the only restrictions on the Minister's power to grant the GHGS IL is the Minister being satisfied that:

- (a) the applicant will commence injection and storage operations into one of the identified GHG storage formations within 5 years of grant;
- (b) the applicant has adequate technical qualifications, technical advice and financial resources; and
- (c) the draft site plan that accompanies the application satisfies the criteria specified in the regulations.

2. Reaching agreement

2.1 No provisions to encourage agreement making

In a number of instances the Bill requires the Minister or JA to have regard to the terms of any agreement between a GHG tenement holder (or applicant) and a petroleum tenement holder (or applicant).

This applies in relation to the grant of a GHG IL. If a GHGS AP or GHGS HL holder makes application for a GHGS IL, where there is a significant risk that operations under the GHG IL will have a significant adverse impact on petroleum operations under a existing or future pre-commencement petroleum title or an existing post-commencement PPL, in the absence of agreement with the relevant petroleum titleholder, the Minister must refuse to grant the GHGS IL.

In exercising the Minister's discretion whether to grant the GHGS IL to a PPL holder, the Minister must also have regard to whether there is an agreement between the PPL holder and any other petroleum titleholder upon whose operations the operations under the GHGS IL pose a SROSAI.

Other relevant provisions of the Bill include:

- (a) the Minister must not approve key GHG operations which pose a SROSAI on petroleum exploration or recovery operations carried on under an existing pre-commencement petroleum title, an existing post-commencement PPL, or a future pre-commencement petroleum title, unless the petroleum tenement holder has agreed to the carrying out of the key GHG operations;
- (b) the Minister's discretion to approve key GHG operations, the Minister must have regard to whether the petroleum tenement holder who is subject to a SROSAI has agreed to the carrying out of the key GHG operations;
- (c) the Minister must not approve key petroleum operations which pose a SROSAI on injection and storage operations under an existing GHGS IL, unless the GHGS IL holder has agreed to the carrying on of the key petroleum operations;
- (d) the Minister's discretion to approve key petroleum operations, the Minister must have regard to whether the GHGS tenement holder who is subject to a SROSAI has agreed to the carrying out of the key petroleum operations;
- (e) the Minister has the power to issue a direction to a GHGS IL holder whose licence area overlaps that of a pre-commencement petroleum titleholder in circumstances where commercially viable petroleum is discovered in the area of the overlap, and the petroleum titleholder has not agreed to the GHGS IL holder carrying on operations which pose a

SROSAI on operations to recover the petroleum or the commercial viability of the petroleum; and

- (f) the Joint Authority must not grant a post-commencement PPL if operations under the PPL pose a SROSAI to operations under an existing GHGS IL, and the GHGS IL holder has not agreed to the grant of the PPL.

However in no instances does the Bill require the parties to reach an agreement or stipulate any mandatory process which is designed to facilitate such agreements.

As a general remark, a process under which a party can incur very substantial costs in obtaining a GHGS AP or GHGS HL, but is still subject to the uncertainty of a SROSAI being declared before a GHGS IL can be granted, will significantly discourage investment. To the extent that the uncertainty can be minimised or reduced, the investment risk will accordingly be reduced, and the overall cost of investment in this sector will be reduced.

2.2 Alternative models

In contrast, other statutory regimes that regulate competing natural resources interests, such as the Queensland Coal Seam Gas (CSG) regime, require parties to share information and consult or negotiate with each other with a view to agreeing on appropriate coordination arrangements.

The Qld P&G Act and the *Mineral Resources Act 1989* (Qld) (**Qld MRA**) together regulate the development of coexisting coal and CSG resources by defining the legal rights, obligations and priorities for the different resources tenure.

Among other things, the Qld P&G Act and Qld MRA establish a mechanism for consultation and negotiation between overlapping petroleum and coal tenement holders. Where agreements cannot be reached, the legislation facilitates a process to ensure that the 'best' resource management decision is made before any production tenure is granted.

The consultation and negotiations mechanisms are illustrated here by the provisions of the Qld P&G Act governing applications for petroleum leases (**PL**) (the Qld MRA contains a similar process for coalmining lease (**ML**) applications).

Where an applicant is applying for a PL in the area of a coal exploration or mining tenement (and the coal tenement holder does not consent to the application), the Qld P&G Act imposes a number of additional application requirements. These requirements differ according to whether the underlying tenure is an exploration tenement or ML.

Where the underlying tenure is a coal exploration tenement (EPC or MDL), the PL application must include a 'CSG statement', which:

- (a) assesses:
 - (i) the likely effect of proposed petroleum production on the future development of coal resources from the land; and
 - (ii) the technical and commercial feasibility of coordinated petroleum production and coal mining from the land; and
- (b) includes a proposed safety management plan for all operating plant for proposed petroleum production under the PL that may affect possible future safe and efficient mining of coal. The plan must include proposals for the minimisation of potential adverse effects on possible future safe and efficient coal mining under a future ML.

The PL application must also address the 'CSG assessment criteria' which require information in relation to:

- (a) compliance with the safety requirements;
- (b) initial development plans;
- (c) the legitimate business interests of the applicant and the coal exploration tenement holder;
- (d) the effect of the proposed PL on the future development of coal resources, such as timing and rate of production and development;
- (e) the potential for a coordination arrangement between the parties;
- (f) attempts made to accommodate any reasonable proposal by the coal tenement holder;
- (g) the economic and technical viability of concurrent or coordinated production and development;
- (h) the extent, nature and value of the respective resources; and
- (i) the public interest in the production or development of the competing resources.

