



**GRUPO BANCO MUNDIAL**

**FGV CERI**

*Centro de Estudos  
em Regulação e  
Infraestrutura*

# BUILDING A GAS MARKET IN BRAZIL

# DOES THE SPIN-OFF OF PETROBRAS' ASSETS AND ACTIVITIES SUFFICE TO CREATE AND DEVELOP A WELL-FUNCTIONING MARKET?

The divestment process faces the risk of an incomplete reform

The challenge of creating a market is bigger than coordinating operational activities

Economical, Legal, Financing and Tax Issues cannot lag behind

**2015**

Sale of 49% of Gaspetro\*

**2016**

Sale of LNG Terminals and Power Plants\*

**2016**

Sale of NTS\*

**2019**

Petrobras will not aggregate demand

PETROBRAS IS NO LONGER WILLING TO COORDINATE THE TRANSACTIONS



# OUR APPROACH

## Transitional Arrangements

### The market we have

Lack of a coherent regulatory model

Absence of short-term transactions

A highly concentrated market

### The market we seek

Large number of trades (buyers and sellers)

Non-discrimination

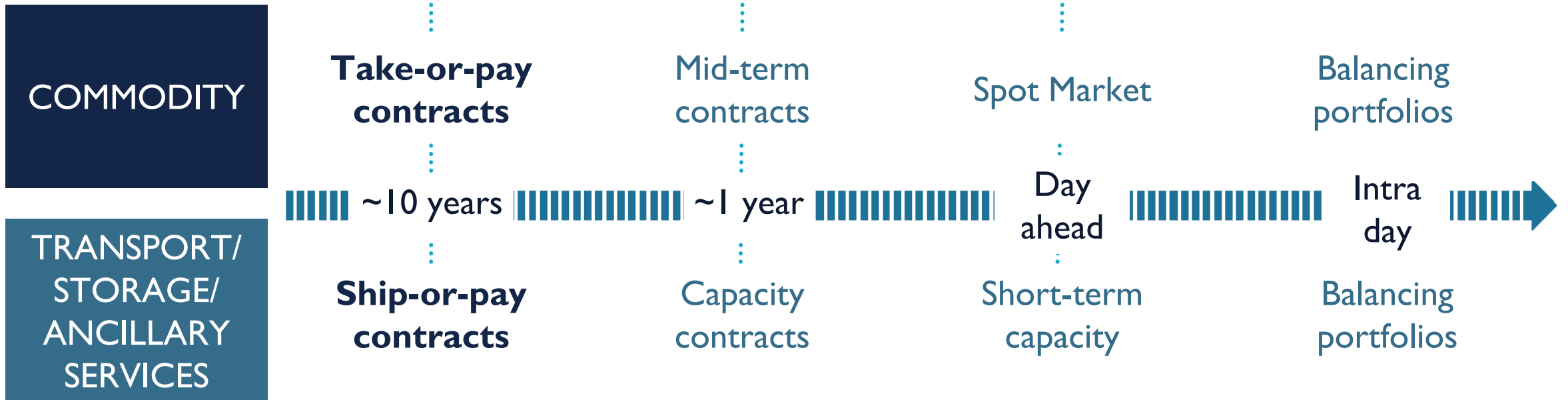
Proper allocation of risks



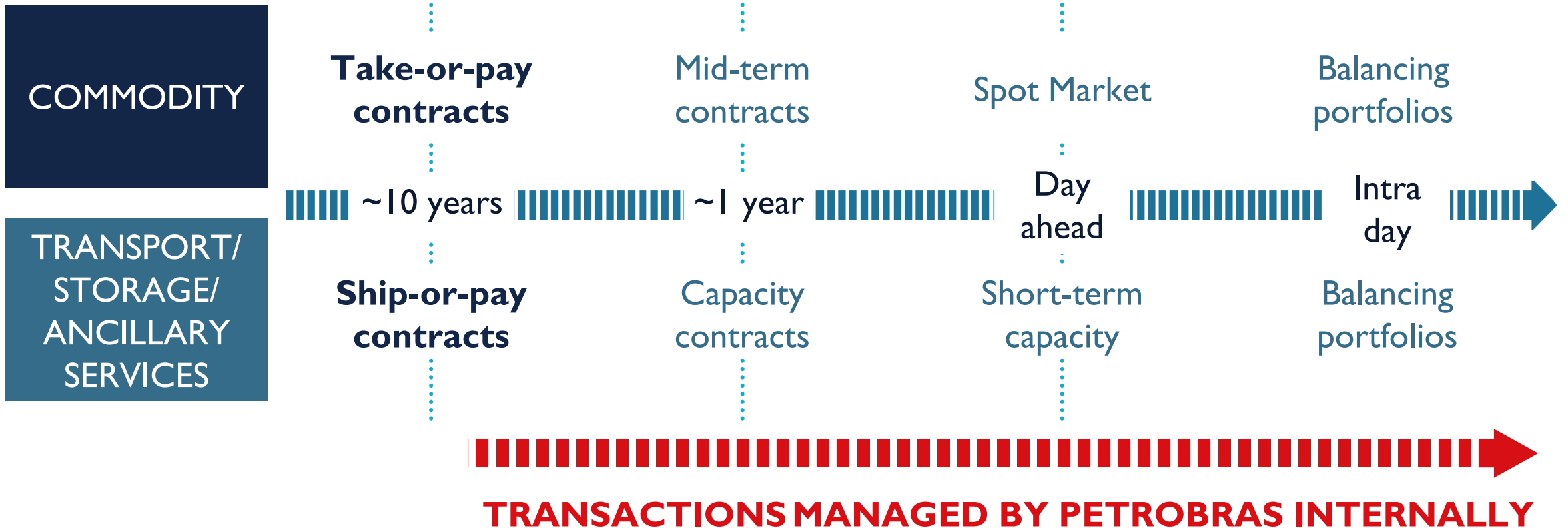
