

Completion report and next steps

Yemen - Petroleum governance

Petroleum Governance Initiative funded Technical Assistance
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In 2007, Yemen's Ministry of Oil and Minerals (MOM) requested the World Bank and the Petroleum Governance Initiative of the Government of Norway to support its efforts in improving its organizational effectiveness in order to mitigate the impact on the oil and gas sector in Yemen. This included support in the formulation of improvements in management of contracts that the MOM negotiates and oversees for oil/gas exploration and production.

Specifically, the funds were used to perform the three following tasks:

- **1. Review of Licensing Framework:** A consulting firm was hired to launch a comprehensive review of the licensing framework in Yemen for oil and gas. The review included proposing well-defined recommendation to improve MOM's existing organizational structure in order to enhance its capability to negotiate and oversee PSA. The review comprised processes, staff competences, data management and linkage between departments, including with PEPA, other ministries and private investors. The consulting firm prepared a number of reports that reviewed the legal environment, fiscal terms, bidding rounds, prospects for the development of off-shore oil and resources and the organizational structure and arrangements of the MOM and its subsidiaries and affiliates. These reports also presented concrete recommendations for the MOM in moving forward. These major findings and recommendations are briefly summarized in *Appendix 1* for a quick overview.
- **2. Review Production Sharing Agreements (PSA):** A consultant was recruited to assist the government review draft gas clauses for the new model production sharing contracts and propose modifications to model PSA.
- **3. Prepare a Background and Issues Report on Subsidy Reform in the Republic of Yemen's Downstream Oil Sector:** A consultant was recruited to assist the Bank's team helping the government in formulating possible measures to reform energy subsidies in Yemen.

The reports compiling the consultant's comments based on the review of the draft model PSA and those reviewing the licensing framework were finalized and cleared by the Bank prior to submission to the client.

To continue with realizing its objectives of: (i) promoting public and private investments in the oil and gas sector to mitigate the effects of declining oil production and secure the supply of hydrocarbon products to the Yemeni economy; and (ii) safeguarding public interest in the

management of oil and gas resources through increased transparency, improved governance and reinforced efficiency of the MOM's organization and procedures, the MOM is now considering the possibility of seeking \$320,000 from the Petroleum Governance Initiative to support a capacity building effort within the Ministry of Oil and Minerals and implement some of the key recommendations proposed under the licensing framework review to address the following challenges. Expertise to be funded will cover the following three dimensions:

- Declining oil production increased the need for more investment in exploration and production and more revenues from hydrocarbon production. The MOM is currently engaged in the development of new rounds of licensing for oil/gas concessions and will require support in facilitating the organization of the 4th bidding round.
- The doubling of the number of blocks operated independently through concessions following the conclusion of the 3rd bidding round in 2007 has placed pressure on MOM to reinforce its capacity to oversee the expected exploration and production of oil. Hence the MOM is seeking support in improving its legal capacity to prepare, negotiate and manage existing production sharing contracts.
- The decline in oil production has also heightened the need for increased public and private investment in exploration. Thus, the MOM is seeking support to facilitate the assessment of fiscal terms (economic analysis) for new fields being explored and for those under production.

Yemen Petroleum Licensing Framework Review Major Findings and Recommendations

Legal Environment

1. The consultant recommended that a petroleum legal framework enshrined in law be put in place both to clarify and streamline the process for the approval and extension of petroleum rights and to regulate all upstream petroleum operations.
2. The consultant recommended that the Safer Exploration and Production Operations Company (SAFER), which has become a player in the Yemeni petroleum sector on account of recent events, should see its performance being monitored based on its ability to be a proficient operator of Block 18 and to develop itself as a centre for experienced Yemeni petroleum industry professionals. Once this has been achieved, SAFER will then be in a position to take steps to continue its evolution into the national oil company for Yemen in the upstream
3. In addition to recommending changes for the revised third round contracts, the consultant recommended that a number of the provisions, namely relating to the extension of rights and the utilization of gas, be extended to contracts already in place in Yemen.

Fiscal Terms (Oil)

1. In terms of absolute values, the State Takes for the Revised 3rd Round PSA Terms are towards the lower end of the scale with values in the ranges from 65% to 72% which is around 10 percentage points lower than many of the selected regimes including neighbors Oman, Egypt, and Pakistan. Only Mauritania and India (with its seven-year income tax holiday) show lower State Takes from oil fields than Yemen's Revised 3rd Round PSA Terms.
2. Assuming a moderate oil price forecast of US\$65/bbl on average over the next 20 years, the Revised 3rd Round PSA terms will establish a minimum economic field size of 50 MMbbl for offshore developments, even when located in deep waters (1000 m). Smaller prospect sizes (even when there is more than one in the same block due to the ring fencing of each development) would not have a positive EMV and therefore would not be attractive to potential investors.
3. When considering a more optimistic price scenario of US\$80/bbl on average for the life of the project, the 25 MMbbls reserve scenarios become economically attractive in shallower water depths (250 m).

Fiscal Terms (Gas)

1. By applying the gas valuation ceiling contained in the Revised 3rd Round PSA Terms, none of the 54 hypothetical gas field developments used in the comparative review provides a return to the investor and therefore any comparison on this basis would be of no value to this benchmarking exercise.
2. None of the fields analyzed in terms of Yemen offshore non-associated gas (up to 880 Bcf) showed an indication of being economic under the terms proposed by PEPA with a gas price of US\$2.50/mcf.

