

9 September 2010

Fuels and Crown Resources Group
Energy and Communications Branch
Ministry of Economic Development
PO Box 1473
Wellington 6140

Dear Sir

Submission: Petroleum Reserves Reporting

1. The Petroleum Exploration and Production Association represent companies involved in exploration and production in New Zealand. This submission is made of behalf of petroleum exploration and production companies operating in New Zealand. The submission answers the questions in the options paper. We have recommended an alternative option to improve reserves reporting which we believe will be cheaper to implement and significantly improve the existing reporting regime.

Executive Summary and Recommendations

2. In summary, the Association's responses to the discussion paper are:
 - Industry believes that existing interpretation of data supplied to MED may be inaccurate. We therefore recommend that MED contract an external consultant to verify that that the data supplied over the past 5 or more years has been accurately recorded and presented in the EDF
 - The Association recommends that the Petroleum Regulations be amended to refer to PRMS as the minimum Standard to which future reserves reporting must comply
 - The Association supports the proposal for increased penalties for non-compliance
 - We recommend that the present P50/P90 reporting regime is retained
 - There is no desire within industry to report upside P10 reserves or contingent resources. These are not relevant nor of sufficient quality to be used for planning purposes. If P10 reserves are to be collected they should not be made public, or if they are, then on a petroleum basin basis to preserve company confidentiality
 - The Association supports up-skilling MED staff for the purposes of cross checking, ensuring compliance, and ensuring the database is correctly maintained. We do not consider it necessary or appropriate for MED staff to be running reservoir models. An appropriately trained person could also bring valuable input into field development plans and licensing issues

Submission

Q1: Can upstream producers confirm that the reserves information reported to Crown Minerals are derived using the Petroleum Resources Management System?

3. Companies advise that they provide information based on either the SEC for P90 and PRMS/SPE for P50. All companies have their figures independently audited every year by a reputable 3rd party reserves auditing body. It should be noted that all companies have legal reserve reporting requirements.

4. The existing Petroleum Regulations require companies to report their petroleum reserves under “good oil field practice”. The Options paper indicates that MED understands this to mean the Petroleum Resources Management System (PRMS) sponsored by the Society of Petroleum engineers.
5. For the avoidance of doubt, PEPANZ recommends that the Petroleum Regulations be amended to refer to PRMS as the minimum Standard to which future reporting must comply. This will remove any ambiguity about what is intended and how companies report, if indeed there is any variation at present.

Recommendation

6. That the Petroleum Regulations be amended to refer to PRMS as the minimum Standard to which future reporting must comply.

Q2: Has the status quo legislative and reporting regime been accurately described?

7. Yes. However it is our view that “good oilfield practice” is not a reasonable standard for the reporting of reserves, and that reserves reporting should be done in the manner recommended above.

Q3: Have the problems/issues with the existing legislative and reporting regime been adequately described?

8. No, not in our opinion, nor is it clear what the problem is. Origin Energy has advised the Association that there have been significant differences between the data it has supplied to MED for inclusion in the Energy Data File, and that which has subsequently been reported. Origin’s submission will contain the details of those errors.
9. The Options paper is predicated on the assertion that there are significant annual swings in reserves which is said to erode confidence in the figures being supplied, and undermines the ability of officials to use the data for planning purposes. The implication is that the industry is responsible for this situation.
10. In our opinion the case has not been made that this is actually occurring. Based on the errors found in the EDF, it seems equally likely that the data being supplied to MED is being misinterpreted or incorrectly analysed. Indeed, the problem may not exist at all.
11. If MED requires a consistent standard to be applied then reserves will be consistently reported. Since PRMS is sufficient for investors in firms to evaluate value, it should be sufficient for the MED’s requirements in evaluating the Crown’s interests.
12. Some of the variability of reserves predictions of late is due to 4 very real facts of the NZ oil and gas environment:
 - a) there is a small population of large fields near the end of field life where a small variation in recovery has a large influence on remaining reserves;
 - b) there is a relatively large number of small fields, with no convincing analogues in the area, in their early stages of life where reserve predictions are subject to large fluctuations as events develop;

- c) product price fluctuations change the reserves to a large extent as they change the expected economic life of fields, thus the reserves that may be booked. In all cases the inaccuracy is unavoidable no matter what reporting standard is invoked;
- d) on-going reservoir management activities in producing fields, like reservoir modelling (including history matching pressures and water), fracking, work-overs, infill drilling, etc. mean that reserves are reassessed regularly, and that the resulting reserves revisions are the natural consequence of active reservoir management. In fact it would be more of a concern if the numbers did not change (except for removal of historical production) because it could mean that a field is not being actively managed.

Recommendation

- 13. Given that industry believes existing interpretation of data supplied to MED may be inaccurate, we recommend MED contract an external consultant to verify that the data supplied over the past 5 or more years has been accurately recorded and presented in the EDF.

Q4: Are there any additional problems/issues which have not been identified?

- 14. We do not believe so.

Q5: Do you have any comments on the proposed objectives?

- 15. We do not understand the purpose of publishing P10 numbers. P50/90 reserves tend to be a realistic expression of field performance in the long term. Provided a standard is used to ensure all operators are consistent in their methods of estimation, P50/90 reserves provide the best reserves for use in policy and decision making by the market. It is standard practice for companies to report both P50 and P90.
- 16. The Options paper suggests that moving to P10 reporting would provide visibility of upside potential at existing fields. We do not agree that this would necessarily be the case.
- 17. Whilst most companies collect P10 numbers and report them internally, it must be understood that the technical rigour applied to the estimation of P10 reserves and Contingent Resources is far less than that applied to P2 reserve estimates. If MED were to simply add P10 estimates together by field it would, in our opinion, provide a far too optimistic forward scenario. (In much the same way that applying the same approach to P90 reserves would result in too pessimistic a forward view of reserves).