# THE MARKET WE HAVE



# GAS INDUSTRY TRANSACTIONS



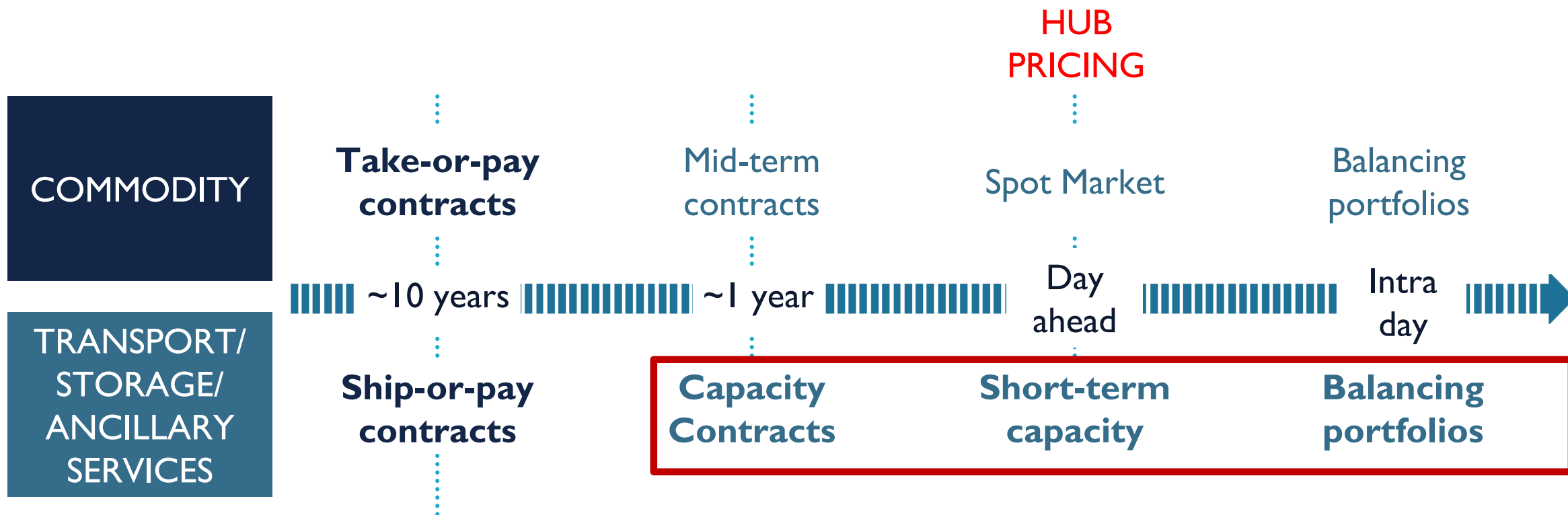
# GAS INDUSTRY TRANSACTIONS



# INCOMPLETE AND MISSING SET OF CONTRACTS

LONG RUN	SHORT RUN
<input checked="" type="checkbox"/> Commodity	<input type="checkbox"/> Commodity
<input checked="" type="checkbox"/> Transmission	<input type="checkbox"/> Transmission
<input type="checkbox"/> Flexibility (Balancing portfolios)	<input type="checkbox"/> Flexibility (Balancing portfolios)

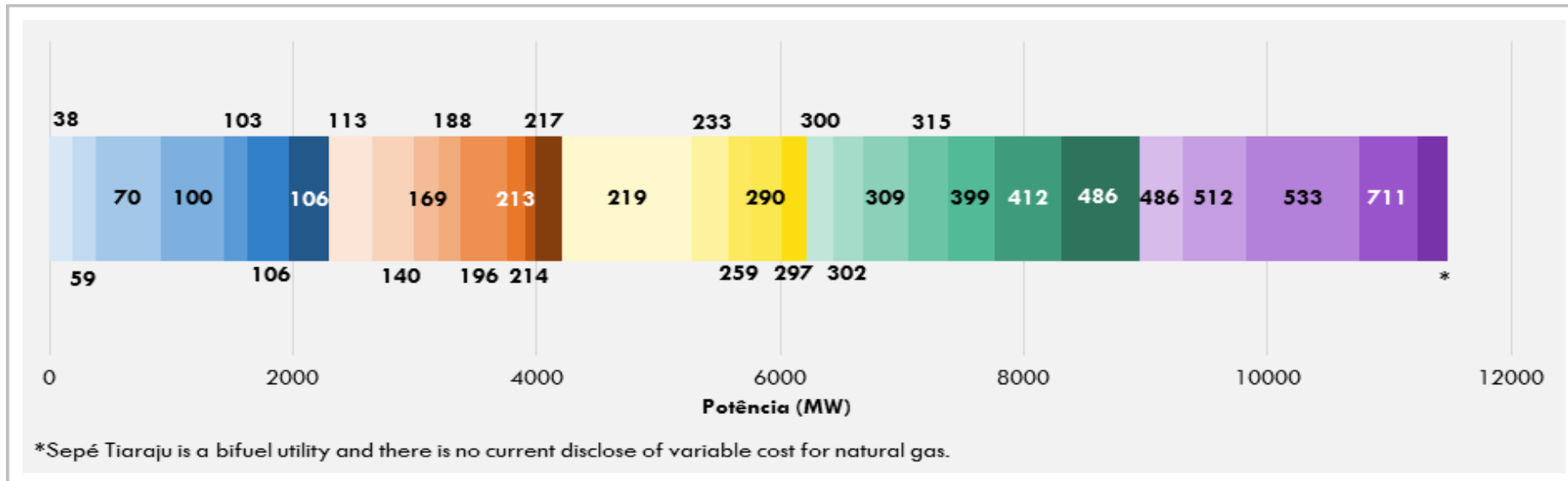
# CONTRACTS TO BE SPECIFIED BY REGULATIONS



