

UNCERTAINTY IN GAS MARKET DESIGN AND REGULATION. THE CASE OF INDONESIA.

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Overview

Several countries outside North America and Europe have tried to open gas markets, by following either the European model of Third Party Access to transportation pipelines and other essential facilities, or the North American approach of strong unbundling of network facilities from supply. Yet some of them have chosen an intermediate approach.

Indonesia is an interesting case. It owns large reserves and has long been a net gas exporter. Yet the development of the domestic market has been limited, and probably well below its potential. Relatively high prices are both a consequence of this limited development and the cause of its slowness, as they hamper effective competitiveness of gas versus other energy sources and the achievement of significant economies of scale.

This paper shows how this outcome may be the result of a lingering uncertainty in the choice of a market model.

Indonesia's gas industry is formally free and end user price regulation is limited to a minor part of the market. However, in fact the industry is dominated by a large state-owned transmission, distribution and supply company.

On the other hand, pipelines are formally regulated and subject to third party access. This setting has often discouraged the dominant and other companies from developing new pipelines, out of fear that these may be used by competitors. Moreover, use of gas is subject to administrative authorisation after government-mandated allocation criteria, which further hamper the workings of the market.

Methods

In order to assess the effects of this market design, the main focus is on prices. The paper analyses two classes of prices:

- Network tariffs for access to transmission and distribution pipelines;
- End user prices.

In both cases, prices as well as key cost drivers are compared in detail with those of similar operators in other countries. Results were assessed and discussed as part of a research project undertaken by the Florence School of Regulation on behalf and in collaboration with the main midstream operator.

The analyses considers in detail the key price components, i.e. the asset base, rates of return, depreciation, operational expenditure, upstream gas purchase prices and trading margins. Each component is compared with the corresponding values of several operators, having regard for the operational conditions of the companies.

Results

The project found that:

- Unit costs of laid pipelines and other assets are comparably high with respect to those of similar companies in Europe and Middle East
- depreciation criteria adopted by the dominant company (and supported by the regulator) are unusual and lead to very high network usage tariffs
- non-tariff access provisions have discouraged effective TPA;
- gas purchase prices are higher than those practised for export gas and relatively high for a producing and net exporting country;
- operational expenditure and trading margins are similar to those of peer operators;
- tariff design occurs on an individual pipeline basis, but no substantial pipe-to-pipe competition occurs;
- rates of return are consistent with the regulatory practice of more developed markets, but are comparatively higher due to macroeconomic factors.

Despite the high prices and high load factors of its main transmission assets, the dominant company reported its reluctance to expand the network in the wake of possible access by other shippers and risk of losing the most profitable end users. In fact, several key pipelines are congested, while others are underdeveloped.

Overall, the development of gas consumption in the country seems to underperform with respect to its potential.

Conclusions

Under unclear regulatory conditions, dominant as well as other companies reduce investments and charge high network tariffs and gas prices. On the other hand, entry into the market by either TPA or construction of competing infrastructure is prevented by the market power of the incumbent, administrative gas allocation constraints, and limited regulatory control. This restricts the opportunity to invest to large consumers, satisfying their own needs (few power, oil and fertilizer producers) and prevents the development of effective competition.

Under this condition, Indonesia is experiencing low market growth rates and comparably high prices (among the highest of self-sufficient countries), as well as limited market growth rates.

The potential of Indonesia's gas market growth could be better exploited if:

- the country chose a clear market design model, which could be either the establishment of a European style regulated transmission operator or of a U.S. style separation of current dominant companies so as to promote pipe-to-pipe competition between unbundled companies. Market size suggests a preference for the European model;
- regulation of transportation tariffs was aligned with technical and economic criteria adopted in advanced markets, with a view to reduce them in return for much lower risk;
- investment were enhanced by protecting the capacity rights of investors or their monopoly rights for a suitable time;
- competition by gas suppliers were encouraged by establishing a level playing field, as well as clear access provisions to networks and gas supplies.