Briefing

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Natural Resource Governance Institute

How Tanzania Can Secure a Good Deal for its Offshore Gas

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Key messages

- There is a reasonable chance that foreign investment in Tanzania's liquefied natural gas (LNG) project will not happen under current conditions. An economic model of the project suggests a long-term LNG price of USD 11 per mmBtu is needed for investors to earn the return they usually require from LNG projects. Current forecasts by the IMF and World Bank are $7-8 per mmBtu.
- The chances of investment will shrink further if, during the ongoing negotiations of the project's regulatory terms, the government increases taxes and requires companies to share a greater portion of the gas with Tanzania's home market.
- Government officials could wait and hope that conditions improve, but this would delay the point at which the country would start generating benefits from the project. If officials want to accelerate development, without harming long-term gains for the country, they could: adopt a more progressive tax regime, avoid raising the share of gas to be sold to the home market, and establish a legal framework that both company managers and future generations of Tanzanians will trust.

ABOUT THIS DOCUMENT

This briefing is accompanied by an annex, "Baseline Assumptions of the 2018 Tanzania Natural Gas Model," available on NRGI's website.

INTRODUCTION

Tanzanians hope that the natural gas lying 100 kilometers off their coast will transform the economy. Developing these gas fields could provide government with the money to accelerate industrialization, supply power to this otherwise energy-constrained country, and ultimately improve people's lives for generations. Foreign companies have proposed a liquefied natural gas (LNG) project comprising three offshore blocks for which Shell and Equinor hold the majority interest.[1] But to start the project and realize the benefits, the companies and the Tanzanian government have much work to do.

Negotiation of regulatory terms for this project centers on the existing production sharing agreements (PSAs) for the offshore blocks and a planned host government agreement (HGA) for the LNG plant. However, two factors complicate the negotiation. First, when the gas was discovered, the price of LNG in Asia—Tanzania's expected export market—was historically high, reaching USD 18 per million British thermal units (mmBtu). The price has since fallen, and forecasts

1 Shell holds the exploration and production rights to Blocks 1 and 4, with Ophir Energy and Pavilion Energy holding minority interests. Equinor holds the rights to Block 2, with ExxonMobil holding a minority interest.

suggest it will remain low in the longer term—around US$7 per mmBtu.[2] Second, new laws passed in 2017 provide for contracts to be frequently renegotiated, prohibit international arbitration to resolve disputes, and suggest that the government could attempt to significantly raise taxes on gas projects and require more gas to be supplied to the Tanzanian market. This could further delay the project and the benefits Tanzanians might receive.

However, this does not mean that the government should rush into a deal that does not benefit Tanzania. Our analysis supports government efforts to negotiate a good deal for Tanzania while ensuring the investment proceeds. We created an economic model to assess four key decisions that will be made in the negotiation: the project's structure, taxation, pricing of transactions between the upstream and midstream and allocation of gas between the export and domestic markets. The model and data we used are available on the Natural Resource Governance Institute's website and at www.resourcedata.org/dataset/tanzania-lng-analysis.

This is an update of previous analysis to account for new information and changes in company planning.[3]

BASELINE SCENARIO

To understand how the four regulatory decisions affect the likelihood of investment and government revenues, we established a baseline from which to measure these changes. This baseline is informed by our discussions with government and company officials, and our own research. While the government and Equinor have recently started negotiating a project that only comprises Block 2, we think a larger project also involving Blocks 1 and 4 is still more likely given the greater potential benefits.[4] However, notable changes from our previous analysis included a differently-sized LNG plant, lower capital expenditure and lower LNG shipment costs. Our main assumptions are discussed in the annex. (See margin box on page 1.)

Given current price forecasts, there is a reasonable chance that investment in the LNG project will not happen. We estimate that investors need a long-term LNG price of $11 per mmBtu to earn the return they tend to require from LNG projects.[5] Unfortunately, forecasts by the IMF and World Bank are $7-8 per mmBtu. However, forecasts are not always correct, and companies might find more efficient ways to develop the gas, so we do not rule out investment altogether. Nevertheless, the government will need to ensure its approach to the negotiations does not further reduce the likelihood of investment.