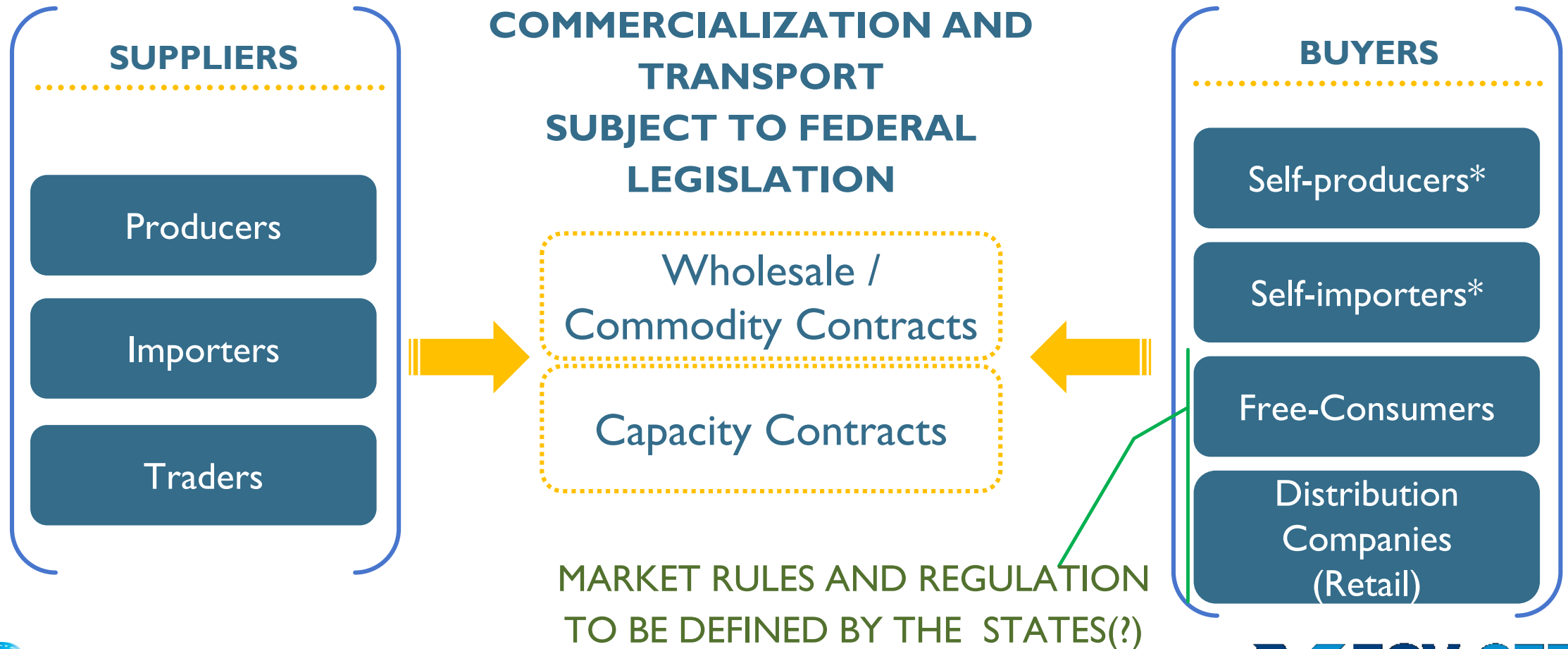


# THERE IS NO PRICE REFERENCE FOR NATURAL GAS CONTRACTING IN THE POWER SECTOR

## RANGE OF GAS PRICES FOR POWER GENERATION



# STRUCTURE AND REGULATION OF THE WHOLESALE AND RETAIL GAS MARKETS IN BRAZIL







# THE MARKET WE SEEK



# STANDARDIZATION OF GAS CONTRACTS



Duration and starting dates  
(e.g. define day-ahead contracts)



Delivery points  
(each of them will be a “pricing point”)

