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READERS' GUIDE

OFFSHORE PETROLEUM (GREENHOUSE GAS STORAGE) AMENDMENT BILL 2007 –
READERS' GUIDE TO EXPOSURE DRAFT

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READERS' GUIDE

OFFSHORE PETROLEUM (GREENHOUSE GAS STORAGE) AMENDMENT BILL 2007 – READERS' GUIDE TO EXPOSURE DRAFT

This Readers' Guide provides an explanation of the key provisions of the Exposure Draft of the Offshore Petroleum Bill 2007 (the Bill). The Bill will amend the *Offshore Petroleum Act 2006* (OPA) to bring within the scope of the OPA the injection and storage of carbon dioxide in deep sub-seabed geological formations.

1. OVERVIEW

- 1.1. The Bill will establish a new range of offshore titles providing for the transportation by pipeline and injection and storage in geological formations of carbon dioxide and (potentially) other greenhouse gases. The Bill will also make consequential changes to the offshore petroleum titles for which the OPA already provides. These changes to petroleum titles will apply only to petroleum exploration permits initially granted after the amendments come into force, and to subsequent titles in the same series.

Geographical application of new titles

- 1.2. The OPA, as amended by the Bill, will continue to apply only in the Commonwealth offshore jurisdiction. The new titles will therefore be located in the area between the outer limits of the State and Northern Territory (3 nautical mile) coastal waters and the outer limit of the Australian continental shelf¹. The new titles will not authorise activities that extend beyond the Commonwealth jurisdictional area.

Substances that can be injected and stored under the Act

- 1.3. A greenhouse gas injection licence will authorise the injection and storage of a 'greenhouse gas substance'. For practical purposes, when the amendments commence, 'greenhouse gas substance' will mean carbon dioxide, together with any substances incidentally derived from the capture or injection and storage processes, with the permitted/required addition of chemical detection agents to assist the tracing of the injected greenhouse gas substance.
- 1.4. There is a power by regulation to extend the meaning of 'greenhouse gas substance' to include other greenhouse gases. This regulation-making power is not expected to be used until such time as the Protocol to the London Dumping Convention is amended to permit geological storage of those other greenhouse gases. In accordance with that Protocol, it will be an offence to add a waste substance or other matter to a greenhouse gas substance for the purposes of disposal.

¹ The limits of Australia's continental shelf are as declared under s 12 of the *Seas and Submerged Lands Act 1973*.

New greenhouse gas titles

- 1.5. The new kinds of titles established by the Bill correspond generally to the existing OPA petroleum titles. Briefly, the new titles are:
 - a. a greenhouse gas assessment permit (similar to a petroleum exploration permit) which authorises the permittee to explore for a greenhouse gas storage formation and injection site(s);
 - b. a greenhouse gas holding lease (similar to a petroleum retention lease) which enables the lessee to retain tenure over the acreage, if necessary, while a commercial source of greenhouse gas for injection is obtained;
 - c. an injection licence (corresponds to a petroleum production licence) which authorises injection and storage of greenhouse gas;
 - d. a greenhouse gas search authority (similar to a special prospecting authority);
 - e. a greenhouse gas special authority (similar to an access authority);
 - f. a greenhouse gas infrastructure licence.
- 1.6. The pipeline licensing provisions will be expanded to provide for pipelines for greenhouse gas.

Protection of rights under existing petroleum titles

Pre-commencement petroleum title

- 1.7. It is an important feature of the Bill that the rights of 'pre-commencement' petroleum title-holders are given a high level of protection, where there is the potential for adverse impacts from greenhouse gas operations.
- 1.8. A 'pre-commencement' petroleum title is a petroleum exploration permit, petroleum retention lease or petroleum production licence that is in force at the time when the OPA amendments commence, and any future petroleum title in the same series. (This includes a petroleum retention lease granted to the holder of a life-of-field production licence that was itself a pre-commencement title.)

Post-commencement petroleum title

- 1.9. A 'post-commencement' petroleum title is a petroleum exploration permit, petroleum retention lease or petroleum production licence in respect of which the initial exploration permit in the series is granted after the OPA amendments commence.
- 1.10. Note: All greenhouse gas titles are 'post-commencement' in the above sense. Greenhouse gas titles and post-commencement petroleum titles are given an equal level of protection, where there is the potential for adverse impacts between title operations.

Categories of 'storage formation'

- 1.11. The Bill establishes three categories of 'storage formation', with increasingly specific descriptors that correspond to the title-holder's improving level of knowledge about the formation. These categories of formation, and their place in the legislative scheme, are as follows.
- (a) A '**potential greenhouse gas storage formation**' is a part of a geological formation that is suitable, with or without engineering enhancements, for the permanent storage of a greenhouse gas substance (s 15A).
Section 249NA requires a greenhouse gas (GHG) title-holder to notify the responsible Commonwealth Minister if the title-holder reasonably suspects that the title area contains a 'potential greenhouse gas storage formation'.
 - (b) An '**eligible greenhouse gas storage formation**' is a part of a geological formation that is suitable, with or without engineering enhancements, for the permanent storage of a particular amount of a particular greenhouse gas substance injected at a particular point or points over a particular period (s 15B). A GHG title-holder who reasonably believes that the title area contains an 'eligible greenhouse gas storage formation' may apply for a declaration that it is an 'identified greenhouse gas storage formation' – see para (c).
 - (c) An '**identified greenhouse gas storage formation**' is an 'eligible greenhouse gas storage formation' that is declared by the responsible Commonwealth Minister under s 249AU to be an 'identified greenhouse gas storage formation'. For this process, and its central role in the scheme, see paras 4.1 to 4.7 below. An injection licence authorises the injection and storage of a greenhouse gas substance in an 'identified greenhouse gas storage formation'.

2. GREENHOUSE GAS ACREAGE RELEASES—SS 249AJ AND 249AP

- 2.1. Section 249AJ provides for the responsible Commonwealth Minister, by notice published in the *Gazette*, to invite applications for the grant of a work-bid greenhouse gas assessment permit over a block or blocks specified in the notice. Section 249AP makes similar provision in relation to applications for cash-bid GHG assessment permits. These provisions mirror the corresponding petroleum acreage release provisions, except that the person publishing the *Gazette* notice is the responsible Commonwealth Minister instead of the Joint Authority.

3. PART 2A.2—GREENHOUSE GAS ASSESSMENT PERMITS

Overview—Purpose of greenhouse gas assessment permit

- 3.1. A greenhouse gas assessment permit ('GHG assessment permit') corresponds to a petroleum exploration permit. It is the title under which exploration is carried out for a geological formation that is suitable to be used for the injection and permanent storage of a greenhouse gas substance.

- 3.2. When an assessment permittee identifies and proves up a greenhouse gas storage formation, the permittee can apply to the responsible Commonwealth Minister for the declaration of an 'identified greenhouse gas storage formation'. Declaration of an identified greenhouse gas storage formation enables the permittee to proceed to a greenhouse gas retention lease or a greenhouse gas injection licence.

