Schlumberger

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Submission No:	11
Date Received:	30-6-08
Secretary:	

30th June 2008

Mr Bill Pender,
Secretary,
House of Representatives Standing Committee on Primary Industries and Resources,
Canberra ACT 2601

By email: pir.reps@aph.gov.au

Dear Bill,

Re: Inquiry into the Draft Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill

Please find attached our submission regarding the terms of reference given to the Committee for its review of the draft Offshore Petroleum Amendment (Greenhouse Gas Storage). We applaud the work done by the Federal Government to date in bringing carbon capture and storage (CCS) to the forefront of climate change mitigation measures through the Low Emission Technology Demonstration Fund (LETDF) and, particularly the Otway Basin Pilot Project (OBPP).

I would like to give an introduction to Schlumberger and our involvement in CCS to date which will put perspective on some of our comments later on.

Schlumberger and Carbon Capture & Storage

Since the mid 1990s, Schlumberger has been involved in geological carbon storage projects, providing services for subsurface characterisation and monitoring, whilst also dedicating specific research and development efforts towards technology. We remain at the industry forefront, in part, from our current and active involvement in numerous international forums and organizations dedicated to reducing atmospheric CO2. We are represented at the Carbon Sequestration Leadership Forum (CSLF) and are active members of the International Energy Agency Greenhouse Gas R&D Program (IEA-GHG), and the European Technology Platform on Zero Emission Fossil Fuel Power Plants (ZEP) European Working Groups. We have also been, and continue to be, heavily involved in the CRC for Greenhouse Gas Technologies (CO2CRC) and the Otway Basin Pilot Project.

Demonstration projects

Schlumberger is also involved in larger scale demonstration projects, integrating all the components of the chain: CO_2 capture at the source (power plant or factory), transport, and storage.

Callide Oxyfuel Project, Queensland, Australia
This demonstration project involves conversion of an existing 30 megawatt (MW) unit at Callide A (currently underway) and capture of CO_2. The second stage of the project will commence in 2010 and is expected to continue for up to 5 years. It will involve the injection and storage of ~100,000 tons of captured CO_2 in saline aquifers or depleted oil/gas fields. Schlumberger is a partner in the Callide project consortium and will project manage the second stage (storage of CO_2). Other consortium members include CS Energy,

XSTRATA, IHI, JPOWER, JCOAL, the Australian Coal Association, and the CO_2CRC. The project will cost A$205M and is funded through the Australian Government's LETDF, the Australian Coal Association's COAL21 Fund, as well as funding provided by the Japanese Government and other participants.

Illinois Project, USA

The United States Department of Energy has recently awarded the Midwest Geological Sequestration Consortium (MGSC) a contract to begin a large-scale CCS project in Decatur, Illinois—the first of its kind in North America wherein an unprecedented amount of 'non oil and gas related' CO_2 will be stored in a saline formation. The Illinois State Geological Survey is responsible for the project and has brought in two major partners—Schlumberger and Archer Daniels Midland—to execute it.

As a primary partner, Schlumberger Carbon Services will manage the complete design, construction, and operation of the storage portion of this project, using oilfield subsurface evaluation and integrated project management techniques.

As a method to reduce greenhouse gas emissions, one million tons of CO_2 currently bound for the atmosphere will be captured from an Archer Daniels Midland ethanol plant and, over a period of 3 years, will be injected into the Mount Simon formation—a geological structure spanning the states of Illinois, Kentucky, Indiana, and Ohio The project is designed to test and demonstrate the ability of a geologic formation to safely, permanently, and economically store considerable amounts of CO_2. This project will help to establish design and safety regulations for future CCS projects.

We recognize the value of these large scale demonstration projects in helping move CCS forward in terms of regulatory as well as technological learnings. Arguably the OBPP has been a model project in terms of the stakeholder involvement which ranges from the State and Federal Governments, local Government, the industry and academia. Indeed, it would be doubtful that the project could have already commenced injection, had it not been for the collaborative efforts of all parties involved.

In Australia, as we are not a petroleum producer, we are not APPEA members. As such we seem to be excluded from the "stakeholder group" defined on page 5 of the Regulation Impact Statement document. We request that Schlumberger Carbon Services be added to this reference group. Schlumberger Carbon Services is a new business unit of Schlumberger and is separate from the Oilfield Services divisions of Schlumberger. All comments contained herein reflect the views of Schlumberger Carbon Services.

I would be pleased to expand on any of our comments and look forward to the next stage in the development of policy around this issue.