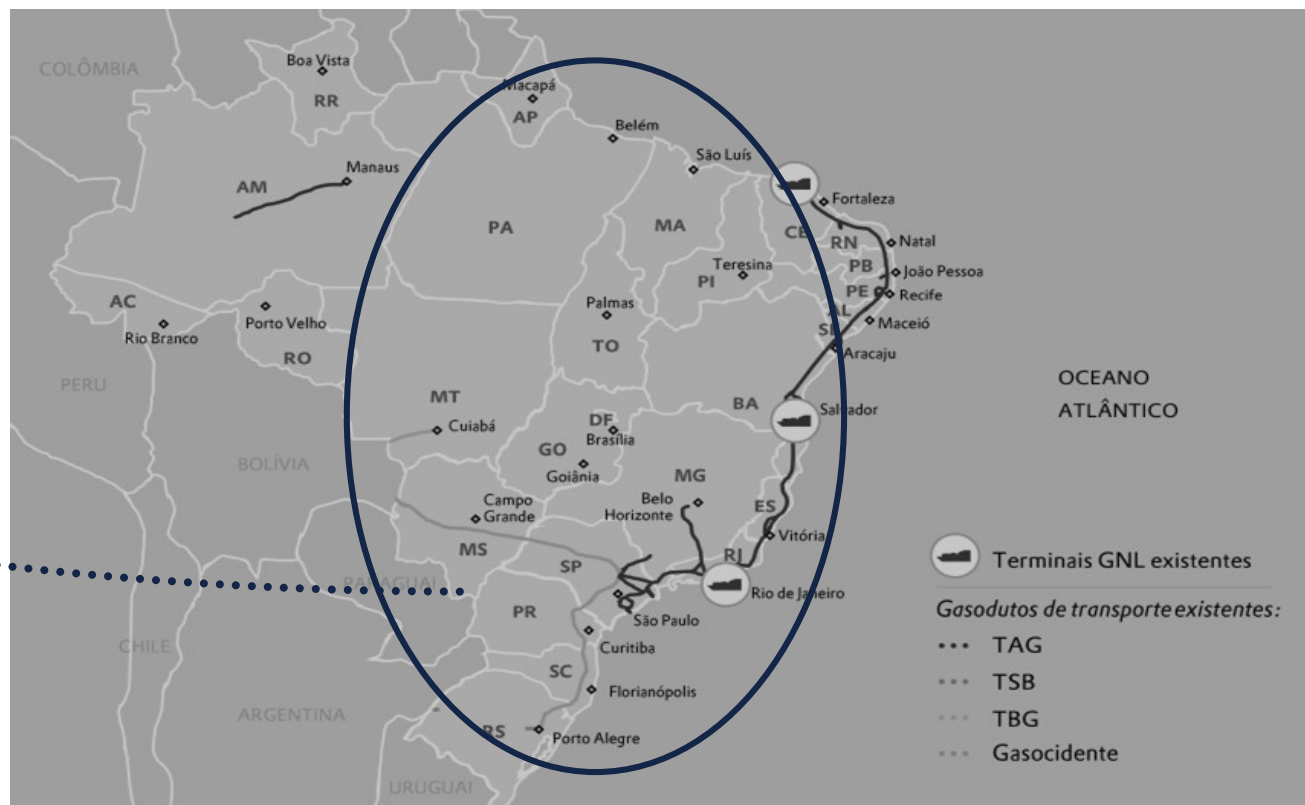
# STANDARDIZATION OF DELIVERY POINTS – PHYSICAL HUBS

Example of  
physical hub



# STANDARDIZATION OF DELIVERY POINTS – VIRTUAL HUBS

Example in which all trade is referred to a common “virtual” pricing point



# VIRTUAL VERSUS PHYSICAL HUBS

## VIRTUAL HUBS

Difficulty to provide investment signals

Main drawback

Main advantage

Larger amount of trading possibilities