Recommendation

- 18. That MED abandons the proposal for collection of P10 reserve information as the numbers are often vague and interpretive.

Objective 1 – ensuring a reasonable degree of consistency in estimation methodologies between fields and companies

Objective 2 – Improving the accuracy and precision of reported reserves

19. Objectives 1 and 2 can be gained by quoting a standard by which reserves must be estimated. For companies that are “listed” and that can demonstrate compliance with PRMS or better, the only additional check should be that numbers reported are consistent between the crown and parent companies/exchanges. The same standard needs to apply to private companies as they too have rigorous standards when reporting reserves.

Objective 3 – Widening the spectrum of reported reserves such that all stakeholders have a view of both the upside and downside potential at existing fields and can manage their risk accordingly

20. While it is understandable that downstream gas users wish to have certainty about New Zealand gas reserves for the purposes of planning and investment, the above features of our industry cannot be avoided. Nor will the introduction of P10 reporting reduce that uncertainty for them – see comments above.
21. Objective 3 is met by including P50 and P90 numbers in the published reserves as these best reflect the “expected” and “reasonably certain” view of the world. They have also been proven by the stock markets as the most relevant in determining oil and gas companies’ future production levels.

Q6: Do you have any comments on the review of international reserves reporting regimes?

22. The selection seems to have targeted two ends of the reporting spectra. Canada would be another useful comparison. The inclusion of Norway is an extreme example because that is a country that takes reporting of “private matters” to an extreme which is not appropriate in a New Zealand context - for example reporting private incomes in local newspapers every year.
23. There is no discussion of the benefits derived by these jurisdictions from the increased levels of reporting. Have decisions in the oil and gas sector in the UK led to better outcomes due to the availability of information versus those in the US?
24. Clearly, the systems used internationally are of interest. However New Zealand must design a system appropriate to the scale and complexity of our industry. If additional costs are to be borne by either the taxpayer or industry there must be a clear and present reason for imposing such costs. We remain unconvinced by the arguments in the discussion paper that the problem is as bad as the Options paper describes.

Q7: Do you have any comments on Option 1, particularly around where additional resources would be best applied (external consultants, GNS Sciences Ltd or MED)?

25. Of all the options presented we believe that elements of Option 1a provide the best model for moving forward. As noted above, we recommend that to ensure the “problem definition” is genuine, MED engage a petroleum engineering consultant to audit the reporting over the past 5 years to determine that the data supplied by industry has been correctly recorded and interpreted.
26. Crown Minerals should also engage a Petroleum Engineering consultant on an annual basis for the EDF compilation to ensure the supplied data is consistently and correctly analysed and summarised for the Crown, thereby avoiding misinterpretation. The consultation paper

acknowledges that there is currently not adequate resource within the MED to do this task properly.

27. The consultant could also cross check material changes for large fields and request confirmation if any inconsistencies or large changes are noted. Having a reliable dataset of historical EDF data is the first step before deciding whether more resources need to be applied, or changes to legislation are required.
28. In our view there is no point in recreating reservoir models for the purposes of checking reserves. There are many different geo-modelling and dynamic simulation models used and some are proprietary systems used by companies. It would add significantly to the compliance costs for industry. We seriously doubt whether all the necessary skills could be obtained in one person to do such a task.
29. The allowance of \$100k is too small if industry standard reservoir simulation or geo-modelling software is anticipated. We would expect a cost of up to \$750,000 to acquire all the necessary software. For example Origin Energy advises that a company licence for the full suite of software required just for the dynamic simulation and analysis they use is around US\$300k + 15-20% per annum to maintain the software.
30. PEPANZ would prefer a long term consulting model to the full time employee model, as the small number of companies operating in New Zealand would not be sufficient to fully occupy an internal resource, and there are a number of consultancies that provide this service.
31. We would have concerns about GNS doing more modelling of reserves due to conflict of interest with its consulting work.

Q8: Do you have any comments on the extent to which Option 2 would meet the stated objectives?

32. There is no demonstration that the UK model would provide a benefit commensurate with the increased costs, and as such, we would question the benefit to New Zealand. The proposal for increased penalties seems reasonable.

Q9: Do you have any comments on the extent to which Option 3 would meet the stated objectives?

33. The costs associated with this option are not justified for an industry of the size of NZ.

Q10: Do you agree/disagree and/or have any comments on the analysis of options undertaken?

PEPANZ recommends an option which was not considered, namely:

- Regulate reporting to PRMS or better
- Increased penalties for non-compliance
- Keep the reporting regime as at present with P90 and P50 numbers reported
- There is no desire within industry to report P10 reserves or contingent resources, these are not relevant nor of sufficient quality to be used for any planning purposes
- If P10 reserves are to be reported, then they should not be made public, or if they are, on a petroleum basin basis only and correctly treated (i.e. statistically).

- Up-skill MED but only for cross checking purposes, ensuring compliance, and ensuring the database is correctly maintained and not for running reservoir models. This person could also bring valuable input into field development plans and licensing issues.

Conclusion

34. The Association would like to meet with officials to discuss this submission.

Sincerely

John Pfahlert
Executive Officer