

# Perspectivas de la Regulacion del Gas

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# Overview

Today's presentation addresses two important issues in natural gas regulation in Colombia

1. Efficiency vs. Cost Recovery in Rate Regulation
2. Building Trust in Regulatory Institutions

First issue is technical, second is broad and thematic

Time permitting, may also discuss international market integration, gas supply prices, and US LNG developments

# Efficiency vs. Financial Stability

Promoting efficiency and ensuring financial stability are two top criteria in Colombia's natural gas framework

Framework says there is no inherent conflict between these objectives

True in theory but not always in practice

- Attempts to recover only “efficient” costs in rates can and sometimes does lead regulators to set rates well below reasonable and observed costs
- Appropriate only for inefficient operating costs or wasteful/unnecessary capital assets

# Difficulties of Efficiency Measurement

The problem is that measuring “efficiency” is extremely difficult and *never* an exact science

>>> voice of experience, undertaken and offered expert witness testimony on numerous efficiency, benchmarking, and productivity studies around the world

There is always uncertainty in evaluating a utility’s efficiency; regulation should appreciate and take account of this uncertainty:

- When referencing a study
- When *applying* the results of a study

# Examples of Bad Benchmarking Applications

## First Electricity Distribution Price Review in Netherlands

Data Envelope Analysis (DEA) study found “efficiency gaps” of 40% or more for some Dutch distributors

Regulators translated these DEA results *directly* into X factors that eliminated those “efficiency gaps” from rates in the five years of plan, to get all companies to “frontier” cost and performance levels

X factors of 8% for some distributors

Companies protested, regulatory order voided and new rate review took place

# Examples of Bad Benchmarking (Con't)

## Second Price Cap Review for Electricity Distributors in New Zealand

Econometric and unit cost benchmarking study in 2003 ranked NZ distributors from 1 to 27, used these rankings in part to set X factors

Next review in 2008 updated earlier benchmarking study, but found the ranking of distributors was nearly the *opposite* of earlier study (e.g. number 1 in 2003 was number 27 in 2008)

Companies went to Parliament, got review delayed and Electricity and Gas Laws amended to make it *illegal* to use benchmarking to set distribution rates

No benchmarking in 2009 or 2013 reviews

# Benchmarking in Colombia

Benchmarking used to set recovery of various costs in Colombian natural gas regulation

- DEA for gas distribution OM&A costs
- Efficient unit prices for gas distribution capital assets
- Allowed average construction costs for gas transportation pipelines

CREG also sometimes imposes “frontier” cost or performance standards on all utilities

# Benchmarking in Colombia (Con't)

Several concerns with CREG's attempts to recover only efficient costs via benchmarking

1. Empirical methods don't deal well with uncertainty
  - >>> econometric cost benchmarking or stochastic frontier analysis quantify uncertainty and allow *hypothesis tests* on whether there is a "statistically significant" difference in company's measured efficiency from average efficiency
2. Empirical methods somewhat inflexible for capital expenditure regulation
  - >>> the "Information Quality Incentive used in UK deserves consideration



# Benchmarking in Colombia (Con't)

## 3. Not reasonable to expect *all* utilities in an industry to exhibit frontier performance levels

- In competitive markets, firms with average performance levels achieve average returns (which recover their costs)
- Firms on the performance 'frontier' in competitive markets earn above-average returns (e.g. Apple, Google)
- Utilities need "room" to outperform the performance standard to improve their performance and earnings

>>> Since regulation is supposed to replicate the outcomes and incentives of competitive markets, regulators should not impose "frontier" performance standards in the rates of regulated utilities **unless** they also reward firms on the frontier with a higher allowed rate of return

# Trust and Regulatory Institutions

Mr. Celia's presentation cited the lack of trust between the natural gas industry and CREG as one of the industry's most important problems (not just regulatory problems)

One example of lack of trust: scheduled distribution rate review has been delayed for seven years

Interesting parallel example: Public Utility Authority of Israel and the Israel Electric Company

# Trust and Regulatory Institutions (Con't)

PUA was supposed to update IEC rates, but stalled for over seven years

In 2013, PUA began a rate review and hired Navigant Consulting (including myself) to advise on the review of both IEC and Jerusalem Electricity Distribution company

Rate review made clear the lack of trust between PUA and IEC, but generally good relationship between PUA and JEDCO

# Trust and Regulatory Institutions (Con't)

## Implications:

- Lack of regulator-regulated utility trust can go both ways
- Lack of trust can in part be a general society-wide issue, but it is also a reflection of the specific institutional framework that governs the regulatory relationship

The relationship between trust and institutions is a very profound and important issue; development economists increasingly cite this as critical not just for regulation, but in overall economic development

- Rule of law, respect for property rights, strong social trust >>> promotes economic development
- Uncertain rule of law and respect for property rights, weak social trust >>> likely development “trap”

# What Aspects of Regulatory Environment are Likely to Foster Trust?

Aspects of regulatory environment likely to foster trust include:

- Transparency
- Credibility
- Stability
- Opportunities for
  - Participation
  - Collaboration
  - Settlement

# Transparency

Transparency of utility costs important to build trust with customers and regulators

- Formal regulatory accounts
- Regular reporting to regulators

Transparency of regulatory decisions critical to utilities and customers

- State all evidence presented in regulatory review clearly
- Discuss merits pro and con of all evidence
- Explicit, articulated and reasonable basis for regulator's decision on *all major components* of a tariff decision

Possible “best practice” example of transparent regulatory decisions: Massachusetts Department of Public Utilities

# Credibility

Credibility touches directly on the trust issue

Rules may be stated clearly, but if the rules say one thing and the regulator does another they are no longer credible

One important means of ensuring credibility: judicial review

Companies should have recourse to courts to ensure that regulators are following the rules and not abusing their authority

In practice, the prospect of judicial review is an important check on inappropriate regulatory discretion and encourages more reasonable, well-founded decisions

# Stability

It is clearly important for regulation to be as stable and predictable as possible

- Utilities are capital-intensive industries
- Stability necessary to induce new capital investment
- Even the best “incentive regulation” method will not be effective if the overall regulatory regime is not stable

Not only are the rules themselves important; so are the “rules for changing the rules” i.e. the broader regulatory and legal framework that underpins the development of new rules in response to changing conditions



# Stability (Con't)

Some regulatory innovations that may lead to a more stable regulatory framework in Colombia include:

- More customer participation and direct contracting  
>>> US gas pipeline industry
- Possibility of collaborative processes that explore issues informally and build understanding, reduce differences  
>>> Ontario Energy Board, Toronto
- Possibility of “settlements” of rate changes directly with participating customer, union and other groups, which CREG can then approve or reject

# Stability (Con't)

Some 'start-up' costs to broaden the regulatory process in these ways, but there are also important payoffs

- Regulation becomes more engaged and informed
- More flexible regulatory process
- More avenues for reaching decisions, CREG less of a “bottleneck”

# Conclusion

Colombia's natural gas industry has made remarkable progress in many ways in last 20 years, but regulatory challenges remain

This presentation designed to present broader perspective on those challenges and possible avenues for reform moving forward

Not all changes may be immediately appropriate to Colombia's natural gas situation, but still a good opportunity for the industry to take the initiative to expand and elevate the debate

# Contact

Muchas gracias!!

For questions and further information:

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