Following submission of the application, the PL applicant must:

- (a) within 10 business days, give the coal tenement holder a copy of the application (excluding any part of the application relating to capability criteria); and
- (b) use reasonable attempts to:
 - (i) consult with the coal tenement holder about the applicant's proposed development plan and proposed safety management plan;
 - (ii) make an appropriate arrangement with the coal tenement holder about advanced testing carried out, or proposed to be carried out, by the tenement holder; and
 - (iii) change the proposed plans to give effect to any reasonable proposal by the coal tenement holder that will optimise the safe and efficient production of petroleum under the proposed PL and coal under any future ML over the land;

Within 4 months after making the application, the PL applicant must lodge a notice with the department providing details of the consultation. The Minister may, after receiving such notice, require the applicant to use all reasonable attempts to conduct further negotiations on certain matters. Failing to comply with the consultation obligations may lead to refusal of the PL application.

The coal exploration tenement holder may also make submissions about the PL application and the Minister must have regard to those submissions in deciding the PL application.

Where the underlying tenure is a coal ML, the PL application requirements are similar, except that:

- (a) the coal ML holder must make reasonable attempts to reach a coordination arrangement with the applicant that provides the best resource use outcome without significantly affecting the parties' rights or interests. However, the obligation to negotiation only applies to the extent a coordination arrangement would be commercially and technically feasible for the coal ML holder; and
- (b) the PL application may only be granted if a coordination arrangement has been agreed between the parties and approved by the Minister and the parties have also agreed to a safety management plan.

Another example of a statutory scheme for regulating competing natural resources interests is contained in the *Petroleum (Onshore) Act 1991* (NSW) (the **NSW Petroleum Act**). Section 73 of the NSW

Petroleum Act establishes a simple process for Ministerial resolution of differences that arise between the holders of petroleum titles and overlapping prospecting or mining tenements.

The relevant section provides:

'73 Disputes between holders of petroleum titles and other persons carrying on operations on the land

- (1) *This section applies where, in respect of any part of any land comprised in a petroleum title, any person is authorised to prospect or mine by virtue of:*
 - (a) *any claim registered, or authority granted, under the Mining Act 1992, or*
 - (b) *(Repealed)*
 - (c) *the person's ownership of any minerals, or*
 - (d) *an agreement with the owner of any minerals, or*
 - (e) *the provisions of the State Coal Mines Act 1912,**and a difference arises between the holder of the petroleum title and the person so authorised about the operations carried out or proposed to be carried out by either party.*
- (2) *Either party, or both of them, may refer the matter for determination to the Minister, who may then refer the matter to the warden for an inquiry and report.*
- (3) *The Minister may make such orders and give such directions to either or both of the parties as seem to the Minister to be just and equitable having regard to the public interest and the circumstances of the case.*
- (4) *Such an order may direct the payment by either or both parties of any costs and expenses incidental to the conduct of the inquiry.'*

2.3 Submission

The key features of the Queensland CSG regime are that parties with competing natural resource interests are required, firstly, to exchange relevant information and secondly, consult or negotiate with each other with a view to achieving the best resource management outcome, including safety management arrangements.

Whilst the ACA and the MCA support an agreement-making facilitation scheme such as that included in the Qld P&G Act, it does not consider that this scheme is optimum in its entirety, given that this scheme does not make any provision for a circuit breaker where the holder of an ML refuses to enter into an agreement with the PL applicant.

The model under the NSW Petroleum Act is not by itself sufficient for managing the complex interactions between offshore petroleum and GHG title holders. However it is submitted that one useful aspect of this model is that it provides an express deadlock-breaking mechanisms where private parties are unable to resolve their differences by themselves.

The ACA and MCA submit that **a mandatory process for parties with competing GHGS and petroleum interests to seek to reach agreement is likely to facilitate a more effective coordination arrangement.** It would also **better form the basis of resource allocation decisions by the Minister or the JA** (as the case may be) where agreements are not achieved (in those circumstances where the Minister or JA retains a discretion). The ACA and the MCA submit that the Bill be amended to include a process to facilitate agreement making.

3. PPL holder application for a GHGS IL

3.1 Provision for grant of GHGS IL to holder of PPL

The OPA Amendment Bill also makes provision for a PPL holder to make application for a GHGS IL over blocks within the PPL area, provided the PPL holder has obtained a declaration of an identified GHG storage formation and there is no GHGS AP, GHGS HL or GHGS IL over those blocks. The grant of the GHG IL is subject to an impacts test.

3.2 Submission

The business of petroleum production is a separate business from that of GHGS injection and storage. Accordingly, as a general principle, competition in the market for the business of GHG injection and storage should be, to the extent possible, open to all bidders on a 'level playing field'.

Consistent with that approach, PPL holders ought to be entitled to undertake GHGS injection where it forms part of their business of petroleum production. However, if GHGS injection forms a separate business, then PPL holders should not have any privileged right of entry to that business.

A PPL holder should be entitled to elect to undertake injection of GHGS for the purpose of Enhanced Oil Recovery (EOR). That injection will typically not qualify for a credit under an AETS, as the GHGS would be re-cycled, and not permanently stored. In these circumstances, the PPL holder should be able to carry out such operations without the need for a GHGS IL – the PPL holder should be able to conduct such operations in accordance with the PPL.