2 The World Bank, *Commodities Price Forecast* (2019), www.pubdocs.worldbank.org/en/598821555973008624/CMO-April-2019-Forecasts.pdf. The World Bank provides a projection of the nominal price. To estimate this price in 2018 US dollars, we deflate the nominal price based on an annual inflation rate of 2 percent.

3 Thomas Scurfield and David Manley. *Negotiating Tanzania's Gas Future: What Matters for Investment and Government Revenues?* (Natural Resource Governance Institute, 2017), www.resourcegovernance.org/analysis-tools/publications/negotiating-tanzania-gas-future-what-matters-investment-and-government.

4 We will need to amend our assumptions and do further analysis if the likelihood of the former increases.

5 We previously estimated a break-even price of $14 per mmBtu. New information and changes in company planning allowed us to reduce our estimate.

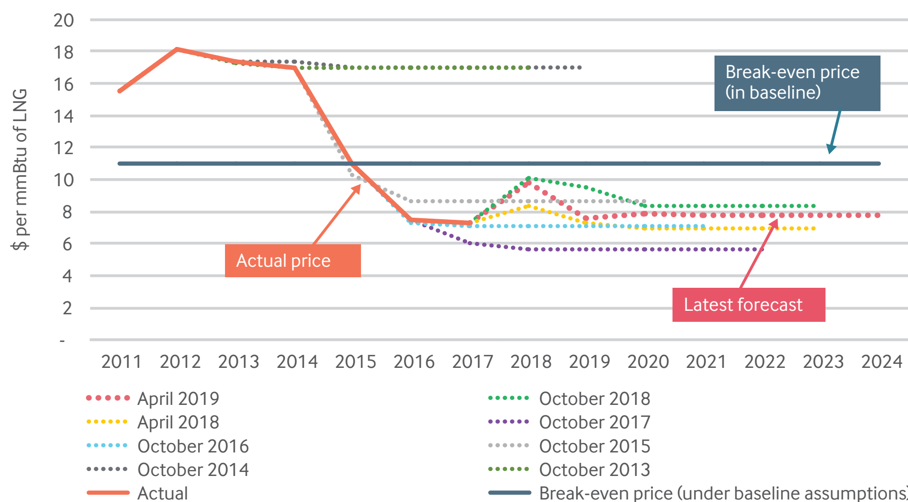

Figure 1. IMF LNG price forecasts and estimated break-even price[6]

ANALYSIS OF FOUR DECISIONS TO BE MADE IN THE HGA NEGOTIATION

Considering the uncertain investment prospects, we analyzed four of the most important decisions that will be made during the negotiation: the project's structure, taxation, pricing of transactions between the upstream and midstream, and share of gas between the export and domestic markets. We focus on three of these decisions below. We did not find the project structure had a significant impact on investor returns and government revenues and understand that the parties will agree to a segmented structure—with the upstream and midstream regulated and taxed as different entities rather than as one entity. We therefore do not discuss this decision further.

1. The stricter fiscal terms of the 2013 Model Production Sharing Agreement (2013 MPSA) and recent legislation would, if implemented, make investment less likely, but reducing taxes to encourage investment is also risky. The PSAs already contain upstream fiscal regimes, while the midstream fiscal regime is to be established in the HGA. But for most oil and gas projects, the upstream rather than the midstream generates the largest profit margins, and therefore the LNG plant is likely to be taxed less than the upstream. Accordingly, to significantly increase taxes, the government would have to renegotiate the PSAs. While the outcome of a recently completed government review of Tanzania's PSAs is unknown, this may be its intention.[7] The 2013 MPSA and recent legislation impose a much higher tax take than what we believe is in the existing PSAs—and higher than those of other African gas producers.[8,9] However, if the government sought these higher tax terms, we estimate the price at which the LNG project would break even rises to a highly unlikely price of $17 per mmBtu.