Section 249AC Prohibition of unauthorised exploration for a greenhouse gas storage formation

- 3.3. Section 249AC makes it an offence to explore for a greenhouse gas storage formation or an injection site in an offshore area unless that exploration is authorised by a greenhouse gas assessment permit or is otherwise authorised or required by or under the OPA.
- 3.4. This offence provision is affected by new s 15(2) and (3), which provide that a person 'explores' if the person carries out a seismic survey, or other kind of survey, or if the person takes samples of the seabed or subsoil, for the purpose of discovering a greenhouse gas storage formation or injection site.

Terms and conditions of a GHG assessment permit

Section 249AD Rights conferred by GHG assessment permit

- 3.5. A GHG assessment permit authorises the permittee to explore for a greenhouse gas storage formation that is wholly within the permit area and for an injection site wholly within the permit area (s 249AD(1)(a) and (b)).
- 3.6. The right to explore for a greenhouse gas storage formation extends to all forms of exploration that are used to explore for petroleum, including the making of exploration wells in the permit area. It also extends to injection and storage in a geological formation, on an appraisal basis, of a greenhouse gas substance, air, petroleum or water (s 249AD(1)(c) to (f)). In a case where a GHG exploration well yields petroleum, the permit also authorises the permittee, with the approval of the responsible Commonwealth Minister, to produce petroleum *for the purpose only of appraising the petroleum discovery* (s 249AD(1)(g)). (Any petroleum recovered does not become the property of the permittee.) A GHG permittee cannot be compelled to carry out this appraisal work, however, the absence of appraisal data will make it difficult for the responsible Commonwealth Minister, when considering an application for a subsequent GHG title over the relevant block(s), to reach the necessary state of satisfaction as to the potential impacts of future GHG activities in the block(s).
- 3.7. A GHG assessment permit also authorises the permittee to carry on such operations, and execute such works in the permit area as are necessary for the purposes of carrying on the above exploration activities.

- 3.8. There is no statutory requirement that a substance injected on an appraisal basis be permanently stored, because the very purpose of the injection is to appraise the ability of the storage formation to retain injected substances permanently. It is possible that the substance injected will remain permanently stored but it is also possible that it will not. The quantities injected will be small, however, so escape from the storage formation, even into the atmosphere, should not cause problems. Any appraisal injection will be subject to prior approval by the responsible Commonwealth Minister under section 249AF (see section 249AE(3) below).

Section 249AE Conditions of GHG assessment permits

- 3.9. Section 249AE enables the responsible Commonwealth Minister to grant a GHG assessment permit subject to whatever conditions the Minister thinks appropriate. In addition, s 249AE itself imposes some permit conditions.

Approval of key greenhouse gas operations

- 3.10. Section 249AE(3) makes it a statutory condition of a GHG assessment permit that the permittee will not carry on 'key greenhouse gas operations' unless the responsible Commonwealth Minister has approved the operations under s 249AF. Conditions may be attached to the approval.

Security

- 3.11. Section 249AE(4) also makes it a statutory condition of a permit that, if the responsible Commonwealth Minister at any time requires the permittee to provide security or to top-up any security previously provided, the permit-holder will provide the security or additional security.

Work-bid GHG assessment permits

- 3.12. Section 249AE(5) expressly authorises the responsible Commonwealth Minister to impose conditions on a work-bid GHG assessment permit requiring the carrying out of work or amounts to be spent in carrying out work.

Section 249AF Approval by responsible Commonwealth Minister of key greenhouse gas operations

- 3.13. Section 249AF relates to the statutory condition of a GHG assessment permit that the permittee must obtain the approval of the responsible Commonwealth Minister in order to carry out 'key greenhouse gas operations' in the permit area. These key greenhouse gas operations are GHG exploration activities that it is considered may have impacts of some kind on petroleum operations under a present or future petroleum title under the OPA. (An equivalent requirement to obtain regulatory approval of petroleum exploration activities is imposed on post-commencement petroleum titles that are 'declared' by the responsible Commonwealth Minister. 'Declared' petroleum titles are the ones that the Minister considers may impact on GHG injection and storage.)

3.14. The term **key greenhouse gas operations** is defined in s 6 as:

- making a well;
- injection and storage on an appraisal basis of a greenhouse gas substance, air, petroleum or water;
- a seismic survey or any other kind of survey;
- monitoring the behaviour of a stored greenhouse gas substance; or
- an operation specified in the regulations.

The ‘impacts’ that these operations may have on petroleum operations include not only impacts at the level of geological formations but also physical interference on the surface with a petroleum title-holder’s operations.

Impacts on future petroleum operations – all petroleum titles

3.15. In deciding whether to approve GHG exploration operations, the responsible Commonwealth Minister is required to have regard to potential impacts on petroleum exploration or recovery operations under existing and future petroleum titles.

3.16. If the responsible Commonwealth Minister is satisfied that there is a significant risk that any of the GHG exploration operations will have a significant adverse impact on operations under an existing petroleum title over a block or blocks, or under a future petroleum title over that block or those blocks, the responsible Commonwealth Minister must have regard to the terms of any agreement between the existing petroleum title-holder and the GHG permittee.

Impacts on future petroleum operations – pre-commencement petroleum titles

3.17. For the meaning of ‘pre-commencement’ petroleum title see para 1.8 above

3.18. If the responsible Commonwealth Minister is satisfied that there is a significant risk that the GHG exploration operations will have a significant adverse impact on petroleum exploration or recovery under an existing or future pre-commencement petroleum title over a block or blocks, the responsible Commonwealth Minister must not approve the GHG operations unless the existing petroleum title-holder has agreed to the GHG title-holder carrying on the operations.

Impacts on future petroleum operations – existing post-commencement production licence

3.19. A post-commencement production licence is given the same level of ‘impacts’ protection as a pre-commencement title. That is, if the responsible Commonwealth Minister is satisfied that there is a significant risk that the GHG exploration operations will have a significant adverse impact on operations under an existing production licence, the responsible Commonwealth Minister must not approve the

GHG operations unless the production licensee has agreed to the GHG title-holder carrying on the operations.

Public interest

- 3.20. The responsible Commonwealth Minister must also have regard to the public interest. The express provisions in s 249AF do not limit the matters that the responsible Commonwealth Minister may take into account. The responsible Commonwealth Minister may, for example, consider impacts of the proposed operations on acreage that has not yet been released.

No right to an approval

- 3.21. A GHG assessment permittee who applies for approval of GHG exploration operations does not have an entitlement to be given an approval. For example, even if a petroleum title-holder has agreed to the giving of the responsible Commonwealth Minister's approval, the responsible Commonwealth Minister may refuse to give the approval if the agreement contains terms that the Minister considers are contrary to the public interest.

Section 249AH Duration of greenhouse gas assessment permit

- 3.22. A GHG assessment permit remains in force for 6 years. There is provision for extensions where certain applications have been lodged, as is standard with petroleum titles. A GHG assessment permit cannot be renewed.