The ACA and MCA accept that **a PPL holder ought to be entitled to re-inject GHGS which is separated from oil or gas which it produces, as this forms part of its existing business of oil and gas recovery.** The GHGS is essentially a disposal product from that business, and does not produce income for the business (although the injection and storage process may reduce expenses otherwise likely to be incurred by a requirement to acquire AETS permits). However in these circumstances the PPL holder should be required to apply for a GHGS IL, so that all the necessary safeguards are put in place for the permanent storage of GHGS.

Similarly if the PPL holder wishes to undertake injection for the purposes of EOR and the GHGS is proposed to be permanently stored (for example, so as to obtain a credit under an AETS), then the PPL holder should be required to obtain the grant of a GHGS IL.

In both these circumstances the PPL holder should not be required to go through the GHGS AP process first.

If, (as a stand alone business or in addition to re-injecting the GHGS for disposal extracted from petroleum produced or for the purpose of EOR) the **PPL holder proposes to engage in the separate business of injecting and permanently storing GHGS produced by third parties**, then it is engaging in business in a separate market, and **should be subject to the ordinary competition rules in that market.** In that event, the GHGS titles should be subject to competition in the ordinary way, and PPL holders **should be required to nominate areas for acreage release and bid for a GHGS AP in a competitive process.**

4. Source of GHGS

4.1 Specification in licence

The Bill provides that a GHGS IL is subject to the condition that the holder will not inject or store GHGS in a GHG storage formation wholly within the GHGS IL area, unless the origin or origins of the GHGS substance are as specified in the licence.

4.2 Submission

The ACA and MCA submit that having as a **condition of the GHGS IL that the origin or origins of the GHGS substance to be stored be specified on the GHGS IL may be counterproductive to the uptake of GHGS injection and storage**. Under the Bill as presently stated, there will be a need to amend the licence every time the GHGS IL holder seeks to enter into commercial arrangements with an emitter.

Such a condition may also restrict the future development of GHGS pipeline collection networks which gather GHG from multiple sources. If and when such a network develops, this concern may be better addressed in pipeline regulations rather than GHGS IL conditions.

The ACA and MCA submit that there are sufficient provisions in the Bill to ensure that volume of GHGS to be injected and stored, and the composition of the GHGS, is appropriate to the particular licence and the identified GHG storage formation. The requirements to state the origin or origins of the GHGS to be injected and stored should be deleted from the Bill.

To the extent that it is felt necessary to retain provisions requiring advice as to the source of GHGS, it is **important that those provisions do not create significant administrative burdens which would constrain the injection and storage of GHGS**. For example, rather than amending the licence each time, the same outcome **could be achieved simply by notifying the Minister after commercial arrangements with an emitter have been entered into**. In this way, the Minister could maintain a register of GHGS sources, without creating administrative burdens which would prevent or prolong commercial negotiations.

5. Commercially viable petroleum

5.1 Impacts test and directions power

The Bill deals with the situation where commercially viable petroleum is located in an overlap, or potential overlap if a GHGS IL application is granted, between a GHGS IL area and any PPL or a pre-commencement PEP or PRL, and the GHGS IL operations pose a SROSAI to the recovery of the petroleum or its commercial viability, in two separate ways:

- (a) upon the Minister's consideration of an application for a GHGS IL, in which case there is no public interest test or written agreement test to fall back upon in the event the Minister is satisfied that there is a SROSAI on the petroleum recovery operations; and
- (b) the directions power in the same circumstances, to eliminate, mitigate, manage or remediate the risk, suspend any of the rights conferred by the injection licence or cancel the licence (except that this is limited to the impact on pre-commencement petroleum tenements only), in which case the Minister must only give the direction in the event that the petroleum tenement holder has not agreed to the carrying on of the injection and storage operations.

5.2 Submission

The policy rationale for the different treatment of the provision for agreement between the GHGS party and the petroleum title holder in each case is not clear. If it is sufficient for agreement to over-ride the need for any remedial action in the case of an existing GHGS IL, then logically it should also be relevant to the grant of a GHGS IL in the same circumstances. The ACA and MCA submit that **the Minister must only refuse to grant a GHGS IL in a commercially viable petroleum situation, in circumstances where the pre-commencement petroleum titleholder has not agreed to the grant**, and the provisions of the Bill should be amended accordingly.

6. Third party access regime

6.1 Possible third party access regime

The Bill provides that the regulations may establish a regime for third party access to services provided by means of the use of GHG infrastructure facilities and pipelines. Regulations may also establish a regime for third party access to services provided by a GHG injection licensee, including the use of:

- (a) identified GHG storage formations;
- (b) wells;
- (c) equipment or structures for use in injecting GHGS; and
- (d) equipment or structures for use in the processing, compressing or storing of GHGS prior to injection.

If the regulations do provide for a third party access regime, compliance with that regime is a condition of the licence.

6.2 Submission

The ACA and MCA are concerned that an issue which has such a great potential to impact on the rights of GHGS title holders is left to the regulations. The ACA and MCA submit that **if a third party access regime is contemplated for inclusion in the OPA (which is not currently contemplated in relation to the facilities and services of petroleum titleholders), it should be set out in the OPA itself.**

To the extent that the third party access regime is not to be fully described in OPA itself, the regulation making power should be clearly defined, so that Parliament does not simply delegate the task of creating the regime entirely to the drafters of the regulations. If regulations are to be made, they should be made in relation to particular discrete matters, not in relation to the creation of the regime generally.