## PHYSICAL HUBS

Difficulty in finding enough players

Main drawback

Main advantage

Larger amount of market-based investment signals

# ELEMENTARY TASKS TO BE PERFORMED

Facilitation of trade  
must be  
implemented

Standardization of  
commodity contracts

Standardization of  
transmission contracts

Transparency of price  
formation

The need to  
choose an access  
regime

Point-to-Point or Entry-Exit

Decisions to be  
made now

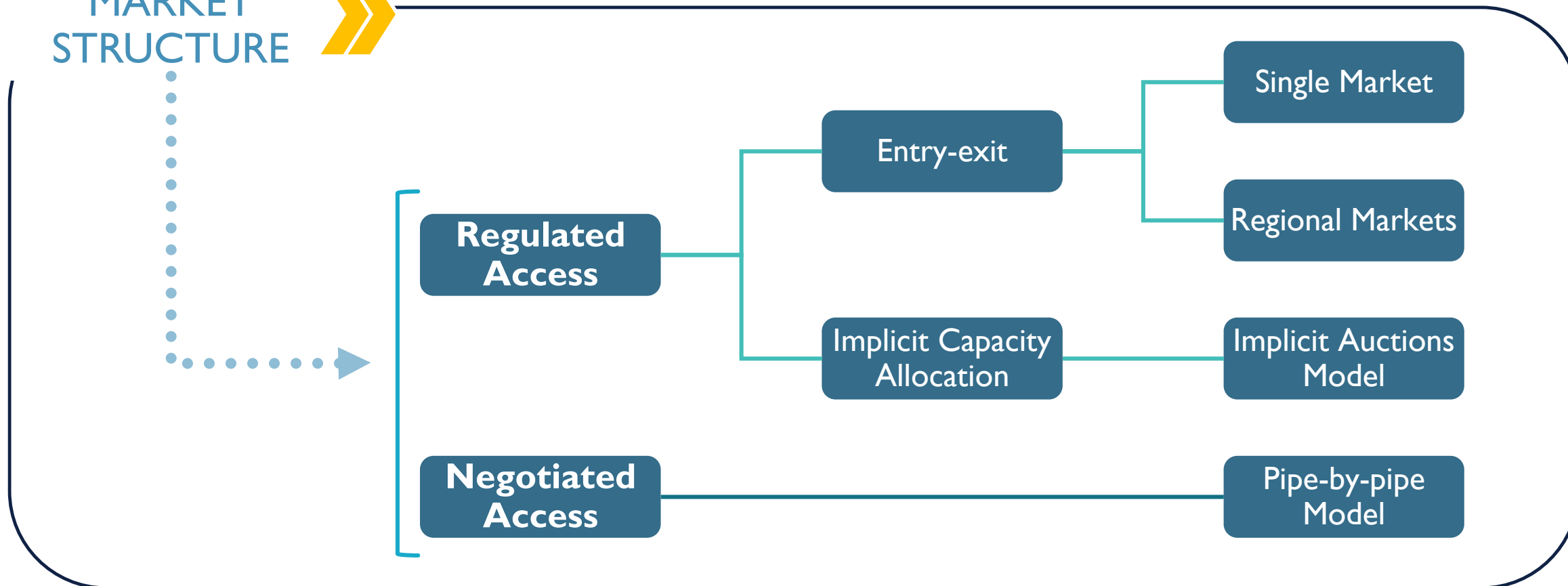
Access regime

Unbundling



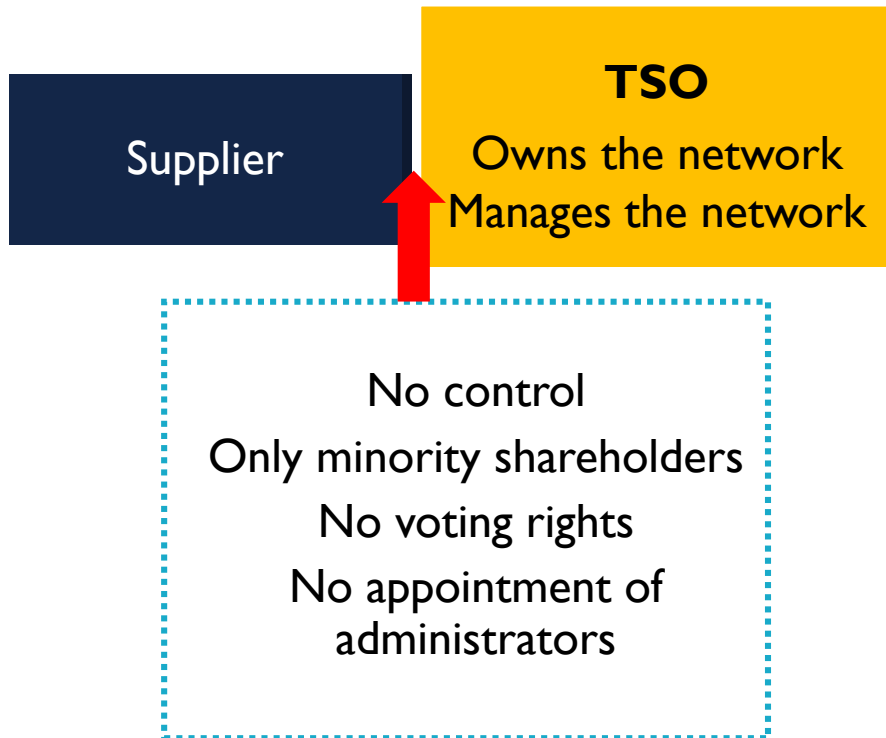
# MENU OF ACCESS REGIMES

MARKET  
STRUCTURE

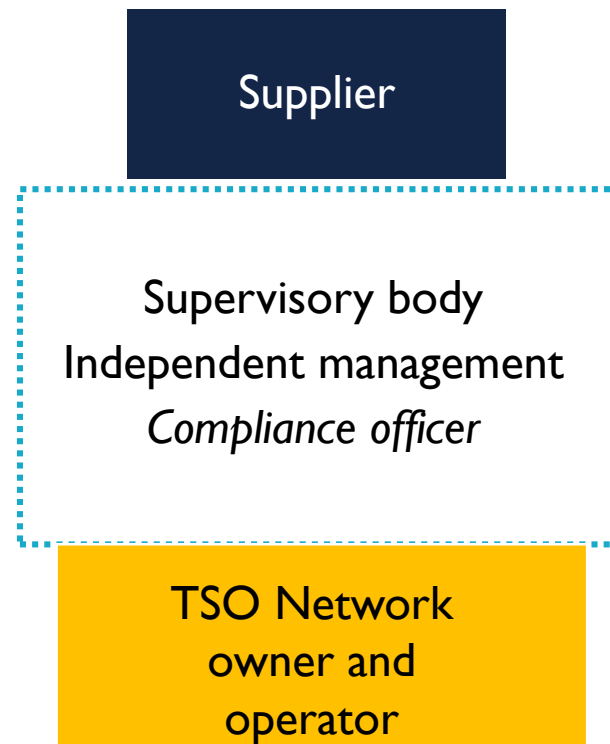


# UNBUNDLING MODELS

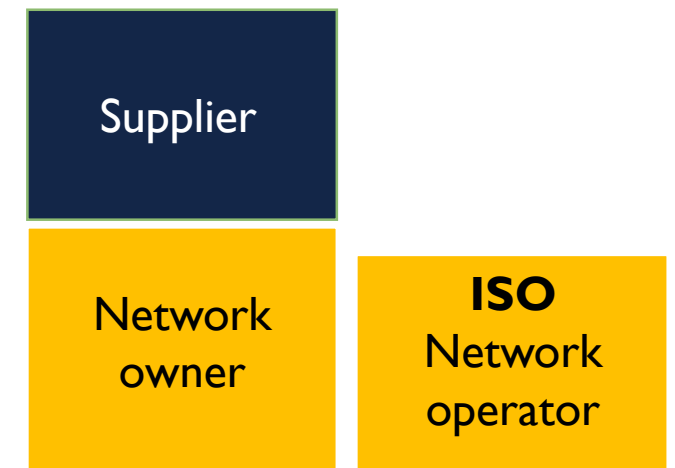
## Model A – OU




## Model B – ITO




## Model C – ISO




# ACCESS TO NON-TRANSMISSION NETWORKS



Gathering systems, trunklines, processing plants, etc. need an access regime...