6 Price for Indonesian LNG at point of delivery to Japan including cost, insurance and freight. International Monetary Fund, "World Economic Outlook Database," www.imf.org/external/pubs/ft/weo/2019/01/weodata/index.aspx.

7 Nasongela Kilyinga, "AG completes review of 11 gas pacts," Daily News, 30 May 2019, www.dailynews.co.tz/news/2019-05-305cef8647f10c8.aspx.

8 Since the 2013 MPSA, provisions in the Finance Act 2016 and the Written Laws (Miscellaneous Amendments) Act 2017 have further tightened the generally applicable regime.

9 Global Data. *Gas Commercialisation Strategies in Sub-Saharan Africa* (2016).

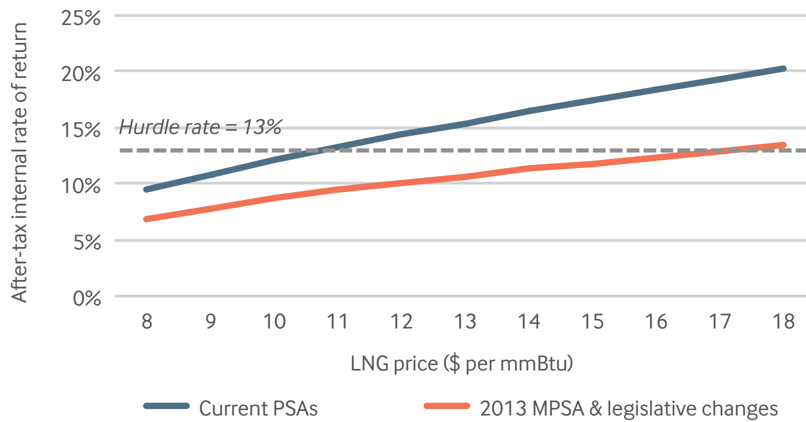

Figure 2. Estimated after-tax internal rate of return with the current PSAs, and with the 2013 MPSA and recent legislation

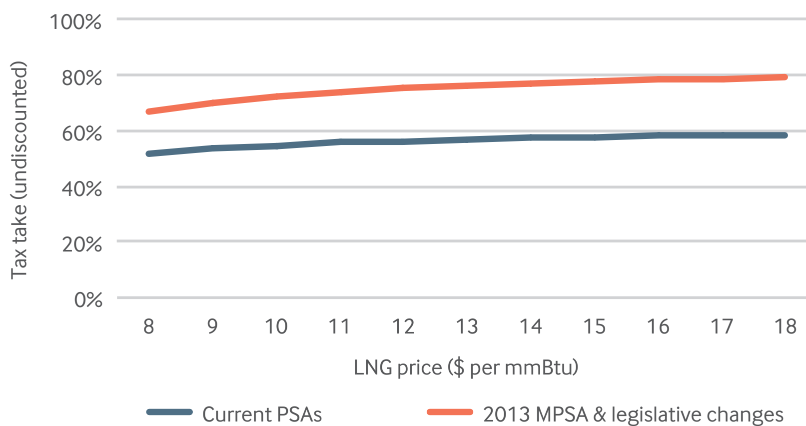

Figure 3. Estimated tax take with the current PSAs and with the 2013 MPSA and recent legislation

Conversely, moving in the opposite direction and succumbing to company pressure to reduce taxes is also fraught with risk, as the history of Tanzania's taxation of the mining sector illustrates. When attracting investors to the country's nascent mining sector in the 1990s, the government set low taxes only to see gold prices and companies' profits rise without a corresponding rise in government revenues.

2. While cheap gas for the domestic market could have benefits for Tanzania, the quantity and price of the domestic market obligation (DMO) will impact investors' returns and the government's revenues. The PSAs establish the share of gas to be supplied to the Tanzanian market rather than exported, but the Petroleum Act of 2015 sets out a larger share.[10] The government is expected to purchase a significant amount of this gas, and therefore it will also have a significant influence on the price. Supplying more gas to the domestic market, especially at a low price, could significantly benefit Tanzanians. However, this has consequences. The domestic market is small and may be slow to develop and selling a large amount of gas to the small domestic market might lower prices even more. Low prices would limit the companies' returns, and limit tax revenues taken from companies' profits. The government could buy gas from companies at a price closer to the export price (minus liquefaction and shipping costs), while still selling gas cheap to Tanzanians. But this puts the burden on the government, to be paid by raising more debt or diverting government funds from other uses.