Of additional concern is the inclusion of identified GHG storage formations in the list of services and facilities that may be the subject of a third party access regime. DRET officials have acknowledged that extending third party access to the identified GHG storage formations would pose significant liability complications, and have indicated that it is not intended that any third party access regime as regulated would extend to identified GHG storage formations.

The ACA and MCA share these **concerns in relation to the liability issues posed by enforced third party access to identified storage reservoirs.** GHGS IL holders are already proposed to be subject to a significant burden under the Bill, including prescriptive licence conditions in relation to source and volume, potential liabilities and expenses flowing from possible Ministerial directions, and the various issues posed by the site closure and relinquishment process. And GHGS IL holders are not given any relief from long term liabilities under the Bill. Giving a third party rights of access to an identified GHG storage reservoir would significantly compound the risks involved. The ACA and MCA submit that the inclusion of **identified GHG storage formations in the list of facilities and services to which regulations may provide for third party access should be removed.**

G. Site closure

Recommendations:

21. *The Commonwealth should indemnify GHGS demonstration and commercial projects commencing before 2015 against long-term common law liability, and the Minister should be required to have regard to the availability and costs of insurance when considering whether to impose a condition on a GHGS title that the holder take out insurance.*
22. *The issue of a site closing certificate, the successful undertaking of MMV, and the current or former GHGS IL holder's compliance with serious situation and remedial directions in accordance with the Bill, should constitute permanent storage for both the purposes of the Bill and for AETS.*

1. Long term liability

1.1 The Commonwealth's position

The MCMR Guiding Principles suggest that ordinary common law liability should apply to carbon capture and storage activities. Therefore, a person or company conducting these activities has potential exposure to liabilities even after a tenement has been surrendered.

In addition, the Australian Government Solicitor has released a document entitled "Responsibility and liability for greenhouse gas injection and storage activities authorised under an amended *Offshore Petroleum Act 2006*". Relevantly this document provides:

Following the existing offshore petroleum model, the OPA will not immunise GHG title-holders or other participants in GHG projects from common law liability to persons who suffer injury or loss as a result of their actions. Nor will the OPA limit their liability. This non-intervention will extend to all forms of common law liability, including long-term liability.

The Commonwealth will therefore not 'take over' long-term liability from project participants. Nor will the Commonwealth provide any indemnity to project participants in respect of any liability they might incur.

In the long term, the risk will, in a sense, pass to the community. If GHG operations were to result in personal injury or loss to individuals, at a time when there were no project participants still available to be sued, or where damages were for some other reason irrecoverable, the cost would in practice be borne by the community. This will, however, be the consequence of the passage of time, not of any assumption of liability on the part of government.

GHG industry participants will therefore need to make their own arrangements to deal with potential common law liability, as an ordinary cost of doing business, as must members of any other industry.

Thus, whilst a GHG injection licence holder's statutory obligations under the Bill will cease upon surrender of the tenement (subject to the provision of security for the Commonwealth's costs in carrying out post-closure monitoring, measurement and verification, and subject to the Minister's ability to give remedial directions to former GHG authority holders) the holder's exposure to common law liabilities will continue.

The Minister may also require, as a condition of a GHGS title, that the holder maintain insurance against expenses, liabilities or specified things arising out or work under the title or the doing of any other thing

under the title, including insurance against expenses of complying with directions relating to the clean-up or other remediation of the effects of the escape of a GHGS.

1.2 Submission

The ACA and MCA submit that **the level of uncertainty surrounding the issue of long-term liability will remain a significant impediment to investment in GHGS**. The 'early-movers' in the GHGS industry will accept a higher proportion of this risk, with application of regulatory and common law principles becoming clearer as the industry matures.

Recognising the need for the urgent development of Australia's GHGS industry, it is proposed that the **Commonwealth indemnify demonstration and commercial projects commencing before 2015 from long-term common law liability**.

Given the insurance market in relation to GHGS operations is immature, if not non-existent, it may prove particularly onerous for GHGS titleholders to take out insurance. The **Minister should be required to have regard to the availability and costs of insurance, when considering whether to impose a condition on a GHGS title that the holder take out insurance**, and the Bill should be amended accordingly.

2. Inter-relationship with the emissions trading scheme

2.1 Permanent storage

In numerous instances the Bill refers to the concept of 'permanent storage' of GHGs. These include:

- (a) the suitability requirements within the definitions of potential GHG storage formation and eligible GHG storage formation;
- (b) the rights conferred upon the holder of a GHGS IL to permanently store GHGS in an identified GHG storage formation;
- (c) the inclusion within the circumstances that constitute a 'serious situation' of where the identified GHG storage formation is not suitable (with or without engineering enhancements) for the permanent storage of the relevant amount of the relevant GHGS injected at the relevant point or points over the relevant period.

The term permanent storage is not defined in the Bill. However the Bill makes significant provisions in relation to dealing with leakage from the identified GHG storage reservoir, including directions in relation to serious situations referred to above, and remedial directions to current and former GHGS titleholders.

2.2 Submission

The ACA and MCA note that broader issues in relation to the AETS are to be dealt with in other legislation. However the ACA wishes to place on record its concern that **the issue of what constitutes permanent storage under the Bill, and that the mechanisms by which the Bill seeks to establish a regime for permanent storage must correlate with the requirements of the forthcoming AETS** in relation to the conditions upon which GHGS injection and storage will be recognised as a deduction from an emitter's liable emissions, or as an offset (whichever is the position under the AETS).

The MCMR Guiding Principles provide that regulation should include identification and accounting of leakage.