Section 249AV Minister may direct GHG assessment permittee to protect petroleum operations

- 3.23. Section 249AV enables the responsible Commonwealth Minister to give a GHG assessment permittee a direction for the purpose of eliminating, mitigating or managing the risk that operations under the permit will have a significant adverse impact on petroleum operations under an existing or future petroleum title.

Obtaining a work-bid greenhouse gas assessment permit

Section 249AJ Release of blocks – Application for work-bid greenhouse gas assessment permit

- 3.24. Section 249AJ provides for the responsible Commonwealth Minister to release acreage for applications for a work-bid GHG assessment permit. Both the acreage release and the process for obtaining a work-bid assessment permit closely mirror the equivalent petroleum provisions.
- 3.25. The application must be accompanied by (among other things) the applicant's proposals for work and expenditure in relation to the block(s). The work bid of the successful applicant will be included in the conditions attached to the grant of the assessment permit.

Section 249AK Grant of work-bid greenhouse gas assessment permit

- 3.26. Where there is only one applicant for a block or blocks, s 249AK provides for the responsible Commonwealth Minister either to give an offer document to that person or to refuse to give a GHG assessment permit to that person.

Section 249AL Ranking of multiple applicants

- 3.27. Where there are two or more applicants for the same block(s), s 249AL provides that the responsible Commonwealth Minister may give an offer document to whichever applicant is 'most deserving' of the grant of an assessment permit. In deciding which applicant is 'most deserving', the responsible Commonwealth Minister must rank the applicants according to criteria made publicly available by the responsible Commonwealth Minister. As with the selection process for the grant of petroleum exploration permits, the published criteria will focus primarily on the extent and quality of an applicant's work program bid.
- 3.28. Where two or more applicants are 'equally deserving' of the grant of a GHG assessment permit, the responsible Commonwealth Minister may invite them to provide details of their proposals for additional work and expenditure in relation to the block(s). The responsible Commonwealth Minister must then have regard to those details in determining which of the equal-ranked applicants is to be offered the permit.
- 3.29. If the applicant to whom an offer document has been given makes a request within the period specified in s 249JF, and provides any security that has been required, the responsible Commonwealth Minister must grant the applicant a GHG assessment permit over the block(s) (s 249AM).

Obtaining a cash-bid greenhouse gas assessment permit

- 3.30. The provisions about obtaining a cash-bid GHG assessment permit are the same as the existing provisions in the OPA about obtaining a cash-bid petroleum exploration permit.

4. DECLARATION OF IDENTIFIED GREENHOUSE GAS STORAGE FORMATION

Overview—Purpose of a declaration of an identified greenhouse gas storage formation

- 4.1. In order for the holder of a GHG assessment permit to advance to a GHG holding lease or an injection licence, the permittee must obtain from the responsible Commonwealth Minister a declaration of a part of a geological formation as an 'identified greenhouse gas storage formation'. The identified GHG storage formation must be wholly situated within the permittee's permit area.
- 4.2. It is possible to have a second or subsequent identified GHG storage formation declared, provided each of them is wholly situated within the title-holder's current

assessment permit area, or within a holding lease or injection licence area that is derived from that original assessment permit area.

- 4.3. This declaration of an identified GHG storage formation is a core document that corresponds to the declaration of a petroleum location. Unlike a petroleum location, however, the declaration of the identified GHG storage formation retains its significance over the whole life of the GHG project. This is because the injection activities that may be carried out under the eventual GHG injection licence will be controlled, via licence conditions, by the matters specified in the declaration of the identified storage formation.

Section 249AU Declaration of identified greenhouse gas storage formation

- 4.4. An application for declaration of an identified GHG storage formation must set out:
- (1) the applicant's reasons for believing that the geological formation is an 'eligible' GHG storage formation – ie that it is suitable for the permanent storage of a particular amount of a particular greenhouse gas substance, etc;
 - (2) the 'fundamental suitability determinants' of the eligible GHG storage formation, ie:
 - (a) the amount of greenhouse gas substance that it is suitable to store;
 - (b) the particular greenhouse gas substance that it is suitable to store;
 - (c) the proposed injection point or points;
 - (d) the proposed injection period;
 - (e) any proposed engineering enhancements;
 - (f) the effective sealing feature, attribute or mechanism that makes it suitable;
 - (3) an estimate of the spatial extent of the eligible GHG storage formation;
 - (4) any further information or analysis that is required.
- 4.5. The declaration will specify the matters in paras (2) and (3) above.

Section 15B Working out the spatial extent of an identified storage formation

- 4.6. It is important to understand the means by which the spatial extent of a storage formation is worked out for the purposes of the declaration of the identified GHG storage formation. This is because the spatial extent of the identified GHG storage formation, as worked out under s 15B, will determine the size of the injection licence area that will eventually be granted. The spatial extent is also important because of the requirement that, in order for a GHG title-holder to obtain a declaration of an

identified GHG storage formation (and eventually a licence), the identified GHG storage formation must be wholly within the title-holder's current title area.

- 4.7. Under s 15B, **the spatial extent** of the identified GHG storage formation is the vertical and horizontal extent of **the expected migration pathway(s)** of the injected greenhouse gas **over a predicted period**. This **predicted period** is:

the proposed injection period + the notional site closing period.

Note 1: The **expected migration pathway** is worked out on the basis of any assumptions and/or methodologies specified in the regulations and the level(s) of probability specified in the regulations.

Note 2: The **notional site closing period** is the period between the end of the proposed injection period and the estimated earliest time when there will be sufficient certainty about the fate of the injected greenhouse gas substance to enable the responsible Commonwealth Minister to grant a **site closing certificate**.

Note 3: For the requirements for the responsible Commonwealth Minister to grant a site closing certificate, see s 249CZF.

Sections 249AUA and 249AUB Variation and revocation of declaration

- 4.8. The responsible Commonwealth Minister may vary the declaration of an identified GHG storage formation either on application by the title-holder or on his own initiative. The responsible Commonwealth Minister may revoke the declaration if it becomes apparent that the identified GHG storage formation is not suitable for the permanent storage of a greenhouse gas substance, for example, as a result of new information about the geology or safety aspects.

5. PART 2A.3—GREENHOUSE GAS HOLDING LEASES

Overview—Purpose of greenhouse gas holding lease

- 5.1. A greenhouse gas holding lease ('GHG holding lease') broadly corresponds to a petroleum retention lease. As is the case with a petroleum retention lease, obtaining a GHG holding lease is not an obligatory step for a GHG assessment permittee in moving towards a greenhouse gas injection licence.
- 5.2. A holder of a GHG assessment permit who has had an identified GHG storage formation declared in the permit area can proceed directly to a greenhouse gas injection licence, if there will be a source of a greenhouse gas substance available to commence injection within 5 years of the grant of the injection licence. A GHG assessment permittee who does *not* have a source of a greenhouse gas substance that will be available to commence injection within 5 years, however, can obtain a GHG holding lease instead. This will enable the lessee to retain tenure over the block(s) to which the identified GHG storage formation extends while the lessee secures a source of greenhouse gas.

