

Vienna 3<sup>rd</sup> December 2010



European Federation of Energy Traders

# EU Gas Market Design Concept

ERGEG Workshop



# Gas Market Design

## High-level statements/vision (January 2007)

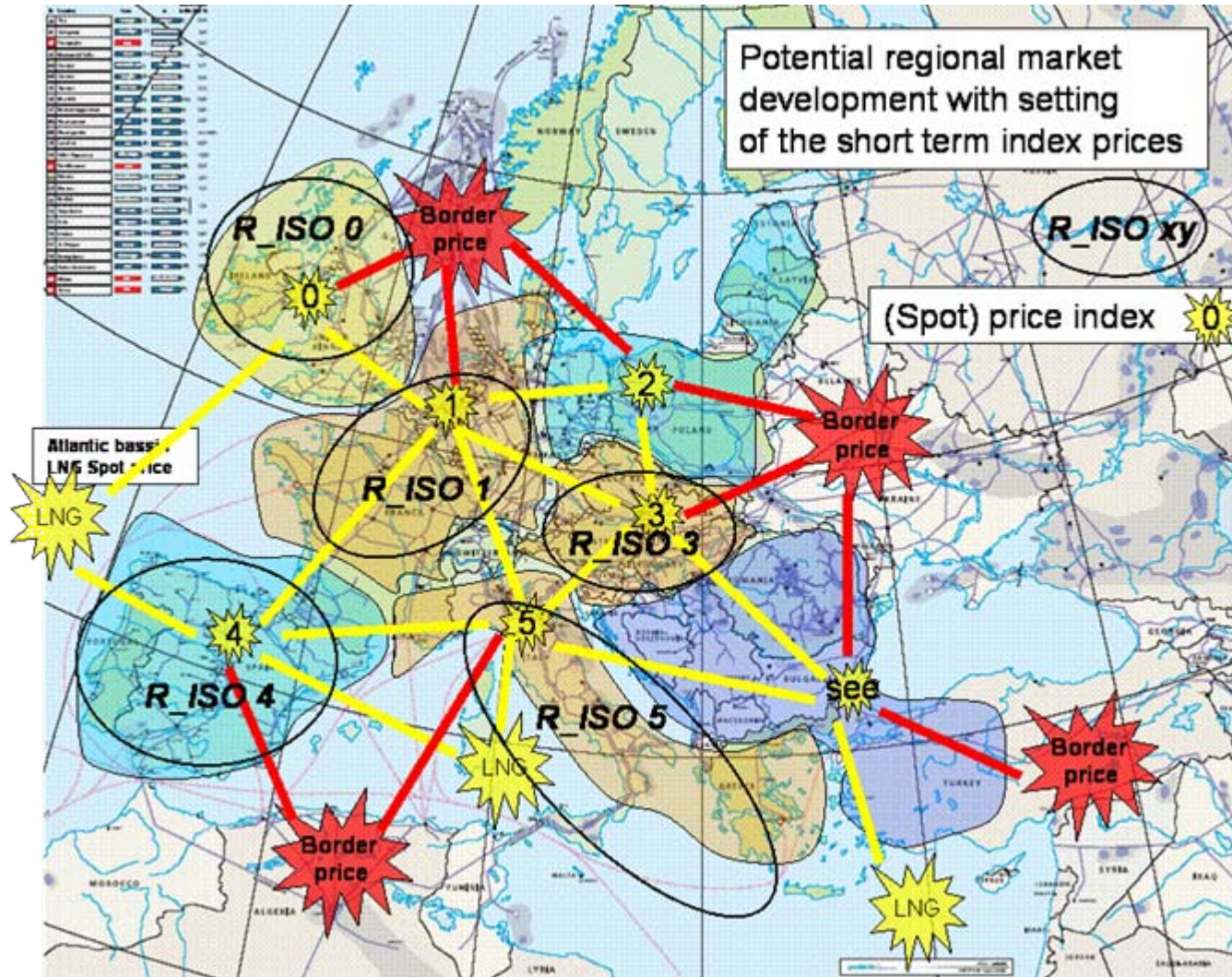
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- Entry-exit systems are the norm
- Independent System Operators are established
- Long term contracts that foreclosed the market have been changed
- Each ISO's system has one balancing zone
- Bid and offer prices are used for cashing out daily imbalances
- Robust and liquid gas futures markets exist
- Capacity rights for any individual transfer route are in the hands of many companies

