

## Alberta's CCS Disposition Scheme: the Carbon Sequestration Tenure Regulation

By Nigel Bankes

### Regulation commented on:

[Carbon Sequestration Tenure Regulation](#), A.R. 68/2011

The provincial government is making steady progress in implementing its plan to put in place a legal and regulatory framework for carbon capture and storage projects. The province passed legislation in the fall of 2010 (Bill 24, *Carbon Capture and Storage Statutes Amendment Act*, which I blogged [here](#)) to deal with pore space ownership issues and to provide a framework for granting agreements to sequester captured carbon dioxide (CO<sub>2</sub>) in that pore space; and in March 2011 it launched a [Regulatory Framework Assessment](#) (RFA) to review the current regulatory rules.

The most recent step is the promulgation (at the end of April) of the *Carbon Sequestration Tenure Regulation*, Alta. Reg.68/2011. This regulation puts some meat on the framework established by the new Part 9 of the *Mines and Minerals Act* (RSA 2000, c. M-17 (*MMA*)). In particular, it describes in greater detail the elements of the two new forms of agreement (evaluation permits and carbon sequestration leases) and some of the content of monitoring, measuring and verification plans (MMV) and closure plans. The regulations also go some way towards clarifying the relationship between the Department of Energy and the Energy Resources Conservation Board in relation to some of the more technical aspects of MMV programs and closure plans.

### Evaluation permit

An evaluation permit may be granted on application. In addition to fees and rentals an applicant for a permit (s.3) must propose an MMV program that meets certain requirements. In particular the plan must contain (s.7(1)) “an analysis of the likelihood that the operations or activities that may be conducted under the permit will interfere with mineral recovery”. This analysis is required because of a new provision in the *Oil and Gas Conservation Act* (*OGCA*), RSA 2000, c. O-6 (s.39(1.1)) which provides that “The Board shall not grant a CO<sub>2</sub> injection scheme approval unless the lessee of that agreement satisfies the Board that the injection of the captured carbon dioxide will not interfere with (a) the recovery or conservation of oil or gas, or (b) an existing use of the underground formation for the storage of oil or gas.”

A permittee must comply with an approved MMV plan (s.7(2)). Once granted the permit:

.... grants, in accordance with the terms and conditions of the permit, the right to conduct evaluations and testing, including the drilling of wells and injection of substances as approved by the Board, into deep subsurface reservoirs within the

location of the permit to evaluate the geological or geophysical properties of the deep subsurface reservoirs for the purposes of determining their suitability for use for the sequestration of captured carbon dioxide.

Deep subsurface reservoirs are defined as pore space in an underground formation that is deeper than 1,000 metres below the surface. A permit does not grant any right to win, work, or recover minerals. A permit can be granted for an area of up to 73,728 hectares (which is about 284 square miles or a little less than 8 townships). A permit may be grouped (s.8) with other contiguous permits for the purposes of meeting the MMV filing requirements. An evaluation permit is valid for a five year term.

### **Sequestration Lease**

The process for acquiring a sequestration lease follows that outlined above for permits with some additional requirements. The additional requirements are: (1) evidence that the location is suitable for CO<sub>2</sub> sequestration, and (2) a closure plan in addition to the MMV plan. The closure plan must set out (s.18) “a description of the activities satisfactory to the Minister that the lessee will undertake to close down sequestration operations and facilities”. The MMV program must also address (in somewhat more detail than in the permit application) the effect of the proposed operations on mineral recovery. In particular, it must contain (s.15(b)):

.... an analysis of the likelihood that the operations or activities that may be conducted under the carbon sequestration lease will interfere with mineral recovery, based on the geological interpretations and calculations the lessee is required to submit to the Board pursuant to Directive 65 in its application for approval of the injection scheme under the *Oil and Gas Conservation Act*...

The lease grants the same rights as the permit plus the right to inject captured CO<sub>2</sub> (s.9(3)). The size limits for the lease are the same as for a permit as are the grouping rules (s.14).