- 5.3. A holder of a GHG injection licence also can choose to revert to a GHG holding lease over the same blocks.
- 5.4. The motivation in each of the above cases to obtain a GHG holding lease rather than an injection licence is that, if a GHG injection licensee fails to carry out any injection and storage operations in the licence area for a continuous period of 5 years, the responsible Commonwealth Minister may cancel the injection licence.
- 5.5. The holder of a GHG holding lease can continue to explore for additional storage formations in the lease area (as well as in blocks of the original permit area that the permit is still in force over). If the title-holder finds one or more new storage formations, they can have them declared as identified greenhouse gas storage formations and proceed to storage licence(s) in respect of the blocks to which they extend.

Terms and conditions of a GHG holding lease

Terms and conditions common to GHG permits and leases

- 5.6. Part 2A.3 makes the same provision in relation to GHG holding leases as Part 2A.2 does in relation to GHG assessment permits, with respect to the following matters:
 - Rights conferred by a GHG holding lease (s 249BB) - see paras 3.5 to 3.8 above;
 - Conditions of a GHG holding lease (s 249BC) - see paras 3.9 to 3.12 above
 - Approval by responsible Commonwealth Minister of key GHG operations (s 249BD) - see paras 3.13 to 3.21 above.
 - Responsible Commonwealth Minister may direct GHG holding lessee to protect petroleum operations (s 249BZ) - see para 3.23 above.

Section 249BF, 249BT Duration and renewal of GHG holding lease

- 5.7. A GHG holding lease remains in force for 5 years and can be renewed once.

Who may obtain a GHG holding lease?

Sections 249BH and 249BI Obtaining a GHG holding lease by a GHG assessment permittee

- 5.8. Section 249BH provides for an application for a GHG holding lease by a GHG assessment permittee. The section contains rules about the blocks over which a holding lease can be obtained. In some circumstances, a single lease area may contain multiple identified GHG storage formations. Otherwise, a separate lease must be obtained over the block(s) containing each identified GHG storage formation.

- 5.9. Section 249BI provides that the criterion for the grant of a GHG holding lease is that the responsible Commonwealth Minister is satisfied that the applicant:
- is not, at present, in a position to inject and store a greenhouse gas substance in the identified GHG storage formation (or in any of multiple GHG storage formations); but
 - is likely to be in a position to do so within 15 years.

Sections 249BN and 249BO Obtaining a GHG holding lease by a GHG injection licensee

- 5.10. Section 249BN provides for a GHG injection licensee to apply for a GHG holding lease. The criterion for the grant by the responsible Commonwealth Minister is the same as in the case of an application by a GHG assessment permittee (s 249BO). The reason why an injection licensee may choose to apply for a GHG holding lease is that the injection licensee's expected source of greenhouse gas for injection has failed to materialise, and that, if injection does not commence within 5 years of the grant of the injection licence, the responsible Commonwealth Minister may cancel the licence. Reverting to a GHG holding lease will give the title-holder time to secure a new source of greenhouse gas.

Sections 249BSA and 249BSB 'Special' greenhouse gas holding leases

- 5.11. Special GHG holding leases are granted in certain limited circumstances. A GHG assessment permittee or GHG holding lessee is entitled to be granted a special GHG holding lease if they have applied for a GHG injection licence and the responsible Commonwealth Minister has refused to grant the licence on the ground that there is a significant risk that operations under the injection licence would have a significant adverse impact on petroleum operations under various categories of existing or future petroleum titles.
- 5.12. A special GHG holding lease remains in force indefinitely. It allows a GHG proponent to retain tenure over the blocks in which an identified GHG storage formation is located until such time as the petroleum operations have ceased. The holder of the special GHG lease can then obtain an injection licence on the normal basis.

6. PART 2A.4—GREENHOUSE GAS INJECTION LICENCES

Overview—Greenhouse gas injection licences

- 6.1. A greenhouse gas injection licence ('injection licence') is the injection and storage project licence. It authorises the injection and storage of greenhouse gas in one or more identified GHG storage formations that are wholly situated in the licence area. An injection licence remains in force until injection operations cease, the site closing work program is completed and the licence is surrendered.

- 6.2. The injection licence authorises injection and storage operations in accordance with the specifications that were set out in the declaration of the identified GHG storage formation – see para 4.4 above. That declaration will have been updated (ie varied), as necessary, to take account of any changes in the current title-holder’s proposals, and can be further varied during the term of the injection licence. The specifications become part of the injection licence by being attached as licence conditions. If the declaration is varied during the term of the injection licence, the licence will also be varied so that the two remain consistent.

Role of site plan

- 6.3. An applicant for an injection licence must submit a draft site plan for the approval of the responsible Commonwealth Minister. Approval of the draft site plan is an important part of the process for granting the injection licence. The regulations will set out the matters that must be covered by the site plan. The regulations relating to site plans will be modelled on existing regulations under the PSLA/OPA such as the *Petroleum (Submerged Lands) (Management of Safety on Offshore Facilities) Regulations 1996*.
- 6.4. The site plan will form the basis for the day-to-day regulatory interaction between the injection licensee and the regulator (the delegate of the responsible Commonwealth Minister). The site plan will keep the regulator informed, at an appropriate level of detail, of:
- the geological attributes or features of the storage formation;
 - current and proposed injection and storage operations;
 - the operations and techniques to be used by the licensee to monitor and verify the behaviour of the greenhouse gas over the life of the project.
 - operations management systems, including processes for identification, assessment and management of risks; and
 - predictions as to the short, medium and long term behaviour and fate of the greenhouse gas in the identified storage formation and associated geological formation(s).

- 6.5. The regulations will prohibit the carrying out of any activity under the authority of the injection licence unless a site plan is in force under the regulations and unless the activity is carried out in accordance with the site plan. The site plan will be required to be updated periodically and also whenever there is a material change in the level or kind of risk.

Site closing

- 6.6. When injection and storage operations cease at the end of the project, the licensee will be required to carry out a decommissioning program of work in order to obtain a site-closing certificate. Once the site-closing certificate is issued, the licensee can surrender the title and leave the site.

Section 249CC Prohibition of unauthorised injection and storage of substances in offshore area

- 6.7. Section 249CC makes it an offence to inject or store a substance in the seabed or subsoil in an offshore area unless that injection or storage is authorised by an injection licence or is otherwise authorised or required by or under the OPA.

Terms and conditions of an injection licence

249CD Rights conferred by an injection licence

- 6.8. An injection licence authorises the licensee to inject and store a greenhouse gas substance in an identified greenhouse gas storage formation that is wholly situated in the licence area. The storage formation must be specified in the licence. A licence also authorises exploration in the licence area for further GHG storage formation(s).

249CE Conditions of an injection licence

- 6.9. Section 249CE enables the responsible Commonwealth Minister to grant an injection licence subject to whatever conditions the Minister thinks appropriate. In addition, s 249CE itself imposes the following statutory conditions on the licence.