**This is still what we want, but what should we add?**

# Gas Market Design

## Schematic vision of hub development (2007)

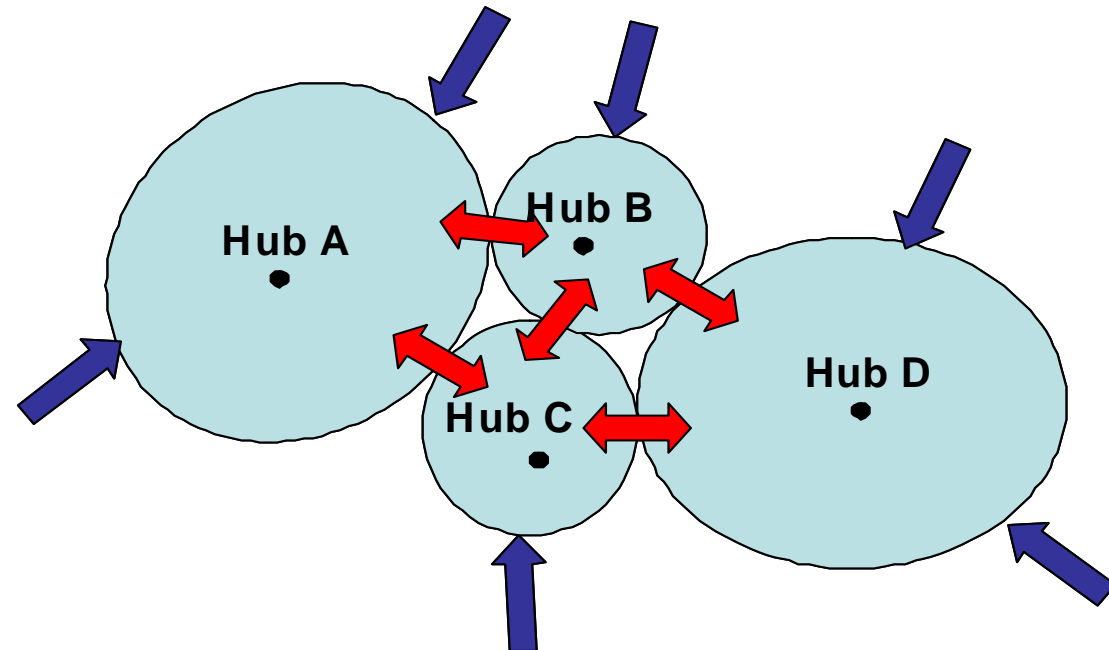


# EFET shares ERGEG's overall vision (as expressed at the 18<sup>th</sup> Madrid Forum)

## ERGEG general principles

- Market areas organized as entry-exit zones with virtual hubs
- Reduce number of market areas to as few as technically and economically feasible, based on physical characteristics rather than political boundaries
- Facilitation of hub-to-hub trading

What does this mean in practice?