The NETT Final Design Report proposes that GHGS injection and storage be treated as 'abatement at source' rather than an offset credit. Under the NETT proposal, operators of GHGS injection and storage projects (and other operators within the CCS process) will be covered parties under the AETS and therefore liable for emissions from the CCS process. The NETT recommends:

- *in the event that a CCS facility leaks, the operator of the facility be liable for that leak and required to surrender permits to offset leaked emissions, regardless of whether the sequestration was treated initially as an offset or a reduction in liability for the covered party (e.g. a generator)*
- *standards of monitoring, identifying and measuring leaks, leakage thresholds at which permit acquittal liability would apply, and definitions of covered parties (e.g. owner, operator, government) refer to specific CCS legislation specifying such matters.*

The NETT report recommends measures for monitoring and recording GHGS leakage (being residual emissions from the plant where the capture occurs, fugitive emissions from transport or injection or emissions from the storage site) as per the accounting approach proposed in the 2006 IPCC guidelines for national GHG inventories.

The Bill does not make provision for ongoing monitoring as envisaged by the NETT report, beyond what is proposed in individual cases for MMV post GHGS IL surrender and site closure. The ACA and the MCA submit that **in the interests of certainty, if the issue of a site closing certificate, the successful undertaking of MMV, and the current or former GHGS IL holder's compliance with serious situation and remedial directions are carried out in accordance with the Bill, this should constitute permanent storage for both GHGS purposes and AETS purposes.**

H. – Other Issues

Recommendations:

23. *The ITAA 1997 should be amended to provide for the same treatment to be applied to GHGS exploration expenses and depreciation of assets as is applied to oil and gas exploration expenses and depreciation of assets.*
24. *Further consideration should be given to inter-jurisdictional cooperative measures, to allow for the declaration of identified storage formations that cross domestic jurisdictional boundaries, and for the grant of GHGS titles in such circumstances.*
25. *The Bill must not be seen as the end solution for all requirements in relation to GHGS injection and storage. The Commonwealth must continue to pursue other initiatives such as research funding for the identification of potential GHG storage formations and one or more large-scale CCS demonstration projects, research and development incentives and initiatives to develop and expand Australia's skill base relevant CCS.*

1. Taxation

1.1 Tax treatment

The MCMPR Guiding Principles provide that income from, and capital and operating costs associated with, a CCS project should be treated in the same way as for any other business venture for taxation purposes.

The Exposure Draft does not provide for a specific treatment for the GHGS tenements, and for GHG exploration expenses.

The Australian Taxation Office (ATO) draft ruling on geosequestration provides some comfort in relation to certain expenses arising from geo-sequestration activities. Where those expenses do not form part of the cost of a depreciable asset, they will be regarded as immediately deductible under section 8-1 of the *Income Tax Assessment Act 1997 (ITAA 1997)*. We support that treatment. However, to the extent that costs form part of the cost of a depreciating asset, they will be deductible in accordance with the ordinary rules in Division 40.

Naturally, Division 40 does not yet contain provisions specific to GHGS tenements.

1.2 Submission

Given the general complementarity of the GHGS provisions of OPA to the petroleum provisions, the ACA and MCA submit that it would be appropriate for **the same treatment to be applied to GHGS exploration expenses and depreciating assets as is applied to oil and gas exploration expenses and depreciating assets**. The ACA and MCA submit that this is consistent with the MCMPR Guiding Principles, and provides no special privileges to GHGS operations, compared to oil and gas exploration and production.

In relation to costs which are not otherwise immediately deductible, the ACA and MCA submit that they should be given the same status as their counterparts in the OPA relating to exploration and production of oil and gas. Exploration for GHG storage formations ought to be treated in the same manner as exploration for oil and gas. Acquisition of, and expenditure on, GHG tenements ought to be treated in the same manner as acquisition of, and expenditure on, oil and gas tenements.

Accordingly, we propose the following complementary insertions to Division 40 of ITAA 1997:

Section 40-80

Amendment of section 40-80 by inserting the bold text as follows:

40-80(1)

*The decline in value of a *depreciating asset you *hold is the asset's *cost if:*

*(a) you first use the asset for *exploration or prospecting for *minerals, or quarry materials, obtainable by *mining operations, **or for GHG exploration**; and*

(b) when you first use the asset, you do not use it for:

*(i) development drilling for *petroleum; or*

(ii) operations in the course of working a mining property, quarrying property or petroleum field; or

*(iii) **GHG injection and storage**; and*

*(c) you satisfy one or more of these subparagraphs at the asset's *start time:*

*(i) you carry on *mining operations **or GHG operations**;*

(ii) it would be reasonable to conclude you proposed to carry on such operations;

*(iii) you carry on a *business of, or a business that included, exploration or prospecting for minerals or quarry materials obtainable by such operations, **or GHG exploration**, and expenditure on the asset was necessarily incurred in carrying on that business.*

Section 40-102(5)

Insertion of the items in bold into the table in section 40-102(5), dealing with capped effective lives, as follows:

Capped life of certain depreciating assets used in specified industries

Item	Kind of depreciating asset	Industry in which the asset is used	Period
1	Gas transmission asset	Gas supply	20 years
1A	GHG transmission asset	GHG injection and storage	20 years
2	Gas distribution asset	Gas supply	20 years
2A	GHG distribution asset	GHG injection and storage	20 years
3	Oil production asset (other than an electricity generation asset or an offshore platform)	Oil and gas extraction	15 years
3A	GHG injection asset (other than an offshore platform)	GHG injection and storage	15 years