Conditions – injection and storage operations

- 6.10. Injection and storage operations under the licence must conform to the specifications in the licence with respect to (s 249CE(3)):
- the identified storage formation;
 - the kind of greenhouse gas substance that is injected;
 - the origin of the greenhouse gas substance;
 - the injection point(s);
 - the injection period;
 - the total amount injected;
 - the rate, or range of rates, of injection;
 - the engineering enhancements to the identified storage formation (if any).

The above matters specified in the licence must not be inconsistent with the fundamental suitability determinants set out in the declaration of the identified greenhouse gas storage formation – see para 4.4 above.

Condition –Securities

- 6.11. It is a statutory condition of an injection licence that, if the responsible Commonwealth Minister at any time requires the licensee to provide security or to

top-up any security previously provided, the licensee will provide the security or additional security. (s 249CE(9)).

Condition – Access regime

- 6.12. If the regulations establish a regime for third party access to the identified GHG storage formation and/or the licensee's GHG preparation and injection infrastructure, the licensee will comply with that regime (s 249CE(10), (11)).

Additional conditions

- 6.13. The responsible Commonwealth Minister may, at any time, impose additional conditions (s 249CE(12)).

Section 249CF Duration of GHG injection licence

- 6.14. An injection licence remains in force indefinitely, subject to compliance by the licensee with the Act, regulations, directions and conditions.

Section 249CG Termination of injection licence if no injection operations for 5 years

- 6.15. Similarly to a petroleum production licence, a GHG injection licence can be terminated by the responsible Commonwealth Minister if no injection operations have been carried out in the licence area for a continuous period of 5 years.
- 6.16. If this appears likely to occur, eg because an expected source of greenhouse gas has failed to materialise, the licensee has the option of applying under s 249BN for a GHG holding lease. The licensee will then not run the risk of having the injection licence terminated. The application must be made while the injection licence is still in force.

Obtaining an injection licence by a GHG assessment permittee or holding lessee

Section 249CH Application for injection licence

- 6.17. A GHG assessment permittee or holding lessee in whose title area there is an identified GHG storage formation may apply for an injection licence over the blocks to which the identified GHG storage formation extends (s 249CH).

Section 249CI and 249CJ Grant of an injection licence

- 6.18. Section 249CI sets out the matters of which the responsible Commonwealth Minister must be satisfied when deciding whether to grant an injection licence. These matters are:
- the applicant will be in a position to commence injecting within 5 years of being granted the licence;

- the ‘impacts test’;
- the applicant's technical and financial resources are adequate; and
- the draft site plan satisfies the requirements in the regulations; see paras 6.3 to 6.4 above.

If these three matters are satisfied, the responsible Commonwealth Minister *must* grant the injection licence. The ‘impacts test’ is explained below.

‘Impacts tests’

- 6.19. The responsible Commonwealth Minister must be satisfied that each of the ‘tests’ in (1) to (3) below is met.

Impact on post-commencement petroleum title

(1) Either:

- (a) there is no significant risk that operations under the injection licence will have a significant adverse impact on petroleum operations under –
 - an existing post-commencement petroleum exploration permit or retention lease; or
 - a future production licence over the same block(s) as that existing permit or lease; **or**
- (b) the grant of the injection licence is in the public interest.

Impact on pre-commencement petroleum title or a production licence

(2) Either

- (a) there is no significant risk that operations under the injection licence will have a significant adverse impact on petroleum operations under:
 - an existing or future pre-commencement petroleum title; or
 - an existing petroleum production licence; **or**
- (b) the holder of the affected petroleum title has agreed to the grant of the injection licence **and** the terms of that agreement are approved for registration.

Impact on commercial petroleum

- (3) If the proposed injection licence area overlaps a pre-commencement petroleum title or a production licence area, and a block in the area of overlap contains commercially viable petroleum –

- (a) there is no significant risk of a significant adverse impact on the recovery of the petroleum.

Note that this 'test' refers to a petroleum discovery already made before the application for the injection licence is decided. For discoveries after the injection licence is granted, see 6.28 below.

Obtaining an injection licence by a petroleum production licensee

Section 249CQ Application for injection licence by a production licensee

- 6.20. A petroleum production licensee who has obtained a declaration of an identified GHG storage formation in the production licence area can apply for an injection licence over the blocks to which the identified GHG storage formation extends (s 249CQ). There is a proviso: there must be no GHG assessment permit, holding lease or injection licence in force over any of the blocks that are included in the application.

Section 249CR grant of injection licence

- 6.21. Section 249CR sets out the matters of which the responsible Commonwealth Minister must be satisfied when deciding whether to grant an injection licence to a production licensee. These matters are:
- (i) the applicant will be in a position to commence injecting within 5 years of being granted the licence;
 - (ii) all of the GHG injected will be a by-product of petroleum recovery in the production licence area (s 249CR(c));
 - (iii) various 'impacts test' (s 249CR(d) to (g)); and
 - (iv) the draft site plan satisfies the requirements in the regulations – see paras 6.3 to 6.4 above.

If the responsible Commonwealth Minister is satisfied of these matters, the Minister *may grant* the injection licence.

- 6.22. Only paras (i) and (iv) above represent settled policy. Comments are invited on:
- the circumstances in which a production licensee should be able to obtain an injection licence (on a non-competitive basis) over blocks in the production licence area; and
 - whether there should be any restrictions on the sourcing of the greenhouse gas for injection.

249CT Variation of matters specified in injection licence

- 6.23. An injection licensee may apply to the responsible Commonwealth Minister for a variation of the matters specified in an injection licence. The licence cannot be

varied so that it is inconsistent with the declaration of the identified greenhouse gas storage formation.

Regulatory powers of responsible Commonwealth Minister in relation to operations under injection licences

Section 249CXA Directions to protect geological formations containing petroleum

- 6.24. Under s 249CXA, the responsible Commonwealth Minister may give an injection licensee a direction for the purpose of eliminating, mitigating or managing the risk that operations carried on under the licence could:
- have a significant adverse impact on a geological formation that contains, or is likely to contain, a petroleum pool; or
 - otherwise compromise the exploitation of any petroleum that occurs as a natural resource.

Sections 249CZ and 249CZA Dealing with serious situations

- 6.25. Sections 249CZ and 249CZA confer on the responsible Commonwealth Minister a range of powers for dealing with situations where injection and storage operations do not go as planned.
- 6.26. Section 249CZ defines a ‘serious situation’ as existing if one of the following has happened or is happening, or if there is a significant risk that one of the following will happen:
- leakage of a greenhouse gas substance from an identified GHG storage formation; or
 - an injected greenhouse gas substance behaving otherwise than as predicted in the site plan; or
 - injection or storage of a greenhouse gas substance compromising the geotechnical integrity of a geological formation; or
 - the identified greenhouse gas storage formation not being suitable for the permanent storage of greenhouse gas.
- 6.27. If the responsible Commonwealth Minister is satisfied that a ‘serious situation’ exists, the Minister has power to direct the injection licensee:
- to carry on operations in a manner specified in the direction;
 - to cease or suspend injection at one or more, or all, sites;
 - to inject GHG at one or more sites;
 - to undertake such activities as are specified in the direction for the purpose of eliminating, mitigating, managing or remediating the serious situation;
 - to take, or not to take, such action as is specified in the direction.