A lease is granted for an initial term of 15 years. There is no right of renewal (see s.11(1), “The Minister may renew”) but the Minister may renew for successive 15 year terms subject to any terms and conditions prescribed by the Minister at that time - and perhaps only with respect to a portion of the lease area or with respect to certain zones (s.11(2)).

### **Evergreen Rules for MMV Plans and Closure Plans**

The Regulations suggest that the Government is committed to learning by doing and to procedures of adaptive management. Thus, MMV programs for leases and closure plans are only valid for three years and must be successively renewed during the term of the lease and upon lease renewal (s.16 for MMV and s.19 for the closure plan). The closure plan provision also contains the important requirement that the lessee must provide (s.19(3)(c)) “an evaluation of whether the injected captured carbon dioxide has behaved in a manner consistent with the geological interpretations and calculations the lessee submitted to the Board pursuant to Directive 65 in its application for approval of the injection scheme under the *Oil and Gas Conservation Act*”. This is crucial for understanding how the CO<sub>2</sub> plume is performing as against the modeling that was undertaken before injection commenced.

## Analysis and comment

The normal mode of disposition for an agreement under the *MMA* is by way of a competitive bid but the regulations make it clear that the new normal for the purposes of sequestration rights is disposition by means of an application. This makes sense since there is no intention to use the disposition scheme to generate revenues.

The regulations contemplate that the applicant for a permit or lease must provide an MMV plan, and, in the case of a lease, a closure plan; the regulations do not require the applicant to provide any details of its experience in similar activities including such activities as acid gas disposal schemes.

The regulations do not provide the permittee or the lessee with the exclusive right to evaluate and test (including drilling) or an exclusive right to inject captured CO<sub>2</sub> within the area of the permit or lease (contrast, for example, the *Petroleum and Natural Gas Tenure Regulation*, Alta. Reg. 264/97, s.4). It is possible that the text of the permit and lease will clarify this matter. Neither does a permittee obtain a preferential right to acquire a lease out of the area in which it holds a permit. This is perhaps the most puzzling omission. The norm in the industry is that a party may conduct seismic on a speculative basis without requiring the right to obtain an exclusive right; but a party will typically be very reluctant to drill a well without some understanding as to at least a preferential right to obtain the next step in the tenure if it finds something of interest.

The regulations do not require an applicant for either a permit or a lease to provide a proposed work program (except to the extent that the MMV program constitutes a form of work program). The annual rental for the permit and the lease is the same and there is no sliding scale i.e. the rental does not increase over time, even if there is, for example, no injection during the first ten years of a lease. This may create a concern that a lessee may sit on potential sequestration targets; however, the need to update MMV and closure plans may serve as a check to ensure that lessees are diligently continuing to explore the potential of the block. This issue might have been dealt with more explicitly in the regulations.

The regulations define the term “pore space”. Some were puzzled that the fall amendments to the *MMA* (Bill 24) did not define this term. This certainly clarifies things for the purposes of the regulations; whether or not it is effective to clarify the term as used in the deeming provision of the Act is less clear.

The regulations build on the requirements of the *MMA* and *OGCA* in terms of protecting mineral recovery interests; however, they are silent with respect to ensuring the protection of potable groundwater. Part of the response may well be that s.39 of the *OGCA* already provides a procedure to address this sort of environmental concern. My response to that argument is that if it was necessary to amend the *OGCA* to protect mineral recovery interests (in fairly absolutist terms: “will not interfere with”), perhaps the same sort of amendment should have been made to ensure (so far as one can) that CCS projects do not impair groundwater values. A legislative commitment to that as a goal might provide some assurance to rural Albertans concerned about this new use of subsurface resources.

Mention of the public and groundwater issues leads to a final comment about process and timing. CCS projects are of potential concern to members of the public as well as industry. As a result, one might have expected broad consultation with respect to the contents of these regulations. So far as I am aware there has been no consultation on these regulations. Government may have

consulted industry privately but there was no posting of a draft and call for comments. This seems particularly odd in light of the RFA process launched in March. That process is endeavoring to engage a broad range of stakeholders (including ENGOs) - but the RFA has not been engaged in relation to these regulations.

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