4	Gas production asset (other than an electricity generation asset or an offshore platform)	Oil and gas extraction	15 years
5	Offshore platform	Oil and gas extraction	20 years
5A	Offshore platform	GHG injection and storage	20 years
6	Asset (other than an electricity generation asset) used to manufacture condensate, crude oil, domestic gas, liquid natural gas or liquid petroleum gas but not if the manufacture occurs in an oil refinery	Petroleum refining	15 years
7	Harvester	Primary production sector	6 2/3 years
8	Tractor	Primary production sector	6 2/3 years

Section 40-730(1)

We have inserted in bold provisions complementary to the existing provisions in section 40-730:

*You can deduct expenditure you incur in an income year on *exploration or prospecting for *minerals, or quarry materials, obtainable by *mining operations, or **GHG exploration** if, for that expenditure, you satisfy one or more of these paragraphs:*

- (a) you carried on mining operations **or operations relating to GHG injection and storage**;*
- (b) it would be reasonable to conclude you proposed to carry on such operations;*
- (c) you carried on a *business of, or a business that included, exploration or prospecting for minerals or quarry materials obtainable by such operations, **or GHG exploration**, and the expenditure was necessarily incurred in carrying on that business.*

40-730(2)

However, you cannot deduct expenditure under subsection (1) if it is expenditure on:

- (a) development drilling for *petroleum; or*
- (b) operations in the course of working a mining property, quarrying property or petroleum field; **or***
- (c) **GHG injection and storage.***

40-730(3)

Also, you cannot deduct expenditure under subsection (1) to the extent that it forms part of the *cost of a *depreciating asset.

40-730(4)

Exploration or prospecting includes:

(a) *for mining in general, and quarrying:*

(i) *geological mapping, geophysical surveys, systematic search for areas containing *minerals (except *petroleum) or quarry materials, and search by drilling or other means for such minerals or materials within those areas; and*

(ii) *search for ore within, or near, an ore-body or search for quarry materials by drives, shafts, cross-cuts, winzes, rises and drilling; and*

(b) *for petroleum mining:*

(i) *geological, geophysical and geochemical surveys; and*

(ii) *exploration drilling and appraisal drilling; and*

(c) *feasibility studies to evaluate the economic feasibility of mining minerals or quarry materials once they have been discovered; and*

(d) *obtaining *mining, quarrying or prospecting information associated with the search for, and evaluation of, areas containing minerals or quarry materials.*

40-730(4A)

GHG exploration includes

(a) geological mapping, geophysical surveys, systematic search for areas containing potential GHG storage formations, and search by drilling or other means for such potential GHG storage formations within those areas; and

(b) geological, geophysical and geochemical surveys; and

(c) exploration drilling and appraisal drilling; and

(d) feasibility studies to evaluate the economic feasibility of undertaking GHG injection and storage in eligible GHG storage formations once they have been discovered; and

(e) obtaining GHG information.

40-730(5)

*Minerals includes *petroleum.*

40-730(6)

Petroleum means:

(a) *any naturally occurring hydrocarbon or naturally occurring mixture of hydrocarbons, whether in a gaseous, liquid or solid state; or*

(b) *any naturally occurring mixture of:*

(i) *one or more hydrocarbons, whether in a gaseous, liquid or solid state; and*

(ii) *one or more of the following: hydrogen sulphide, nitrogen, helium or carbon dioxide;*

whether or not that substance has been returned to a natural reservoir.

40-730(6A)

GHG means a greenhouse gas substance within the meaning of that phrase in section 6 of the Offshore Petroleum Act 2006

40-730(7)

Mining operations means:

- (a) mining operations on a mining property for extracting *minerals (except *petroleum) from their natural site; or*
- (b) mining operations for the purpose of obtaining petroleum; or*
- (c) quarrying operations on a quarrying property for extracting quarry materials from their natural site;*

*for the *purpose of producing assessable income.*

40-730(7A)

GHG injection and storage means injection and storage of GHG pursuant to a greenhouse gas substance injection licence granted under the Offshore Petroleum Act 2006

40-730(8)

Mining, quarrying or prospecting information is geological, geophysical or technical information that:

- (a) relates to the presence, absence or extent of deposits of *minerals or quarry materials in an area; or*
- (b) is likely to help in determining the presence, absence or extent of such deposits in an area.*

40-730(8A)

GHG information is geological, geophysical or technical information that:

- (a) relates to the presence, absence or extent of eligible GHG storage formations in an area; or*
- (b) is likely to help in determining the presence, absence or extent of such eligible GHG storage formations in an area.*

40-730(8B)

Eligible GHG storage formation means eligible greenhouse gas storage formation within the meaning of that phrase in section 6 of the Offshore Petroleum Act 2006

2. National consistency

2.1 Cross-jurisdictional issues

Given the source of most artificially occurring GHGS is likely to be from on-shore, it is imperative that the Commonwealth, states and territories adopt consistent legislative and regulatory approaches to GHGS operations.

The provisions of the Bill which ascribe responsibility for GHG pipelines to the DA and JA are appropriate for these reasons.

However further consideration needs to be given to how GHGS operations may be undertaken in circumstances where GHG storage formations are located across jurisdictional boundaries. A GHG storage formation should not become ineligible for declaration as an identified GHG storage formation merely because it extends beyond the Commonwealth's jurisdiction. Similar issues to those discussed in paragraph 2 of part D, in relation to the optimal use of resources, apply here.