Section 249CZC Protection of petroleum discovered in the title area of a pre-commencement petroleum title

- 6.28. Section 249CZC provides for the situation where a GHG injection licence overlaps the area of a pre-commencement petroleum exploration permit, retention lease or production licence held by a person other than the injection licensee and there is a new discovery of petroleum in the area of the overlap. The section applies where –
- (a) the petroleum is commercially viable, or likely to become commercially viable at some time in the future; and
 - (b) there is a significant risk that injection and storage operations under the GHG title will have a significant adverse impact either on recovery of the petroleum or on its commercial viability; and
 - (c) the petroleum title-holder has not agreed in writing to the carrying on of the injection and storage operations.

If Minister considers it is practicable to eliminate the risk

- 6.29. Section 249CZC provides that, if the responsible Commonwealth Minister considers that it is practicable to eliminate the risk to the commercially viable recovery of the petroleum, the Minister must:
- (i) give a direction to the injection licensee for the purpose of eliminating the risk; or
 - (ii) suspend, either for a specified period or indefinitely, all or any of the rights conferred by the injection licence; or
 - (iii) cancel the injection licence.

If Minister considers it is not practicable to eliminate the risk

- 6.30. Section 249CZC provides that, if the responsible Commonwealth Minister considers that it is not practicable to eliminate the risk to the commercially viable recovery of the petroleum, the Minister must:
- (i) give a direction to the injection licensee for the purpose of mitigating, managing or remediating the risk; or
 - (ii) suspend, either for a specified period or indefinitely, all or any of the rights conferred by the injection licence; or
 - (iii) cancel the injection licence.

Regulatory practice

- 6.31. The action that it is appropriate to take in an individual case will depend on the particular circumstances. In practice, the responsible Commonwealth Minister will seek to minimise the disruption to the injection licensee's operations as far as is consistent with carrying out the Minister's responsibilities under the section.

Direction to take action outside licence area

- 6.32. Under s 249CXA, s 249CZA and s 249CZC, the responsible Commonwealth Minister can direct an injection licensee to take action outside the injection licence area. Prior to giving such a direction, the Minister must notify any person who holds a title over the 'action area' and take into account any submissions that the person might make.

7. SITE CLOSING

Overview—Purpose of site closing process

- 7.1. Once injection operations cease permanently in an injection licence area, the licensee must apply for a site closing certificate. This triggers the commencement of the site closing period, during which the injection licensee will be required to carry out a work program corresponding to a petroleum decommissioning process but potentially with additional requirements.
- 7.2. As is the case with a petroleum decommissioning, the injection licensee will be required to plug wells, repair damage to the seabed and remove or otherwise deal with property and equipment. However, an injection licensee who has injected greenhouse gas into a storage formation may also be required to carry out work for the purpose of ensuring that the injected greenhouse gas does not escape into the atmosphere (eg via abandoned petroleum wells) or otherwise migrate unacceptably and so cause damage or loss. The site closing work program will also include extensive monitoring, measurement and verification (MMV) of the behaviour of the injected GHG in the storage formation. The purpose of this is to enable the responsible Commonwealth Minister to achieve sufficient confidence about the likely fate of the injected GHG that the Minister can grant a site closing certificate to the licensee.
- 7.3. When offering the licensee the site closing certificate, the responsible Commonwealth Minister will notify the licensee of the program of post site closing MMV that the Commonwealth proposes to carry out in future years in relation to the storage formation, and the estimated costs of that program. Before receiving the grant of the site closing certificate, the licensee will be required to provide security for the payment of those costs.
- 7.4. Upon receipt of the site closing certificate, the licensee can surrender the licence in good standing.
- 7.5. The formal site closing process only begins when operations cease in the injection licence area as a whole. If the licensee is injecting into two or more identified greenhouse gas storage formations in the one licence area, the licensee may wish to conduct a staged shut-down of injection operations in the different storage formations. In that case, prior to ceasing injection in the first storage formation, the licensee would seek a variation to the site plan to provide for the entire staged shut-

down. The licensee would only apply for a site closing certificate under the Act when injection ceases into the last of the storage formations.

Section 249CZE Application for site closing certificate

- 7.6. An injection licensee who has injected a greenhouse gas substance into one or more identified greenhouse gas storage formations in the licence area must apply for a site closing certificate when injection operations in the whole licence area have ceased permanently. The application must be accompanied by a written report setting out:
- the licensee’s modelling of the behaviour of the greenhouse gas and relevant information and analysis; and
 - the licensee’s assessment of the expected migration pathway(s) and short and long term consequences of the migration; and
 - the licensee’s suggestions for post site closing MMV by the Commonwealth.

Section 249CZFA Deferral of decision

- 7.7. The application for a site closing certificate is the start of the site-closing process. The grant of the site closing certificate is the end of that process. The site closing certificate cannot be given until the licensee has completed the work program that the responsible Commonwealth Minister has directed to be carried out (see para 7.8 below). The Minister also needs to have been given information by the injection licensee that enables him or her to reach the necessary state of confidence about the fate of the greenhouse gas in order to grant the site closing certificate. This may take months or years. Section 249CZFA therefore enables the responsible Commonwealth Minister to defer making a decision on the application for as long as is necessary.

Section 316-311A Site closing directions to injection licensee

- 7.8. During the site closing period, the responsible Commonwealth Minister can direct the injection licensee to carry out the same kinds of remedial work that a petroleum production licensee must carry out in the decommissioning stage of the project. This includes directions to:
- remove property brought into the area by the licensee;
 - plug or close off wells drilled under the licence;
 - provide for the conservation of natural resources in the licence area;
- 7.9. In addition, an injection licensee who has carried out injection and storage operations can be required by the responsible Commonwealth Minister to carry out remedial work on the storage formation and the post site closing migration path, including outside the injection licence area, in order to prevent (eg) escape of GHG

into the atmosphere or unacceptable effects on other resources. For example, an injection licensee might be directed to plug abandoned petroleum exploration wells, whether in the injection licence area or outside it, if modelling shows that they are in the projected migration path of the injected greenhouse gas.

Section 249CZF Issue of site closing certificate

7.10. Section 249CZF sets out the criteria to be applied by the responsible Commonwealth Minister in deciding whether to grant a site closing certificate. They are as follows:

- (a) the Minister may have regard to any relevant matter;
- (b) the Minister must have regard to any significant risk to navigation, fishing, pipeline operations or the enjoyment of native title rights;
- (c) the Minister may refuse to give a certificate if:
 - (i) the greenhouse gas is not behaving as predicted in the site plan;
 - (ii) there is a significant risk of a significant adverse impact on:
 - the conservation or exploitation of natural resources;
 - the geotechnical integrity of a geological formation;
 - the environment; or
 - human health or safety.