...but it does not need to be the same as the transmission system regime



The essential facility doctrine may help

- TPA will be granted when the facility is essential to access the market



Again, one needs to decide between regulated and negotiated TPA



# CONCLUDING REMARKS



# THE ROAD AHEAD

Make a decision on a target model

Define how players will interact

Role of Petrobras  
as gas buyer

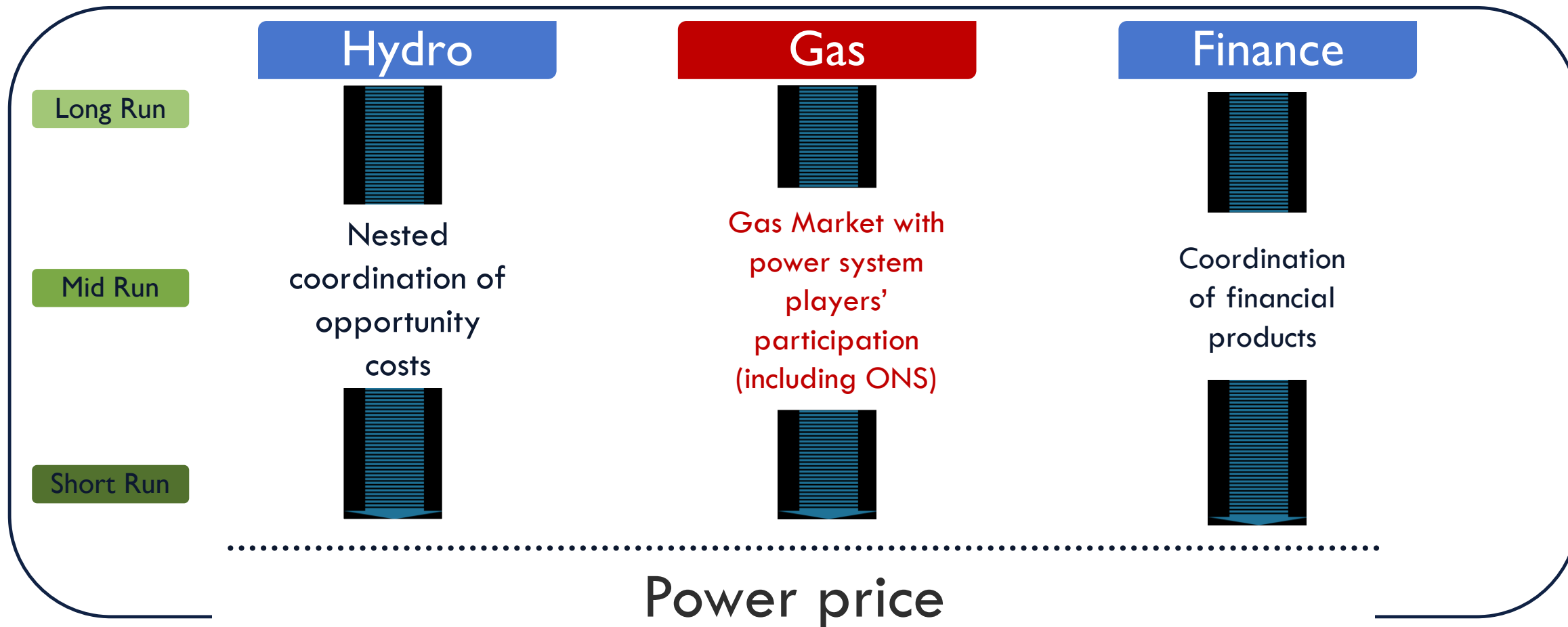
Distribution  
Companies and  
Regulated Tariffs:  
Retailing and last-  
resort tariffs

Role of PPSA

Facilitating Trading  
Possibilities  
(including  
measures to  
facilitate entry)

Gas to power

# GAS AND POWER INTERACTION



# TAXATION POTENTIAL ISSUES

## ICMS over gas transactions

- Commodity Trade
- Transport Service
  - Current legislation is linked to the physical flow (assumes that there is a physical flow)

## ICMS on a Market with Diversity of Players

- Commodity Trade
- Transport Service: The definition of the contract is still pending
  - Entry-Exit: the transport service contract is different
  - The object of the contract is not one flow is potentially all the flows in the network