10 While the PSAs for the offshore blocks contain a DMO of 8-10 percent of production, the Petroleum Act requires the offshore blocks to satisfy domestic demand up to the amount of profit gas.

3. Regulating the tolling fee may prevent companies from avoiding their taxes but needs to ensure the LNG plant earns a sufficient return. Because the companies operating the gas fields will also be the majority owners of the LNG plant, they will have an incentive to set the tolling fee (also known as the liquefaction charge) to reduce their overall tax payments. They might do this by setting a high tolling fee to offset their upstream profits (which are likely to be taxed heavily) and increase their midstream profits (which are likely to be taxed lightly). To prevent this, the government could set a maximum tolling fee that the companies can charge. However, an excessively low tolling fee could reduce the returns from the LNG project to the extent that it impacts investment prospects. Setting a tolling fee that strikes this balance is difficult. Looking at what other LNG plants charge is a good rule of thumb, but the government will need to account for the project's specific economics, ownership structure and fiscal regimes.

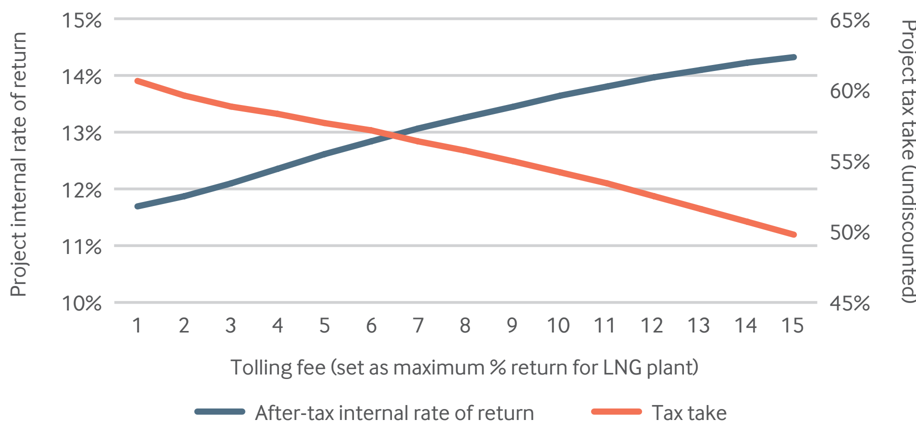

Figure 4. Estimated impact of LNG plant returns on project returns and tax take (with LNG price of $11)

CONCLUSION

Low gas prices and recent rule changes create a very challenging context for negotiation for both parties. Given this, the government has two options.

First, it could wait for gas prices to rise, and perhaps then impose stricter terms. However, this would delay benefits to Tanzanians, perhaps for a generation. The sooner government earns money, the sooner it can spend the money. We estimate that the project starting just one year later than currently expected would reduce government revenues by $900 million in present value terms (with a discount rate of 10 percent).

Second, rather than negotiating stricter terms, the government could instead improve investment prospects. However, doing so risks giving the companies too much, at the expense of government. How can the government strike the right balance? In three ways:

A. Tax. The government could lower taxes. However, government officials will want to avoid past mistakes with the mining sector. They could do this by setting taxes that impose a low burden when company profits are low but automatically rise as profits rise—in other words making the regime more progressive. While this should be done carefully as it implies the government receives less revenues when profits are low and involves taxes that are more difficult to administer, we think greater progressivity would still be beneficial.

B. Domestic market obligation. The government could lower the DMO and buy this gas at a price similar to the LNG price. It could reduce the impact of more expensive gas being supplied to the Tanzanian market by incentivizing greater exploration of onshore gas. Further onshore discoveries could potentially fill any gap left by the LNG project. Further study of the costs and benefits of these approaches would be useful.