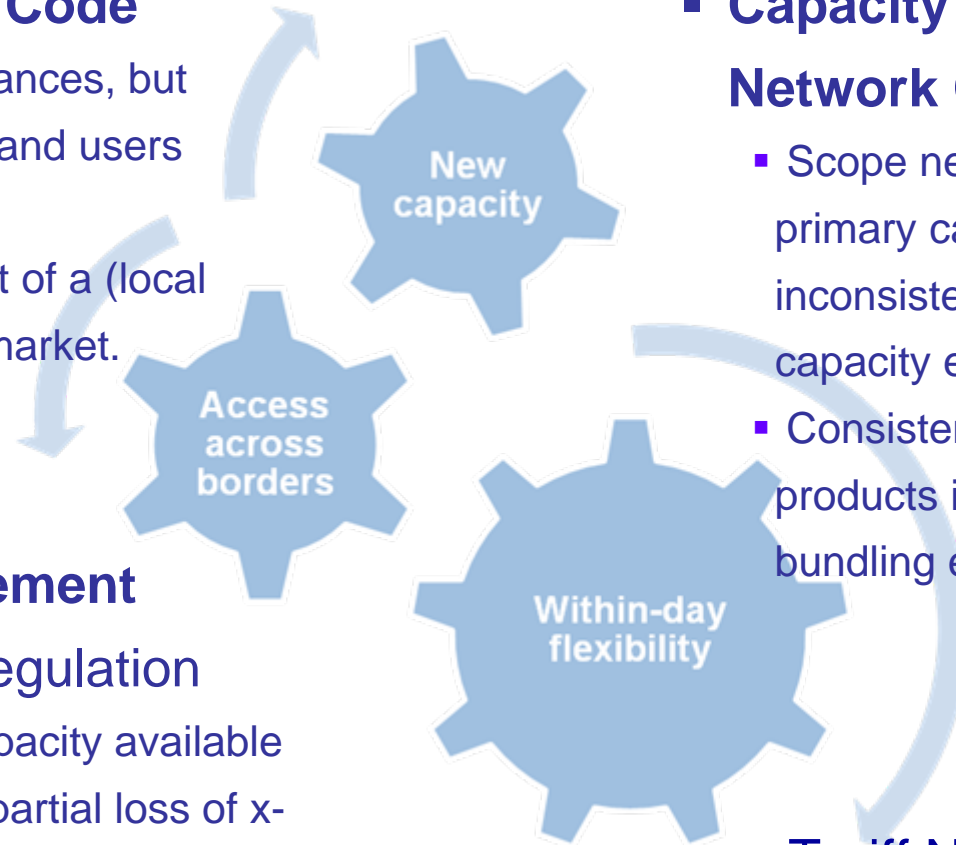


# Work on EU Network Codes is planned for 2011

## - What these codes say impacts on market design

### ▪ **Balancing Network Code**

- Cash-out of daily imbalances, but responsibilities of TSO and users not yet agreed.
- Relies on establishment of a (local or regional) balancing market.



### ▪ **Congestion Management**

#### amendment to the Regulation

- TSOs must make all capacity available
- Early gate closure and partial loss of x-border re-nomination rights changes the value of capacity and changes access to x-border flexibility.

### ▪ **Capacity Allocation Network Code**

- Scope needs to apply to all primary capacity or there will be inconsistency with incremental capacity etc...
- Consistency of capacity products is a prerequisite to bundling entry & exit capacity.

### ▪ **Tariff Network Code**

- Scope not yet decided
- TSO incentives?

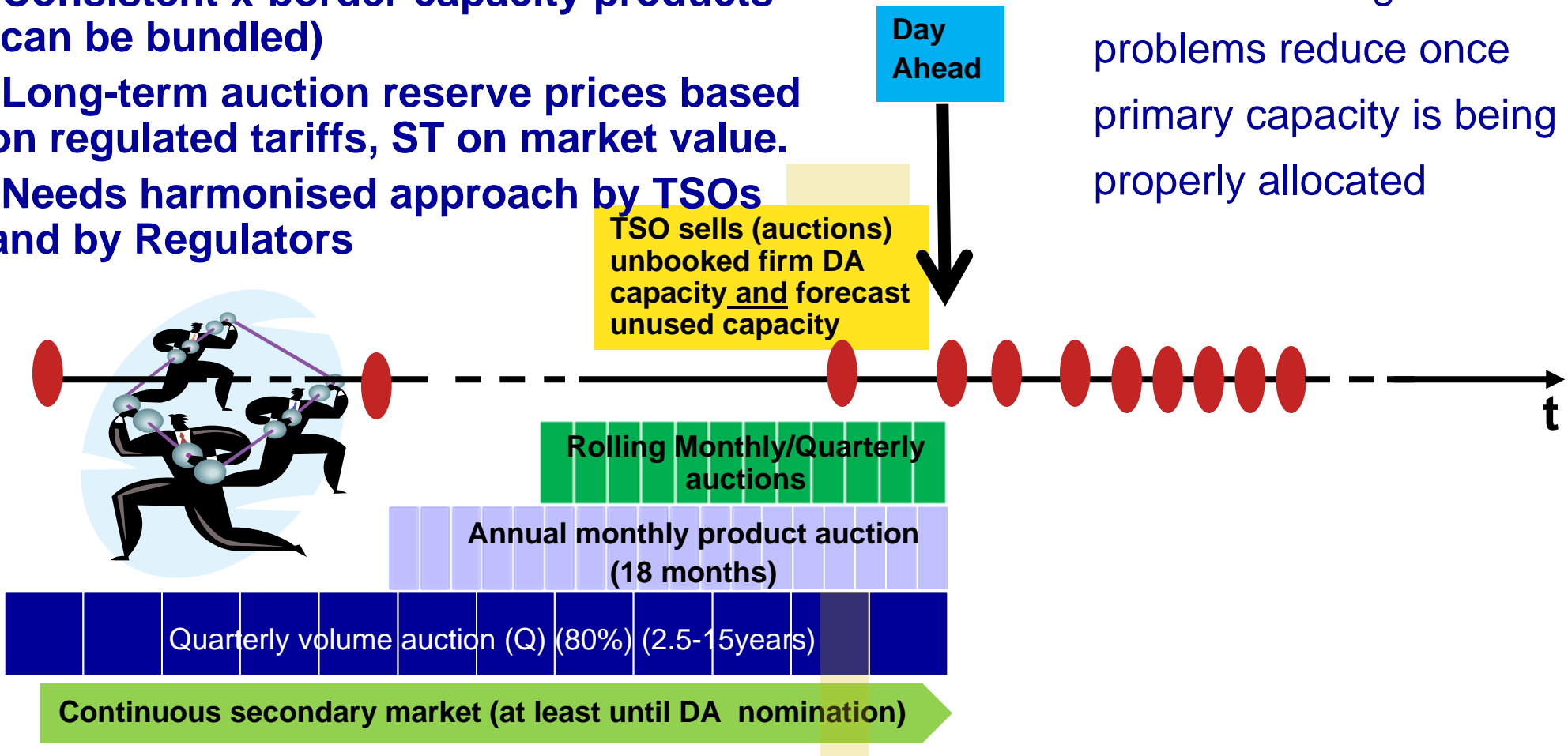
# Target Model for Gas - Cross-border trade (I)

