

# *The Brattle Group*

## **Gas Markets**

Presented to:  
**Florence School of Regulation**

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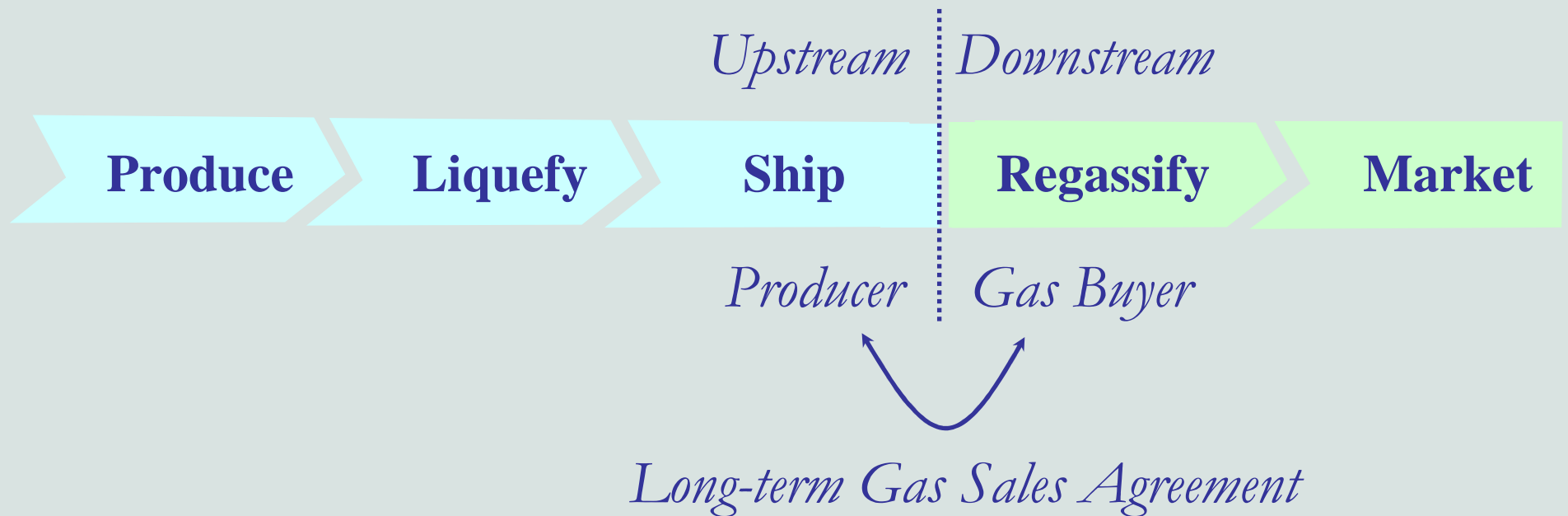
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# Introduction

## The Traditional LNG Chain in Europe



Is this still the right model?

# Recent Developments

- Upstream producers integrating downstream
- Downstream players integrating upstream

*Upstream* | *Downstream*

**Produce**

**Liquefy**

**Ship**

**Regassify**

**Market**

*Sonatrach integrating in Spain*

*LNG J.V.s by Unión Fenosa Gas, Eni, Gaz de France, Repsol*

**Avoids the traditional GSA**

# Hypotheses

- 1. Liberalisation of the European gas industry places enormous strain on the traditional GSA.**
  - Complicates price re-openers.
  - Puts incentives of the producer and buyer into conflict.
- 2. There are two logical solutions:**
  - Amend the traditional GSA.
  - Integrate vertically, to reduce risks and align incentives.
- 3. The optimal solution depends on:**
  - The timing and nature of the likely transition to a mature gas market.

# The Traditional GSA

## **Price re-openers entail significant risk:**

- Can take 18 months
- Several million € in litigation expenses
- Retro-active application to renewal date: liabilities can become intolerable

## **Wording is too general to give certainty**

- “Significant change in economic circumstances”
- “Not reasonably expected”
- “The value of gas”

- Liberalisation can be a significant change.
- Can cause a shift in alternative fuel, from oil products to gas.
- Most markets lack transparent gas prices.

*Other complications:*

- Buyers have information advantage.
- Does liberalisation change a “reasonable return” for the buyer? How did the contract allocate the risk of liberalization?
- With competition, buyers likely to resist ToP.
- Large buyers would prefer a “tighter” downstream market than the seller– buyer protects a large portfolio from price movements.



