

# IMPROVEMENT IN THE SYSTEMATICS OF OIL AND GAS AUCTIONS, MAKING ECONOMICALLY VIABLE ONSHORE SMALL FIELDS AND INCREASING GAS TRANSPORT CAPACITY IN BRAZIL

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# Summary

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# Introduction

- The discoveries of shale gas were a revolution not only for the oil and gas industry, but for the production and generation of energy (IEA, 2017)
- The discoveries of shale gas reserves have favored the growth of several countries worldwide
- The United States, for example, have moved from a gas importer to a gas exporter, which is a very important factor for a country's energy security (EIA, 2018)
- Regulatory changes and government incentives were crucial for countries such as the US, which have become a world leader in the natural gas market
- Lessons can be learned from these experiences to favor other countries

# Objective

- The purpose of this article is to propose improvements in bids for onshore oil and gas fields, with a focus on onshore shale gas fields in Brazil, in conjunction with public calls for the construction of new gas pipelines

# Overview of/on shale gas regulation in US

- In 2019, the US produced 33.6 Bcf of natural gas, 25.5 Bcf of which was only shale gas
- According to Sundback et al (2021), this large production is mostly due to US regulatory policy that mandates property law
- While the particulars of state laws vary across the US, rights to oil and natural gas extracted from the ground are generally held by the surface landowner
- The mineral interest in a property can be sold separately from the surface portion of property
- Rights to oil and natural gas can also be split from each other, and so can rights to producing from different strata below the property
- Mineral interest owners can typically occupy the surface of a property to extract oil and natural gas
- Current US federal policy encourages domestic production of oil and natural gas and this policy has been implemented in multiple ways including:
  - ✓ Issuing executive orders to ease restrictions associated with fracking
  - ✓ Repealing prior bans on certain offshore drilling locations
  - ✓ Permitting the construction of certain oil pipelines by easing environmental regulations

# Overview of/on shale gas regulation in Brazil

- In Brazil, mineral resources, including those in the underground, are considered government assets by law
- Thus, the federal government, through the oil & gas national regulatory agency, ANP, organizes bidding rounds that gives the right to explore and produce oil and natural gas
- This juridical frame established in Brazil makes oil and gas E&P activities less attractive to investors when compared to the US model, once it requires more bureaucratic steps to be overcome

# Pipeline regulation in US and Brazil

- In US, FERC has jurisdiction over the operation of interstate natural gas pipelines under the Natural Gas Act (NGA) and the Natural Gas Policy Act (NGPA)
- FERC requires interstate natural gas pipelines to provide non-discriminatory open access to their pipeline systems, so the pipelines must sell service through existing uncontracted capacity to customers that are creditworthy (FERC, 2021)
- The pipeline network US has about 3 million miles of mainline and other secondary pipelines that link natural gas production areas and storage facilities with consumers
- To date, Brazil has only 28 thousand miles of mainline which is a small network area that prevents the growth of the gas sector in the country.
- However, the new Brazilian gas law that alters the regulation of natural gas transportation, should encourage the construction of new gas pipeline lines and thus create new incentives to E&P investments

# Proposing regulatory improvements for onshore small fields

- Aiming to enable the concession of new onshore small fields as well as the construction of new gas pipelines article proposes that the bidding rounds organized by the regulatory agency, ANP, should be carried out in conjunction with public calls for new transport pipelines
- Thus, in order to make gas production economically feasible, especially for onshore shale gas fields, and to increase the amount of gas available for new pipeline projects, a unique bid system involving the rights of exploring shale gas fields and profiting from the construction of new pipelines can be beneficial to the country according to interviews carried out with prospective investors



# Final remarks

- One of the problems faced in infant energy infrastructure networks is the unbalance between E&P activities and the capacity to transport the output. Joint bids for E&P of shale gas associated with the concession of pipelines can draw possible synergies, reducing risks, and thus make the auctions more attractive to potential investors
- In this way, investors that will explore and produce natural gas will be guaranteed that the production will be fully transported to its final destination
- In the same way, investors of the new gas pipelines will count with natural gas to be transported and thus traded
- Naturally, detailed regulation will be needed to support joint auctions, and this new regulation can be addressed with regards to the principles of social and environmental governance that guides the deliberation of local regulatory agency

# Main references

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# Thank you for you attention

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