Global Experience in Gas Regulation

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What is regulated and why?

- What is regulated depends on the stage of market development.
- In developed markets, only transmission and distribution are regulated
- In emerging markets, transmission, distribution, profit margins, storage, metering and billing etc can be regulated. (whatever is not amenable to competition)
- Gas price outside regulatory purview. Sometimes, regulator monitors for gaming

Gas Market Classification

Basic

- 1-2 gas sources. Some high-pressure pipelines with <10 offtake points for power generation or industry

Emerging

- 2+ gas sources. High-pressure transmission with <100 offtake points for power, industry and some LDCs

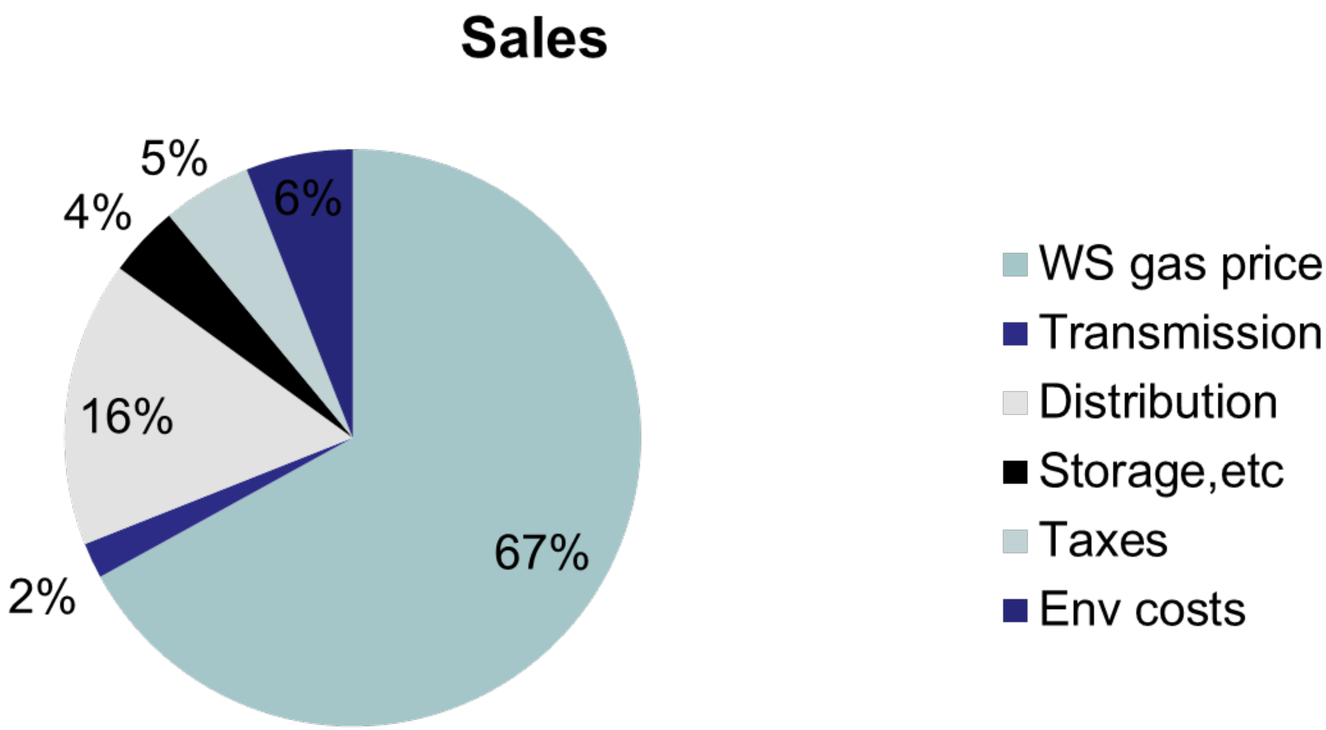
Submature

- 4+ gas sources, nationally extensive transmission system with significant industrial and commercial market share. Growing need for integrated control with seasonal load-balancing needs beyond use of line-pack. Distribution networks in all major towns with significant domestic market penetration

MatureMature

- Multiple gas sources, flexible and integrated gas grid, . Approaching saturation in geographical coverage to economic customers, On-going maintenance and capacity expansion programs

Components of Consumer Bill – Mature Market



Why Regulate?

- Network Monopoly, scale economies, duplication redundant
- To prevent exercise of market power
- To realise policy/political goals
- To incentivise investments, to improve efficiencies in network monopolies, to achieve rapid and equitable development of infrastructure
- To oversee transition from public ownership to competitive markets
- To mimics markets – provide level playing field- in developing countries
- To correct/safeguard against market failures (collusion, geopolitical factors)

How Regulated?

