

THE PUBLIC UTILITY INDUSTRIES COMPARED: NATURAL GAS

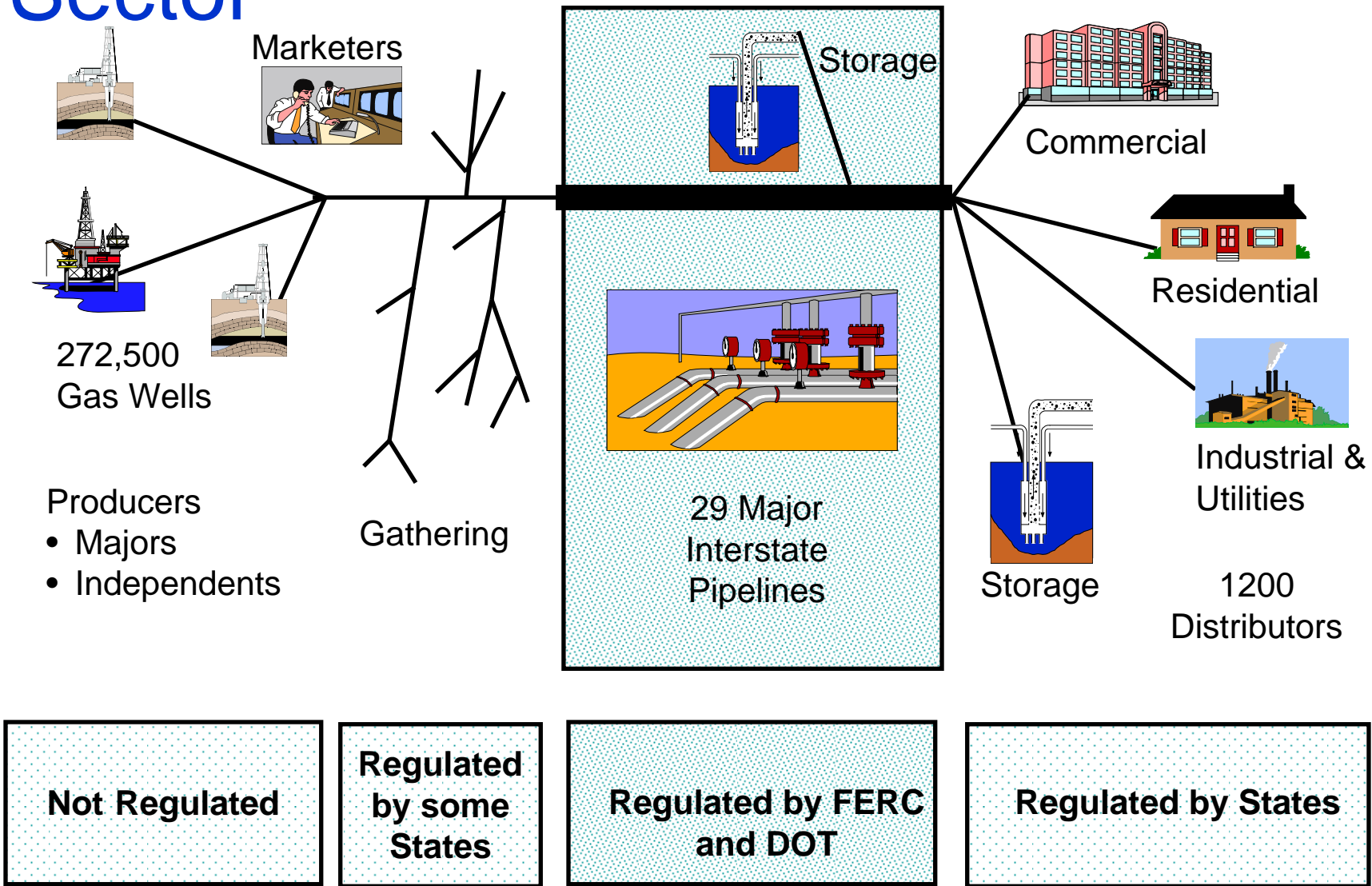
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49th Annual Regulatory Studies Program
Institute of Public Utilities
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August 6, 2007

Structure of the U.S. Natural Gas Sector



Basic Technological and Economic Features

- Competitive production sector
- Imports meet about 15% of domestic gas demand, with projections of significant increases from LNG
- Interstate pipelines carrying gas long distances from gas fields to market areas
- Individual pipelines operate their own facilities
- Release of unused pipeline capacity in the secondary market

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Basic Features -- *continued*

- Storage facilities serve important functions
- Over 200 independent and affiliated marketers and brokers providing both wholesale and retail services
- Market centers and hubs (over 40)
- Local distribution companies (LDCs) provide both bundled sales service and transportation

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Basic Features -- *continued*

- Scale economies for delivery services (pipeline, distribution), requiring price regulation and regulation of other activities
- Open access to interstate pipelines (contract carriers)
- Open access to distribution systems for large customers and many small customers (“customer choice” programs)

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Basic Features -- *continued*

- Well-developed spot and futures markets (NYMEX gas futures since 1990, options on futures contracts since 1992)
- Bypass of local distribution by many large customers (industrials, electric generators)
- Most large customers buy only transportation from the local gas utility
- Industrials are the largest users of gas (about 40% of total), but gas use for electric generation has grown the fastest

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Basic Regulatory Structure

- FERC regulation (the wholesale gas market involving interstate commerce)
 - Pipeline, storage and LNG facility construction
 - Regulation of gas transportation in interstate commerce
 - Issuance of certificates of public convenience and necessity for interstate pipelines, LNG facilities, and storage facilities (differs from electric transmission lines)
 - Setting of rates for interstate and wholesale storage services

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Basic Regulatory Structure -- *continued*

- State PUC regulation
 - Issuance of certificates of convenience and necessity for distribution facilities (distribution pipes, storage facilities, metering systems)
 - Setting of rates charged by local gas utilities for different services, including bundled sales service and transportation service (PGAs, and base rates)
 - Regulation of intrastate pipelines and some gathering facilities

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Cost and Pricing Characteristics and Trends

- Retail rates: 65-70% commodity gas, 10% pipeline and storage, the rest is distribution costs (20-25%) (note: LDCs generally make their profits only from throughput, not from the purchase and sale of commodity gas)
- Commodity gas has risen dramatically since 2000 because of a tight wholesale gas market
- PGAs pass through purchased gas costs; base rates (non-gas costs) determined in rate cases
- Rate issues: allocation of fixed costs in rate elements, rate rebalancing, weather normalization adjustments, cost riders, revenue decoupling, incentives for advancing energy efficiency
- Gas procurement strategies: emphasis on applying portfolio theory and hedging

Drivers of Industry Change

- In the 1970s, severe gas shortages because of price controls
- In the 1980s, industrial customers wanting the ability to purchase spot gas, which at that time was much lower in price than contract prices
- In the 1980s, marketers wanting to compete in both wholesale and retail markets
- In the 1990s, the push for choice for residential and business customers by marketers, some LDCs and free-market economists
- FERC's current efforts aimed at a more competitive wholesale gas market and infrastructure development

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Policy Issues

- High gas prices
- Price volatility and hedging by gas utilities (gas procurement management)
- New gas supplies
- Energy efficiency
- Gas-electricity interdependency
- Delivery-infrastructure development
- Retail ratemaking mechanisms

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