2.2 Submission

A nationally consistent approach, with regulatory frameworks for both onshore and offshore CCS projects providing certainty and transparency for project proponents and containing appropriate safeguards for the broader community with respect to the environment, health and safety, is desirable. To encourage consistency in regulations and limit duplication between jurisdictions, the following should be considered:

- (a) an ongoing process of reviewing legislation (proposed and existing) and reinvigoration of COAG's role in this area;
- (b) a regulatory approach which adopts the concept of 'minimum effective regulation';
- (c) minimisation of all regulatory costs, such as compliance and adverse side-effects; and
- (d) adoption of the best regulatory approach available to address a defined problem (including an assessment being undertaken of whether self-regulation or no regulation may be more appropriate public policy choices).

The ACA and the MCA wish to put on record the concern that state and territory jurisdictions promptly follow through with their own legislative amendments for GHGS operations, and do so in a manner that seeks to maximise national consistency.

It is also submitted that the Commonwealth should give **further consideration to inter-jurisdictional cooperative measures to allow for the declaration of identified storage formations that cross domestic jurisdictional boundaries, and for the grant of GHGS titles in such circumstances**, to ensure such resources are not sub-optimally utilised.

3. Other initiatives necessary for the uptake of GHGS injection and storage

3.1 Other initiatives

Other than legislative provision for a GHGS tenement regime, and the interaction of GHGS operations with those of petroleum titleholders, there is a need for numerous other initiatives to support the development of CCS and GHGS injection and storage.

The House of Representatives Standing Committee on Science and Innovation August 2007 report, *Between a rock and a hard place*, recognised a number of other initiatives required for the successful uptake of CCS. These include:

- (a) funding to progress research into feasible GHGS storage sites across Australia;
- (b) funding for one or more large-scale CCS projects to demonstrate the capacity for commercial GHGS injection and storage applications;
- (c) the employment of financial incentives, both direct and tax based, in an effort to encourage science and industry to continue developing and testing CCS technology; and

(d) initiatives to further develop and expand Australia's skills base in CCS technology.

3.2 Submission

It is important that the Bill not be seen as the **end solution for all requirements in relation to GHGS injection and storage**. To that end, the ACA and MCA urge the Commonwealth, through the Committee, to **continue to pursue the other initiatives required to ensure the successful uptake of CCS and GHGS injection and storage**.

Schedule 1 – Specific provisions

Submission paragraph reference	Relevant sections of the Bill
Section C, paragraph 2	<ul style="list-style-type: none">• 15F Significant risk• 79A Declared exploration permit—approval by responsible Commonwealth Minister of key petroleum operations• 79B Declared exploration permits• 114A Declared retention lease—approval by responsible Commonwealth Minister of key petroleum operations• 114B Declared retention leases• 138A Declared production licence—approval by responsible Commonwealth Minister of key petroleum operations• 138B Declared production licences• 131 After paragraph 145(c)• 134 After subsection 146(4A)• 249AF Approval by responsible Commonwealth Minister of key greenhouse gas operations• 249BD Approval by responsible Commonwealth Minister of key greenhouse gas operations• 249CI Offer document• 249CR Grant of greenhouse gas injection licence—offer document• 249CZ Serious situation• 249CZC Powers of responsible Commonwealth Minister to protect petroleum discovered in the title area of a pre-commencement petroleum title• 249CZF Issue of site closing certificate—pre-certificate notice• 316-311A Site closing directions to current holders of greenhouse gas injection licences
Section C, paragraph 4.1	<ul style="list-style-type: none">• 79A Declared exploration permit—approval by responsible Commonwealth Minister of key petroleum operations• 114A Declared retention lease—approval by responsible Commonwealth Minister of key petroleum operations• 138A Declared production licence—approval by responsible Commonwealth Minister of key petroleum operations• 131 After paragraph 145(c)

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- 133 At the end of section 145
 - 135 At the end of section 146
 - 249AF Approval by responsible Commonwealth Minister of key greenhouse gas operations
 - 249BD Approval by responsible Commonwealth Minister of key greenhouse gas operations
 - 249CI Offer document
 - 249CK Deferral of decision to grant greenhouse gas injection licence—pending application for post-commencement exploration permit
 - 249CR Grant of greenhouse gas injection licence—offer document
 - 442C Public interest

Section C, paragraph 5.2

- 45 Section 6
- 119 At the end of section 79
- 79A Declared exploration permit—approval by responsible Commonwealth Minister of key petroleum operations
- 79B Declared exploration permits
- 122 At the end of section 114
- 114A Declared retention lease—approval by responsible Commonwealth Minister of key petroleum operations
- 114B Declared retention leases
- 127 At the end of section 138
- 138A Declared production licence—approval by responsible Commonwealth Minister of key petroleum operations
- 138B Declared production licences