Development of Off-Shore Oil Resources

1. The cost recovery ceiling would be required to be removed or set at least at 90% of gross production after royalty.
2. The maximum contractor profit share should be increased to at least 50% of available profit oil.
3. Adjusting royalty rates would not be sufficient to turn a negative Expected Monetary Value (EMV) block turn into a positive one

Development of Off-Shore Gas Resources

1. With the proposed Revised 3rd Round PSA Terms for Gas, an upstream gas price of at least US\$3.20 is required for the contractor's EMV to breakeven. Any price above this level would encourage investors to develop prospects of 440 Bcf and above in shallow to medium water depths.
2. Other terms than can be easily improved to attract foreign investment in the short term are:
 - a. Exploration Bonuses. Bonuses, especially when large and non-recoverable, can act as a deterrent for an international oil companies (IOC) in areas without proven prospectivity.
 - b. Cost Recovery Ceilings. Increasing the cost recovery ceiling can achieve a relatively strong improvement of the contractor's NPV without having to modify the profit sharing rate.
3. If the gas price cap is significantly increased, there will be scope for MOM to tighten the terms for profit sharing rates and cost recovery ceiling. By tightening fiscal terms tied to the project's profitability rather than setting a very low price cap, the Government can encourage the development of gas prospects while maximizing expected government revenues.

Organizational Arrangements of MOM's General Department of Legal Affairs

Findings

1. The absence of many clear processes for the planning, distribution, allocation and performance of work within the GDLA.
2. Clarity in the administrative division of GDLA into sections.
3. Overlap in the duties and functions of lawyers of the various sections of the GDLA.
4. Time delays in the PSA work within the GDLA.
5. Little exposure of lawyers to all the main category of the GDLA's work.
6. Little widespread proficiency in English language essential to interaction with contractor companies.
7. Access to international legal programs and databases.
8. Little opportunity to be exposed to contractual aspects of petroleum operations in exploration and production and joint operating committees.
9. An absence of effective filing and archives system for the project and legal documentation and related Department correspondence.
10. An absence of electronic archives and filing system.

11. Poor communication regarding the work related interaction between lawyers of GDLA and MOM and PEPA departments and absence of Department staff meetings to discuss work and Department related matters.
12. Empowerment issues regarding the delegation and authority to make decisions and slow and inefficient computer hardware equipment in the GDLA.

Recommendations

1. Develop, approve and adopt a transition plan for GDLA to provide a structure to meet the current and increasing work load in the four major areas the PSA, refineries and gas Markets, mining work and the General Legal Services work during the period. Proposed period for introduction 1-3 months.
2. Engaging expatriate expert trainers with extensive experience and expertise in PSA, refineries and gas markets work in the international oil industry and appointing them in GDLA for specified periods of time to develop expertise and skills. Proposed period for introduction is 1-12 months.
3. Utilization of a business area structure in the GDLA where the work of the GDLA is divided into four major business areas namely PSA work and petroleum downstream and mining work and General Legal Services each led by its Business Area Head and the General Legal Services business area should be divided into three discrete sections namely the legal drafting and advisory section, the investigations and disputes section and the registration, documentation and research section. Proposed period for introduction is 6-12 months.
4. Appointing four senior management positions within the GDLA with responsibility for PSA, petroleum downstream and mining work and for General Legal Service area respectively. Proposed period for introduction is 6-12 months.
5. General Manager of the GDLA should focus on executive decision and policy making, long-term planning and setting the direction for the four business area teams and the projects and delegate much of the daily PSA, downstream and mining contract drafting and negotiation work and other legal work to the respective area Heads. Proposed period for introduction is 6-12 months.
6. Introducing a system of regular staff meetings within the GDLA to discuss, review and exchange views on the work of the Department and various developments in petroleum sector in and outside Yemen and on house keeping and internal matters. Proposed period for introduction: immediately.
7. Introduction of the process to develop training requirements separately from performance review of the staff of the GDLA by way of an annual training plan formulated by each individual staff member in consultation with the management based on an individual assessment of training requirements for the staff concerned. Proposed period for introduction is 6-12 months.
8. Introduction of multidimensional performance appraisal process and system in the GDLA. This measure relates to the introduction of new performance appraisal process and system in GDLA. Proposed period for introduction is 12-24 months.

Bidding Rounds

1. The Government of Yemen must take into consideration factors such as geological prospectivity, technical costs, commercial and political risks and access to markets when

designing the fiscal terms and minimum work commitments requested from international oil companies.

2. Modify pre-qualification rules in order to attract quality foreign investment with experience relevant to the areas under offer.
3. Take into account technical costs and offshore prospectivity when setting minimum bid parameters (fiscal terms and work requirements) and when selecting winning bids.
4. Align government objectives with bid evaluation criteria. Make evaluation rules and weights and government objectives known to bidders in anticipation.
5. Implement promotional and marketing strategy improvements.
6. Carefully re-introduce out-of-bidding negotiations in the form of Application Rounds in order to increase oil production from selected strategic areas.
7. Gas licensing strategies: encourage risk-taking by international investors on the early stages of the development of the gas chain. Oil and gas E&P companies of all sizes play an important role at this stage, since each will look at diverse areas based on their different risk profiles. When the gas resources of the country have been more clearly identified, encourage the participation of a small number of highly competent gas companies by carefully designing pre-qualification criteria to be used on Application Rounds of selected key areas.
8. For natural gas in particular, as opposed to oil, the contractual rules of the domestic market with respect to risk, pricing, ownership and many other factors must be clearly defined for the participants in the market from the start. Clauses for gas pricing need to state clear principles for determining producer prices.
9. The development of the gas chain will involve many changes, variations, concessions and delays that the Government may need to effect as they implement a national gas strategy. In order to be in a position to object unreasonable demands from investors or requests that are insensitive to their political implications, the Government must be well informed in gas monetization practices to protect their own negotiating position and for them to continually keep abreast of industry developments. It is therefore recommended that should a significant gas resource be identified in the country MOM should develop a country wide dynamic gas model.