Sections 249CZGAA and 249CZGA Pre-certificate notice—Security

7.11. Before granting a site closing certificate, the responsible Commonwealth Minister must give a notice to the injection licensee specifying a program of MMV operations that the Commonwealth proposes to carry out and setting out an estimate of the costs of the program (s 249CZGAA). It is the responsibility of the injection licensee to pay the costs of that work (s 249CZM). Section 249CZGA requires that the injection licensee have given security for payment of those costs before the site closing certificate can be given.

8. OTHER GREENHOUSE GAS TITLES

Part 2A.5—Greenhouse gas search authorities – ss 249GA to 249GJ

- 8.1. Greenhouse gas search authorities correspond to petroleum special prospecting authorities in Part 2.7 of the OPA.
- 8.2. A greenhouse gas search authority authorises the holder, in the authority area, to explore for a greenhouse gas storage site or injection site (other than by drilling of a well) (s 249GB). There must be no greenhouse gas or petroleum permit, lease or licence over the area (s 249GF).

Part 2A.6—Greenhouse gas special authorities – ss 249HA to 249HL

- 8.3. Greenhouse gas special authorities correspond to petroleum access authorities in Part 2.8 of the OPA. The persons who can obtain a greenhouse gas special authority are: the holder of a greenhouse gas assessment permit, holding lease or injection licence, or the holder of a greenhouse gas search authority (s 249HE).
- 8.4. A greenhouse gas special authority authorises the holder to carry on, in the authority area, the operations specified in the authority (s 249HB). The specified operations cannot include the drilling of a well. The operations that can be authorised by a greenhouse gas special authority are operations related to the operations that are being carried on in the authority holder’s assessment permit area, holding lease area, injection licence area or search authority area.

9. PETROLEUM EXPLORATION PERMITS

Overview—Changes to existing OPA provisions about exploration permits

- 9.1. The Bill makes some significant changes to the OPA provisions that establish the rights and obligations of holders of petroleum exploration permits. These statutory modifications will apply only to ‘post-commencement’ exploration permits. (For the meaning of the term ‘post-commencement’ as used in this Readers’ Guide see para 1.9 above.) The most significant changes are:
- the holder of a ‘declared’ exploration permit must obtain the approval of the responsible Commonwealth Minister in order to carry out any ‘key petroleum operations’;
 - the holder of a ‘declared’ exploration permit may be required to construct wells in a manner that facilitates effective plugging;
 - if the holder of any post-commencement exploration permit discovers commercially viable petroleum and applies for a production licence, the responsible Commonwealth Minister will apply an ‘impacts test’ in deciding whether the production licence should be granted.

New terms and conditions of post-commencement exploration permits

Section 79B Declared exploration permits

- 9.2. Section 79B will enable the responsible Commonwealth Minister to determine that a post-commencement exploration permit is a ‘declared’ exploration permit. The determination can take place at the time when the permit is issued, or at any later time.
- 9.3. The responsible Commonwealth Minister may determine that a permit is ‘declared’ if the Minister is satisfied that there is a significant risk that any of the ‘key petroleum operations’ that could be carried on under the exploration permit will have a significant adverse impact on injection and storage operations that are being, or could be, carried on under an existing greenhouse gas title or a future greenhouse

gas title. The responsible Commonwealth Minister can determine that an exploration permit is 'declared' whether or not there is any existing greenhouse gas title in force over the block(s) that the Minister considers may be affected by the petroleum operations.

Section 79 Conditions of a declared exploration permit

- 9.4. Section 79(8) will make it a statutory condition of a 'declared' exploration permit that the permittee will not carry on 'key petroleum operations' unless the responsible Commonwealth Minister has approved the operations under s 79A.
- 9.5. Section 79(10) to (12) provide that, if the responsible Commonwealth Minister approves 'key petroleum operations', the Minister may impose further conditions on the exploration permit. These may include a condition requiring that wells are constructed in a manner, and to a standard, that facilitates plugging of the wells in a way that restores or maintains the suitability of the affected geological formation for storage of greenhouse gas.

Section 79A Declared exploration permit—Approval by responsible Commonwealth Minister of key petroleum operations

- 9.6. 'Key petroleum operations' are petroleum exploration activities that it is considered may have impacts of some kind on injection and storage operations under a present or future greenhouse gas title under the OPA. (An equivalent requirement to obtain regulatory approval of greenhouse gas activities is imposed on all greenhouse gas titles.)
- 9.7. The term key petroleum operations is defined in s 6 as:
- making a well;
 - injecting and/or storing a substance;
 - a seismic survey or any other kind of survey;
 - monitoring the behaviour of a stored substance;
 - taking samples;
 - an operation specified in the regulations.

The 'impacts' that these operations may have on greenhouse gas operations include not only impacts at the level of geological formations but also physical interference on the surface with a greenhouse gas title-holder's operations.

Impacts on future greenhouse gas operations – all GHG titles

- 9.8. In deciding whether to approve 'key petroleum operations', the responsible Commonwealth Minister is required to have regard to potential impacts on greenhouse gas exploration, injection and storage operations under existing and

future greenhouse gas titles. If the responsible Commonwealth Minister is satisfied that there is a significant risk that any of the 'key petroleum operations' will have a significant adverse impact on operations under an existing greenhouse gas title over a block or blocks, or under a future greenhouse gas title over that block or those blocks, the responsible Commonwealth Minister must have regard to the terms of any agreement between the existing greenhouse gas title-holder and the petroleum exploration permittee.

Impacts on operations under an existing GHG injection licence

- 9.9. If the responsible Commonwealth Minister is satisfied that there is a significant risk that the 'key petroleum operations' will have a significant adverse impact on operations under an existing GHG injection licence, the responsible Commonwealth Minister must not approve the petroleum operations unless the injection licensee has agreed to the petroleum title-holder carrying on the operations.

Public interest

- 9.10. The responsible Commonwealth Minister must also have regard to the public interest. The express provisions in s 79A do not limit the matters that the responsible Commonwealth Minister may take into account. The responsible Commonwealth Minister may, for example, consider impacts of the proposed operations on acreage that has not yet been released.

No right to an approval

- 9.11. A petroleum exploration permit-holder does not have an entitlement to have 'key petroleum operations' approved. For example, even if an injection licensee has agreed to the 'key petroleum operations' going ahead, the Minister may refuse to give the approval if the agreement contains terms that the Minister considers are contrary to the public interest.

New 'impacts test' when applying for a production licence

Section 145(d) and (e) Grant of production licence

- 9.12. Section 145 will add new 'impacts tests' to the matters of which the responsible Commonwealth Minister must be satisfied when considering an application for a production licence by a post-commencement exploration permittee or a post-commencement retention lessee. (For the meaning of the term 'post-commencement' as used in this Readers' Guide see para 1.9 above.) These new tests will apply regardless of whether the exploration permit or retention lease is 'declared'. (For the meaning of 'declared', see paras 9.2 and 9.3 above.)
- 9.13. The responsible Commonwealth Minister must be satisfied that each of the 'tests' below is met.