**Disputes  
likely**

# Vertical Integration and the Transition

- Vertical integration avoids the risks of a poor GSA in the New World
- However, the New World is just a phase
- In a mature gas market, traditional GSAs will be fine again. No need to integrate

## Old World

- Oil products set value of gas
- ToP acceptable
- Incentives aligned

## Transition

- Difficult to measure gas value; buyer advantage
- ToP tension
- Conflicting incentives

## Mature Market

- Transparent gas index measures value
- ToP acceptable: excess gas sold at indexed spot price. Incentives more aligned.

# Key Questions

Vertical integration takes a lot of effort:

- Big acquisition
- Adapting the organization
- Change in risk profile

Integration solves the problem of a dysfunctional GSA, but is it worth it?

- Where transition to mature market is long and bumpy, YES
- If transition takes 2-4 years or “already there” (UK), NO except maybe into downstream *infrastructure* (Petronas) and *trading*, not retail

Alternative: sign “innovative” GSAs

# Gazprom and integration

**There were rumours that Gazprom wanted to buy Centrica.**

- Why, if UK market has already made the transition?
- Why cut out the “middle man” if the middle man only earns reasonable profits?.
- Vertical integration is almost always a response to “hold up”.
- Gazprom strategy is now integration into INDUSTRIAL market, large presence in continental Europe.
- Gazprom gains information: valuable in price reviews during the transition.

# Structuring a Strategic Analysis

**Determining the optimal strategy should entail:**

**1**

Analysis of likely transition:

- Quality of TPA regime
- Diversity of access to gas,  $\Delta$  in supply/demand balance
- Political will, institutions, incentives

**2**

Integration risk analysis:

- Will differ depending on direction of integration

**3**

Analysis of possibly innovative GSA

# Analysing the likely transition

- Analysing the TPA regime is an exercise in regulatory economics.
- Changes in the supply/demand balance have tremendous impact on the transition:
  - ▶ Surpluses were key motivators to liberalisation in US, UK.
  - ▶ Surpluses now arising in some European countries. Surpluses also generate liquidity, make a gas index possible.

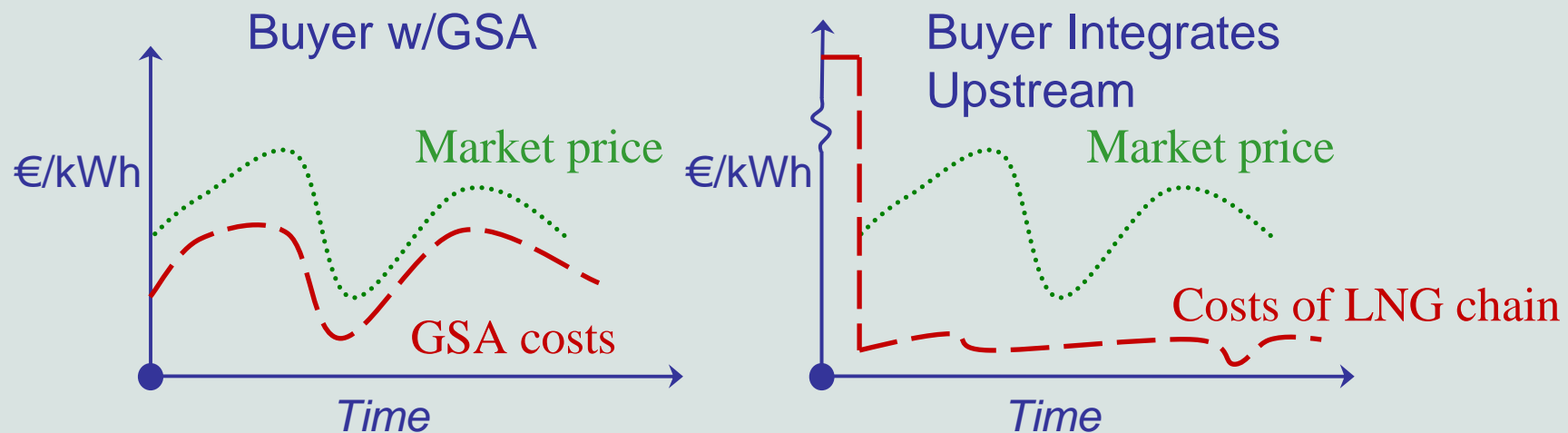
# Risk Analysis

## For a buyer who integrates upstream:

- The traditional GSA is a “hedge”: costs follow expected revenues
- Integration magnifies risk exposure tremendously: costs largely fixed upfront.