C. Business and governance structure. The government could provide greater certainty to investors. It could reconsider some of the provisions in the new laws, at least temporarily, and provide more clarity on others through amendments or regulations. For example, the government could reconsider a full move away from international arbitration until investors are confident that they will be consulted on legislative changes that impact them, and they trust the independence and objectivity of Tanzanian courts. In the interim, the government could permit the use of international arbitration but only after the exhaustion of local remedies.[11] One area in particular need of clarifying is the renegotiation of contracts that parliament deems to be "unconscionable."[12] Currently, the criteria for an unconscionable term could potentially cover any contractual terms viewed to be against Tanzanian interests, which would make any deal between the government and companies inherently unstable.

Ensuring stable regulations in the future will also require a transparent approach that Tanzanians' trust. Public information on the deal and ongoing operations will encourage government officials and companies to strike a deal that is in Tanzanian's long-term interest, and for the public to accept the deal that the government makes. With the right contextual explanation, it will also set realistic public expectations. A good first step—and one already required by law—would be to disclose the PSAs now and the HGA document once concluded.

At this juncture, the gas sector's prospects are in the balance. By taking careful and transparent decisions and making improvements in the wider business climate, the government can give the country its best chance of realizing the benefits offered by its offshore reserves.

11 This approach is set out in the South African Development Community and East African Community model bilateral investment treaties and provided in South African law. It may still face obstacles. Not least because it is inconsistent with several of Tanzania's existing investment treaties. However, it is unlikely to have such a significant impact on investor sentiment and would allow for the independence and objectivity of Tanzanian courts to be tested and demonstrated. For a discussion on the exhaustion of local remedies rule, see: Martin Dietrich Brauch, *Exhaustion of Local Remedies in International Investment Law* (International Institute for Sustainable Development, 2017), www.iisd.org/sites/default/files/publications/best-practices-exhaustion-local-remedies-law-investment-en.pdf.

12 Other areas in need of greater clarity are discussed in: Nicola Woodroffe, Matt Genasci and Thomas Scurfield. *Tanzania's New Natural Resources Legislation: What Will Change?* (Natural Resource Governance Institute, 2017), www.resourcegovernance.org/analysis-tools/publications/tanzania-new-natural-resources-legislation-what-will-change.

REFERENCES

Brauch, Martin Dietrich. *Exhaustion of Local Remedies in International Investment Law* International Institute for Sustainable Development, 2017. www.iisd.org/sites/default/files/publications/best-practices-exhaustion-local-remedies-law-investment-en.pdf

Global Data. *Gas Commercialisation Strategies in Sub-Saharan Africa*. Webinar, 16 November 2016. No longer available online.

International Monetary Fund. "World Economic Outlook Database." Accessed 3 July 2019. www.imf.org/external/pubs/ft/weo/2019/01/weodata/index.aspx

Kilyinga, Nasongela. "AG completes review of 11 gas pacts." *Daily News*, 30 May 2019. www.dailynews.co.tz/news/2019-05-305cef8647f10c8.aspx

Natural Resource Governance Institute. NRGI LNG model for Tanzania. 2019. www.resourcedata.org/dataset/tanzania-lng-analysis

Scurfield, Thomas and David Manley. *Negotiating Tanzania's Gas Future: What Matters for Investment and Government Revenues?* Natural Resource Governance Institute, 2017. www.resourcegovernance.org/analysis-tools/publications/negotiating-tanzania-gas-future-what-matters-investment-and-government

Woodroffe, Nicola, Matt Genasci and Thomas Scurfield. *Tanzania's New Natural Resources Legislation: What Will Change?* Natural Resource Governance Institute, 2017. www.resourcegovernance.org/analysis-tools/publications/tanzania-new-natural-resources-legislation-what-will-change

The World Bank. *Commodities Price Forecast*. 2019. pubdocs.worldbank.org/en/598821555973008624/CMO-April-2019-Forecasts.pdf

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