Yours sincerely,

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We have attempted to answer each of the specific terms of reference given to the Committee

a) Establishes legal certainty for access and property rights for the injection and long-term storage of greenhouse gases (GHGs) in offshore Commonwealth waters;

The establishment of separate title and associated property and access rights is absolutely critical for the CCS industry. Transparency in the bidding and awarding of these titles is also essential for the development of long term injection and storage projects within Commonwealth waters though it must be recognized that the availability of data for prospective storage project proponents is extremely limited given the relative immaturity of this industry compared to the oil and gas industry. The proposed storage acreage release next to existing oil and gas tenements offshore makes it extremely likely that existing operators (oil and gas companies) would seek to apply for this acreage either to potential store CO2 longer term or protect their existing oil and gas operations from any potential CO2 storage project interference. The relative data imbalance between the two industries will preclude any serious new entrants into the CO2 storage business, especially if **existing** operators are allowed to store **exogenous** CO2 at their sites. This recognizes that they currently do have the rights to inject CO2 as a potential enhanced hydrocarbon recovery mechanism, but a grant of storage rights for exogenous CO2 storage would be anti-competitive to the growth of new CO2 storage companies.

It must also be recognized that Geoscience Australia cannot currently provide a detailed data package for storage acreage release in a manner similar to that provided for the new offshore oil and gas tenement data packages. Hence, there are enormous data gaps present in any proposed storage acreage to be released and unless one has access to a range of confidential data (often held by existing operators in the same basin/fields) then there is no incentive to apply for storage acreage being released. The current skills and equipment shortages and corresponding high costs to acquire data pertaining to assessment of a site's storage potential makes it even less attractive as a business compared to the oil and gas industry. We think it unrealistic that storage companies would be in a position to pay large sums upfront to bid for acreage and that the Government should take care to award acreage to those proponents capable of raising the capital required and have access to the project management expertise needed to execute a storage project successfully. These will likely be the oil and gas players, large service companies such as Schlumberger and other global mining companies.

b) Provides a regulatory regime which will enable management of GHG injection and storage activities in a manner which responds to community and industry concerns;

The regulatory regime proposed is reasonable and should place the onus back on the project proponents to show that their project is safe and efficient. A prescriptive approach would be counterproductive as there remains and should remain, common law liability with project proponents. The regulatory regime must also be flexible to allow for an interaction with the forthcoming emissions trading scheme as we would expect to see CCS approved as a carbon mitigation option and there must be a means of crediting CO2 stored through CCS through an approved and independent auditing mechanism. Industry will need certainty around the closure periods of projects and the requirements of the longer term monitoring program to ensure the on-going safe storage of CO2. We suggest a limit of 5-10 years for the post injection - pre-closure/closure junction to be reached. This is not unreasonable given that during the injection phase, the migration pathway of the injected CO2 would have been shown to be predictable and conform to models.

c) Provides a predictable and transparent system to manage the interaction between GHG injection and storage operators with pre-existing and co-existing rights, including, but not limited to, those of petroleum and fishing operators, should these come into conflict;

As mentioned above, the information asymmetry that currently exists between existing oil and gas producers and any new storage project proponent makes it difficult to envisage how a storage project could get up without extremely deep pockets and a huge appetite for risk. The Bill recognizes that existing property rights must be protected and that any overlapping projects must have a commercial agreement between the respective promoters. If the onus is on the storage proponent to show no adverse impact on existing oil and gas operations then they must have access to data held by the oil and gas operator to prove this. The Government should be able to set and enforce a strict timeline on when an agreement must be reached by two parties otherwise it will apply the 'public interest' clause. We envisage most of the potential conflicts to come from overlapping storage and hydrocarbon operations as opposed to storage and fishing operators. One suggestion might be for all exploration and production data to be placed on open file within 1 or 2 years of acquisition.

d) Promotes certainty for investment in injection and storage activities; and

Again, the property rights are an important step around investment certainty for storage projects but are only part of the equation. The price of carbon is equally, if not more, important. Given the dramatic growth in the oil price, the logical option would be to pursue oil and gas developments as fast as possible as storage projects will likely depend on the acquisition of new data to prove up a suitable site for storage, then determine a commercial agreement with a CO2 producer, construct pipelines etc. The risk reward equation doesn't balance for storage projects at present and a carbon price alone may not be sufficient to make such projects economical (at least in the short term).

e) Establishes a legislative framework that provides a model that could be adopted on a national basis.

We recognize that almost all the States and Territories are working storage specific legislation and would hope that a national legislative model can be developed as ultimately storage of CO2 is a national, indeed a global, benefit. There has been a long learning process done through the Otway Basin Pilot Project in terms of legislation and regulations needed for all stakeholders to approve the project. Perhaps one means that the Governments, at both State and Federal levels, can facilitate storage projects would be through a single guiding framework that encompasses all the approvals needed for storage projects.