

Gas Storage

Tariffs, Economic Efficiency and Investment

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1. Economic drivers for regulation of access to storage facilities

Why regulating markets?

- The presence of market failures is the main economic reason for regulation
- Market failure occurs when there is an inefficient allocation of products and services in a market
 - Individual interests are different from the social welfare (maximisation of firms and consumers surplus)
- Market failures are often associated with *Market power* because of welfare optimality of a competitive market
 - With market power, prices are too high compared to perfect competition
 - Market power may give incentives to use non-price strategies (creating switching costs for consumers, creating barriers to entry through restrictive clause in supply contracts...)

Why regulating access to gas storage facilities?

- In network infrastructures, inefficiencies may result from the essential facility characteristics
- Characterisation of an essential facility leads to ask several questions
 - Dominant position of the facility owner in downstream market?
 - Shared access feasible?
 - Facility essential to deliver products on downstream markets?
 - Facility duplicable?
- Is gas storage really an essential facility?
 - Dominant position of facility owner can be controlled by unbundling
 - There exist other flexibility tools than storage: production flexibility, import flexibility, customers interruptibility, spot markets...
 - Gas storage may be essential for the gas market but not really an essential facility

Regulating access to gas storage facilities

- The key questions of regulation are:
 - The allocation of capacity among potential users
 - The monitoring of access terms and especially access tariffs

- Regulation of access to gas storage facilities should be focused and pragmatic to avoid regulatory failures

- Recent economic literature shows that:
 - Storage facilities may be strategically used as a foreclosure tool when Third Party Access is regulated
 - TPA regulation may strengthen trade-offs between storage and spot markets and finally may limit the fluidity of supply markets

2. Economic efficiency and access to storage facilities

Short-term efficiency vs. Long-term efficiency

- The economic efficiency is achieved when products or services are offered at the lowest possible cost to consumers
 - Total economic welfare is maximised
 - Markets work perfectly and prices are equal to marginal costs (Short-term efficiency)

- Regulation should take care about Long-term efficiency
 - Long-term efficiency is achieved when firms innovate and invest at an optimal level which maximise total economic welfare
 - Cannot be achieved with cost-based prices because firms need rents to invest and innovate
 - Trade-off between Short-term and Long-term efficiency...

Service-based competition vs. Facility-based competition

- Entrants can compete for services by two ways:
 - Using the incumbent facility: Service-based Competition (SBC)
 - Building their own facility: Facility-Based Competition (FBC)

- Regulatory policy aim at promoting both SBC and FBC
 - SBC allows entrants to enter the market without incurring significant costs and it pushes short-run competition
 - But, FBC is essential to establish long-run competition

- SBC can be viewed as a stepping stone to FBC (gives market experience to the entrants)
 - But, SBC may deter FBC if terms of access to the facility is too attractive for the entrants
 - This is a part of the trade-off between Short-term and Long-term economic efficiency

**3. Providing incentives to invest
in gas storage**

Why underinvestment in gas storage facilities?

- Traditionally the relative lack of investments in gas storage facilities is lying in the regulatory and market demand context
 - Regulatory uncertainty gives rise to revenue uncertainty for investors and then reduces investment (classical hold-up problem due to the limited alternative use of the investment)
 - Lack of information about the future demand for storage services

- Granting an Access Holiday spurs the investment since the access regulation creates a regulatory truncation of profits
 - AH can be achieved by allowing certain investments an exemption from the Third Party Access
 - Economic analysis gives some insight of how and when to grant exemptions but it is not especially applied to gas storage....

How access tariffs shape the investment decisions?

- One should take into account two considerations: Incentives to invest for incumbent / entrants
- Build or buy decisions of the entrants depend in part on access tariffs
 - Too low TPA probably delays investments by the entrants
 - But, too high TPA may hinder short-run competition for services
 - An access price increasing over time may be used to trade-off between Short-term and Long-term economic efficiency
- In turn, what could be the consequence for the incumbent?
 - Low access prices in short-term delay the investment from the incumbent
 - Incumbent needs rents to invest in new facilities or to upgrade its existing facilities
- It appears a dilemma for regulatory policy: What is the right balance between these two opposite incentives?

4. Conclusion

- ✓ Gas storage is not really an essential facility
- ✓ A flexible regulatory approach is needed since gas storage is essential for the gas market
- ✓ Access to storage facilities may be used strategically as a foreclosure tool when TPA is regulated
- ✓ Market-oriented TPA may facilitate the trade-off between Short-term and Long-term economic efficiency
- ✓ Access Holiday may help to give incentives to invest but the sunset clause should be finely tuned

**Thank you for your
attention!**

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