Section C, paragraph 6.1

- 119 At the end of section 79
 - 122 At the end of section 114
 - 127 At the end of section 138
 - 249LB Consent to surrender title
 - 204 After subsection 311(2)
 - 205 After subsection 312(3)
 - 316-311 Remedial directions to current holders of permits, leases and licences
 - 316-311A Site closing directions to current holders of greenhouse gas injection licences
 - 316-312 Remedial directions to former holders of permits, leases, licences
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	and authorities etc.
Section C, paragraph 7.3	<ul style="list-style-type: none"> • 249CK Deferral of decision to grant greenhouse gas injection licence—pending application for post-commencement exploration permit
Section C, paragraph 7.4	<ul style="list-style-type: none"> • 274A Section 433 (after subparagraph (b)(ii) of the definition of reviewable Ministerial decision)
Section D, paragraph 1.2	<ul style="list-style-type: none"> • 249AJ Application for work-bid greenhouse gas assessment permit—advertising of blocks • 249AK Grant of work-bid greenhouse gas assessment permit—offer document • 249AL Ranking of multiple applicants for work-bid greenhouse gas assessment permit • 249AM Grant of work-bid greenhouse gas assessment permit • 249AP Application for cash-bid greenhouse gas assessment permit • 249AQ Grant of cash-bid greenhouse gas assessment permit—only one application • 249AR Grant of cash-bid greenhouse gas assessment permit—2 or more applications • 249AS Grant of cash-bid greenhouse gas assessment permit
Section D, paragraph 2.1	<ul style="list-style-type: none"> • 249AU Declaration of identified greenhouse gas storage formation • 249CH Application for greenhouse gas injection licence by greenhouse gas assessment permittee or greenhouse gas holding lessee
Section D, paragraph 3.1	<ul style="list-style-type: none"> • 249AH Duration of greenhouse gas assessment permit
Section E, paragraphs 1.1 and 1.2	<ul style="list-style-type: none"> • 249BSA Application for special greenhouse gas holding lease by an unsuccessful applicant for a greenhouse gas injection licence • 249BN Application for greenhouse gas holding lease by the holder of a greenhouse gas injection licence
Section F, paragraph 2.1	<ul style="list-style-type: none"> • 79A Declared exploration permit—approval by responsible Commonwealth Minister of key petroleum operations • 114A Declared retention lease—approval by responsible Commonwealth Minister of key petroleum operations • 138A Declared production licence—approval by responsible Commonwealth Minister of key petroleum operations • 133 At the end of section 145 • 135 At the end of section 146 • 249AF Approval by responsible Commonwealth Minister of key greenhouse gas operations • 249BD Approval by responsible Commonwealth Minister of key

	greenhouse gas operations
	<ul style="list-style-type: none"> • 249CI Offer document
Section F, paragraph 3.1	<ul style="list-style-type: none"> • 249CQ Application for greenhouse gas injection licence by the holder of a production licence
Section F, paragraph 4.1	<ul style="list-style-type: none"> • 249CE Conditions of greenhouse gas injection licences
Section F, paragraph 5.1	<ul style="list-style-type: none"> • 249CZC Powers of responsible Commonwealth Minister to protect petroleum discovered in the title area of a pre-commencement petroleum title
Section F, paragraph 6.1	<ul style="list-style-type: none"> • 138B At the end of section 167 • 145 At the end of section 181 • 249CE Conditions of greenhouse gas injection licences
Section G, paragraph 2.1	<ul style="list-style-type: none"> • 15A Potential greenhouse gas storage formation • 15B Eligible greenhouse gas storage formation • 119 At the end of section 79 • 122 At the end of section 114 • 127 At the end of section 138 • 181A Approval by Joint Authority of greenhouse gas substance to be conveyed in a pipeline • 249CZ Serious situation • 204 After subsection 311(2) • 205 After subsection 312(3)

Schedule 2 - Glossary

Terms used in this submission are as follows:

Term	Meaning
ACA	Australian Coal Association
ACARP	Australian Coal Association Research Program
AETS	Australian Emissions Trading Scheme
ATO	Australian Taxation Office
Bill	<i>Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill 2008 (Cth)</i>
Committee	Senate Economics Committee
CCS	carbon dioxide capture and storage
CSG	coal seam gas
CSLF	Carbon Sequestration Leadership Forum
DA	Designated Authority
DRET	Department of Resources, Energy and Tourism
EOR	enhanced oil recovery
GHG	greenhouse gas
GHGS	greenhouse gas substance
GHGS AP	greenhouse gas substance assessment permit
GHGS HL	greenhouse gas substance holding lease
GHGS IL	greenhouse gas substance injection licence
IEA	International Energy Agency
IPCC	Inter-governmental Panel on Climate Change
ITAA 1997	<i>Income Tax Assessment Act 1997 (Cth)</i>
JA	Joint Authority
MCA	Minerals Council of Australia
MCMPR	Ministerial Council on Mineral and Petroleum Resources
MCMPR Guiding Principles	Ministerial Council on Mineral and Petroleum Resources <i>CCS Regulatory Guiding Principles</i> , November 2005
ML	mining lease
MMV	monitoring, measurement and verification
NETT	National Emissions Trading Taskforce
NETT Final Design	National Emissions Trading Taskforce <i>Possible design for a national</i>

Report	<i>greenhouse gas emissions trading scheme: Final framework report on scheme design, December 2007</i>
NSW Petroleum Act	<i>Petroleum (Onshore) Act 1991 (NSW)</i>
OPA	<i>Offshore Petroleum Act 2006 (Cth)</i>
PEP	petroleum exploration permit
PPL	petroleum production licence
PRL	petroleum retention lease
PSLA	<i>Petroleum (Submerged Lands) Act 1967 (Cth)</i>
Qld MRA	<i>Mineral Resources Act 1989 (Qld)</i>
Qld P&G Act	<i>Petroleum and Gas (Production and Safety) Act 2004 (Qld)</i>
RIS	Regulation Impact Statement
SROSAI	significant risk of significant adverse impact
TIA	<i>Transport Infrastructure Act 1994 (Qld)</i>