- Through Regulations
- Licensing, Post-licensing monitoring
- Tariff determination
- Open Access Rules, Network Codes
- Dispute Resolution

Regulatory Design

- Regulation should be light-handed, but binding.
- Ideally regulator should be independent (of policy maker or govt), autonomous, equi-distant from stakeholders, and quasi-judicial;
- Statutory regulators as a separate pillar of governance, but clear lines of accountability;
- Selection process transparent, security of tenure, adequate powers, provisions to prevent conflict of interest
- Regulatory should have enforcement powers
- Regulator works within policy framework
- Clear appeals mechanism

Evolution of Regulation: Britain

- Vertically integrated public utility before 1986
- Privatized vertically integrated utility after 1986, but 90-10 rule to break monopoly; spots markets developed
- Wholesale & Contract markets enjoy open access while small consumers serviced by BG
- Regulated tariffs for small consumers
- Unbundling of BG in 1997 Centrica (transportation & storage) BG Plc (distribution & storage)
- Market-making by regulator through network code – rules of access to pipeline networks and trading in gas and capacity
- Secondary market emerging with trading in pipeline capacity
- Price-cap tariffs, incentive regulation in 1988

Evolution of Gas Regulation :The United States

Natural Gas Act 1938 to regulate inter-state pipelines – FPC

Affiliates subject to regulatory oversight of gas price

- Phillips decision 1954 - Cost-justified gas price ceilings for gas transported through interstate pipelines
- Gas shortages in non-producing states the mid-1970s. Price spikes
- NGPA 1978; FERC replaced FPC; partial removal of ceilings, only national level ceiling. Incentives for new wells
- Natural Gas Wellhead Price Decontrol Act of 1989
- Complete removal of ceilings in 1994
- Voluntary unbundling of ownership and transport initially in 1985 through FERC Order 436 and mandatory through FERC Order 636 in 1992
- FERC fixes interstate pipeline tariffs, state regulators fix local tariffs

Evolution of Gas Regulation: European Union -1

- 28 members. Market structure varies across countries
- Some vertically integrated, others unbundled
- Some state-owned, some private
- Every member has a regulatory authority that regulates tariffs, sets rules of interconnection
- Entry-Exit system mandated in 2007 – to facilitate trading across boundaries

Evolution of Gas Regulation: European Union -2

- Third Package:
- EU Directive 2007 – Ownership unbundling or ISO, open access for large consumers
- Mandates non-discriminatory regulated third-party access for all transmission and distribution infrastructure and for LNG import terminals. Exemptions for new infrastructure from third-party access and regulated tariffs, but on case-to-case basis.
- European Transmission System Network Operators for Gas (ENTSO-G) tasked to produce an EU-wide Ten-Year Network Development Plan (TYNDP).
- It is up to regional groups within the EU member states and also to all single EU member states to set up regional and national TYNDP's.
- Harmonisation of cost regulation to drive infrastructure investment, and to facilitate one EU regulatory system

Evolution of Gas Regulation: India

- GAIL, National Champion: state-owned vertically integrated national pipeline utility; buys gas and acts as supplier and transporter and as LDC in some jurisdictons through subsidiaries.
- Regional networks also state-owned and vertically integrated
- Skewed development of pipeline networks; no national grid
- Most pipelines open access on negotiated tariff. Market power apparent. Dealt with by regulator on the basis of complaints
- New pipelines to have common carrier capacity. Regulator can direct pipeliner to expand capacity if market warrants it
- Independent regulator licenses new pipelines and LDCs through competitive bidding: network tariff key bid parameter.
- Regulator lets the market decide location and size of new capacity – through EoI
- Regulator reviews open access tariffs charged by incumbent entities when utility files for revision.
- Regulator mandated to decide on timing of unbundling

Nigeria

- Governed by Oil Pipeline Act & Petroleum Act
- Govt as policy-maker and regulator. DPR licensing authority
- (specifications, cost, gas specs, conformity to Nigeria National Grid, technical and safety stds)
- DPR issues license to survey route, to construct, maintain and operate a pipeline, to store gas
- Two pipeline systems –not connected
- NGC, a vertically integrated monopoly
- No automatic open access. Access to network determined by minister if there is no mutual agreement. Market power exercised by NGC
- LDCs dominated by NGC directly or thru franchisees
- Transmission & Distribution tariff not regulated

Mozambique

- National Petroleum Institute awards pipeline contracts through competitive bidding
- Open to foreign investors, but must have 50% local share capital
- Open access subject to availability of capacity on negotiated commercial terms