Impact on greenhouse gas assessment permit or holding lease

- (1) Either:
- (a) there is no significant risk that operations under the production licence will have a significant adverse impact on greenhouse gas operations under:
 - an existing greenhouse gas assessment permit or holding lease; or
 - if there is an identified greenhouse gas storage formation in an existing permit area or lease area, a future injection licence over the blocks in which that storage formation is located; **or**
 - (b) the grant of the production licence is in the public interest.

Impact on greenhouse gas injection licence

- (2) Either:
- (a) there is no significant risk that operations under the production licence will have a significant adverse impact on greenhouse gas operations under an existing greenhouse gas injection licence; **or**
 - (b) the holder of the injection licence has agreed to the grant of the production licence **and** the terms of that agreement are approved for registration.

10. PETROLEUM RETENTION LEASES

Overview—Changes to existing OPA provisions about retention leases

- 10.1. The Bill makes similar changes to the OPA provisions that establish the rights and obligations of holders of petroleum retention leases to those it makes in relation to exploration permits. Again, these statutory modifications will apply only to 'post-commencement' retention leases. (For the meaning of the term 'post-commencement' as used in this Readers' Guide see para 1.9 above.) The most significant changes are:
- the holder of a 'declared' retention lease must obtain the approval of the responsible Commonwealth Minister in order to carry out any 'key petroleum operations';
 - the holder of a 'declared' retention lease may be required to construct wells in a manner that facilitates effective plugging;
 - if the holder of a post-commencement retention lease applies for a production licence, the responsible Commonwealth Minister will apply an 'impacts test' in deciding whether the production licence should be granted.

New terms and conditions of post-commencement retention leases

Section 114B Declared retention leases

- 10.2. Section 114B will enable the responsible Commonwealth Minister to determine that a post-commencement retention lease is a 'declared' retention lease. The determination can take place at the time when the lease is issued, or at any later time.
- 10.3. The responsible Commonwealth Minister may determine that a lease is 'declared' if the Minister is satisfied that there is a significant risk that any of the 'key petroleum operations' that could be carried on under the retention lease will have a significant adverse impact on injection and storage operations that are being, or could be, carried on under an existing greenhouse gas title or a future greenhouse gas title. The responsible Commonwealth Minister can determine that a retention lease is 'declared' whether or not there is any existing greenhouse gas title in force over the block(s) that the Minister considers may be affected by the petroleum operations.

Section 114 Conditions of a declared retention lease

- 10.4. Section 114(11) will make it a statutory condition of a 'declared' retention lease that the lessee will not carry on 'key petroleum operations' unless the responsible Commonwealth Minister has approved the operations under s 114A.
- 10.5. Section 114(13) to (15) provide that, if the responsible Commonwealth Minister approves 'key petroleum operations', the Minister may impose further conditions on the retention lease. These may include a condition requiring that wells are constructed in a manner, and to a standard, that facilitates plugging of the wells in a way that restores or maintains the suitability of the affected geological formation for storage of greenhouse gas.

Section 114A Declared retention lease—Approval by responsible Commonwealth Minister of key petroleum operations

- 10.6. Section 114A makes the same provision in relation to approval of 'key petroleum operations' to be carried out under a declared retention lease as s 79A does in relation to a declared exploration permit. See paras 9.6 to 9.11 above.

New 'impacts test' when applying for a production licence

Section 145(d) and (e) Grant of production licence

- 10.7. When a post-commencement retention lessee applies for a production licence, new paras 145(d) and (e) of the OPA will require the application of new 'impacts tests'. OPA paragraphs 145(d) and (e) apply to post-commencement assessment permit-holders and retention lease-holders alike. See paras 9.12 and 9.13 above.

11. PETROLEUM PRODUCTION LICENCES

Overview—Changes to existing OPA provisions about production licences

Existing ability to inject and store under s 137 to be retained

- 11.1. It is intended that holders of petroleum production licences will continue to have the ability that they currently have (subject to obtaining normal regulatory approvals) to do whatever is necessary in the licence area for the purpose of recovering petroleum in the licence area, including:
- (a) injecting methane and/or CO₂ in the licence area for gas recycling or enhanced petroleum recovery; and
 - (b) (subject to approval) injecting for disposal in the licence area methane or CO₂ stripped from the petroleum stream that is recovered in the licence area.
- 11.2. Public comment is invited about the scope of the greenhouse gas injection and storage activities of petroleum titleholders to be covered by this item.

Changes applicable to post-commencement production licences

- 11.3. The Bill makes similar changes to the OPA provisions that establish the rights and obligations of holders of petroleum production licences to those it makes in relation to exploration permits and retention leases. Again, these statutory modifications will apply only to 'post-commencement' production licences. (For the meaning of the term 'post-commencement' as used in this Readers' Guide see para 1.9 above.) The most significant changes are:
- the holder of a 'declared' production licence must obtain the approval of the responsible Commonwealth Minister in order to carry out any 'key petroleum operations';
 - the holder of a 'declared' production licence may be required to construct wells in a manner that facilitates effective plugging;
 - the criteria for the grant of a post-commencement production licence include 'impacts tests'.

New terms and conditions of post-commencement injection licences

Section 138B Declared production licences

- 11.4. Section 138B will enable the responsible Commonwealth Minister to determine that a post-commencement production licence is a 'declared' production licence. The determination can take place at the time when the licence is issued, or at any later time.
- 11.5. The responsible Commonwealth Minister may determine that a production licence is 'declared' if the Minister is satisfied that there is a significant risk that any of the 'key

petroleum operations' that could be carried on under the production licence will have a significant adverse impact on injection and storage operations that are being, or could be, carried on under an existing greenhouse gas title or a future greenhouse gas title. The responsible Commonwealth Minister can determine that a production licence is 'declared' whether or not there is any existing greenhouse gas title in force over the block(s) that the Minister considers may be affected by the petroleum operations.

Section 138 Conditions of a declared production licence

- 11.6. Section 138(10) will make it a statutory condition of a 'declared' production licence that the licensee will not carry on 'key petroleum operations' unless the responsible Commonwealth Minister has approved the operations under s 138A.
- 11.7. Section 138(12) to (14) provide that, if the responsible Commonwealth Minister approves 'key petroleum operations', the Minister may impose further conditions on the production licence. These may include a condition requiring that wells are constructed in a manner, and to a standard, that facilitates plugging of the wells in a way that restores or maintains the suitability of the affected geological formation for storage of greenhouse gas.

Section 138A Declared production licence—Approval by responsible Commonwealth Minister of key petroleum operations

- 11.8. Section 138A makes the same provision in relation to approval of 'key petroleum operations' to be carried out under a declared production licence as s 79A does in relation to a declared exploration permit. See paras 9.6 to 9.11 above.

New 'impacts test' when applying for a production licence

Section 145(d) and (e) Grant of production licence

- 11.9. New paras 145(d) and (e) will require the application of new 'impacts tests' when a post-commencement exploration permit-holder or a post-commencement retention lease-holder applies for a production licence. See paras 9.12 and 9.13 above.