## For an LNG producer who integrates downstream:

- Already exposed to market price risk. No significant  $\Delta$  from integration.



- Other risks for buyers not present in GSA: political, technical
- Smaller buyers may not be able to tolerate the risks of integration, even if it solves GSA problems.
- How big do you have to be to handle a GSA? To integrate vertically into LNG?
  - ▶ GSAs for less than 1 bcm are rare.
  - ▶ It is rare for one supplier to have just one GSA.
  - ▶ Minimum size for integration: case of Unión Fenosa.

# Unión Fenosa

- Great strategic thinking, success
- Investment of over €4 billion.
  - ▶ Ships
  - ▶ Regas capacity
  - ▶ Liquefaction
- Still not *fully* integrated. Has a GSA in Egypt.
- Company almost went bankrupt in the process.
- ENI saved it.

## **Limits to risk tolerance suggest:**

- ✓ LNG producers are the logical initiators of integration downstream...
- ✓ But smaller buyers should consider strategy of “offering themselves for sale”
- ✓ Perhaps JVs can align incentives, share risk without crossing risk tolerance thresholds.

- Don't have to go all the way to the liquefaction plant.
- Could just buy regas capacity, sign a GSA *where title transfers at entry to regas terminal.*
- Idea:
  - ▶ Protection from regulatory failure on terminal access.
  - ▶ Can sign GSA with diversion rights.
- You only solve one problem, but you incur less risk.
- Intriguing for northern Europe.

# Integration and Timing

## Back to Unión Fenosa:

*What would have happened if in 2000 you could predict a liquid, Spanish NBP by 2006?*

- We might now be saying that Unión Fenosa risked the company for no real advantage.
- In 2000, were there signs that Spain would not have a liquid market any time soon?
- “Cynical managers” would have said “no”, but they ALWAYS say “no”.

# Integration and Timing

## *Predicting the arrival of liquidity in Spain*

### Factors in favour of “yes”:

- UK already had a liquid market.
- From network code to liquidity took five years in UK.
- Spain already had legislation for gas release.
- Spain’s large industrial market should have facilitated development of competition.
- LNG provided *opportunity* for access by producers.

### Factors in favour of “no”:

- Main entry on the horizon was *Spanish electricity companies*.
- Spanish TPA regime was not designed for short-term transactions.
- Regulator had little power.
- Spain faced a shortage of gas—surpluses tend to promote reforms that generate liquidity.

# Lesson for Governments, Regulators

## **If you start the transition, better to move fast.**

- If industry does not believe in the “vision”, will respond with vertical integration.
- By the time you implement the framework for the vision, you have a vertically integrated market.
- Note: Spain is still an advanced market, but authorities now wish there were more transparency.
- Vertical integration makes price reviews for the *unintegrated* parties more difficult
  - ▶ Data on “average import price” attracts suspicion where companies are vertically integrated.
  - ▶ A classic “information” externality.

# An Innovative GSA

Innovations to consider:

## **Expanded force majeure**

- ❖ Deregulation events (unbundling)?
- ❖ Market share levels, completion of new terminals in destination country

## **Right of first refusal + termination as an implicit “re-opener”**

- ❖ If buyer gets “better offer” on similar terms, then seller can match. Otherwise buyer terminates.

**“Baseball” arbitration– refuse to allow arbitrator to “split the baby”. Motivates each side to present a reasonable case.**

# Innovative GSAs

## Barriers to introduction:

- Older generation of gas procurement executives
- Tendency of arbitration tribunals to “split the baby”
- Many organizations do not reward people for taking risks
- Producers suspicious of European suppliers

## However:

Expect a “crack”  
And then the flood

# Conclusions

- The transition of gas markets puts a strain on the traditional GSA.
- Vertical integration avoids the strain, but you could also try to change the design of the GSA.
- Choosing between the two requires a strategic analysis.
- An optimal structure for such an analysis involves:
  1. Analysis of likely transition to mature gas markets: duration, features.
  2. Risk analysis of vertical integration, exploring possible risk mitigation strategies.
  3. Thinking carefully about innovations to the GSA as an alternative.