## Long term capacity building blocks

Clear but challenging Long Term target:

- Consistent x-border capacity products (can be bundled)
- Long-term auction reserve prices based on regulated tariffs, ST on market value.
- Needs harmonised approach by TSOs and by Regulators

- Short-term congestion problems reduce once primary capacity is being properly allocated



# Target Model for Gas - Cross-border trade (II)

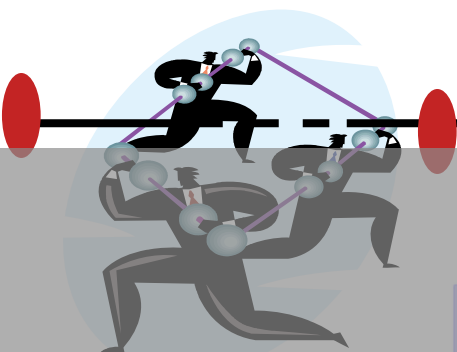
## Long term and short term building blocks

Clear but challenging Long Term target:

- Consistent x-border capacity products (can be bundled)
- Long-term auction reserve prices based on regulated tariffs, ST on market value.
- Needs harmonised approach by TSOs and by Regulators

Who is best placed for flexibility on the day?

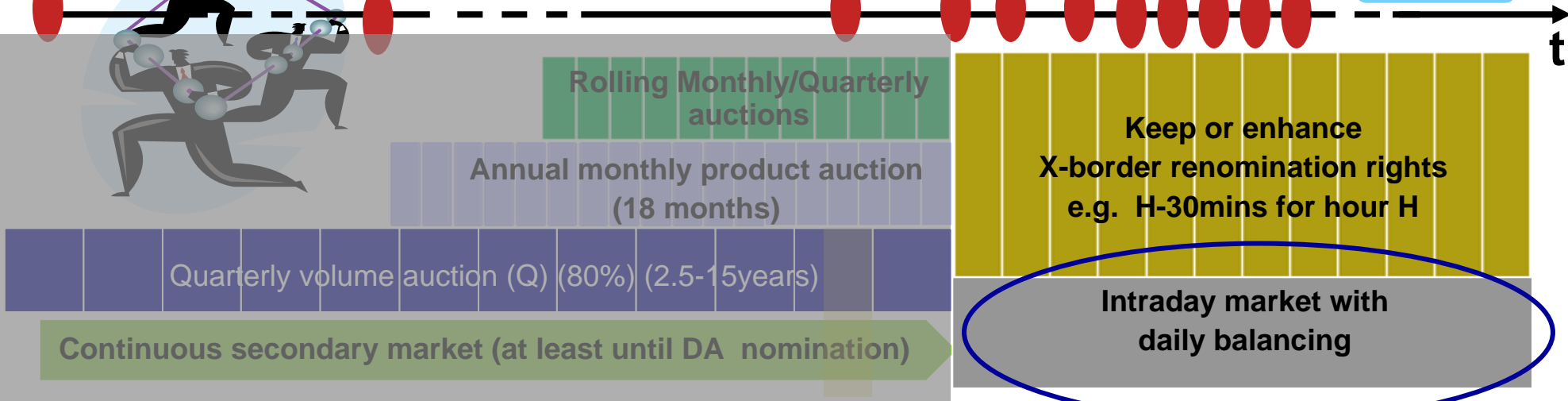
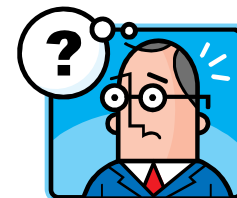
- TSO operates capacity
- Market focus on gas trading and flexibility



Day Ahead

TSO sells (auctions) unbooked firm DA capacity and forecast unused capacity

TSO allows intra-day booking and buys back capacity if necessary



# Target Model for Gas? - Cross-border trade (III)

## Alternative short term approach, like electricity?

Clear but challenging Long Term target:

- Consistent x-border capacity products (can be bundled)
- Long-term auction reserve prices based on regulated tariffs, ST on market value.
- Needs harmonised approach by TSOs and by Regulators

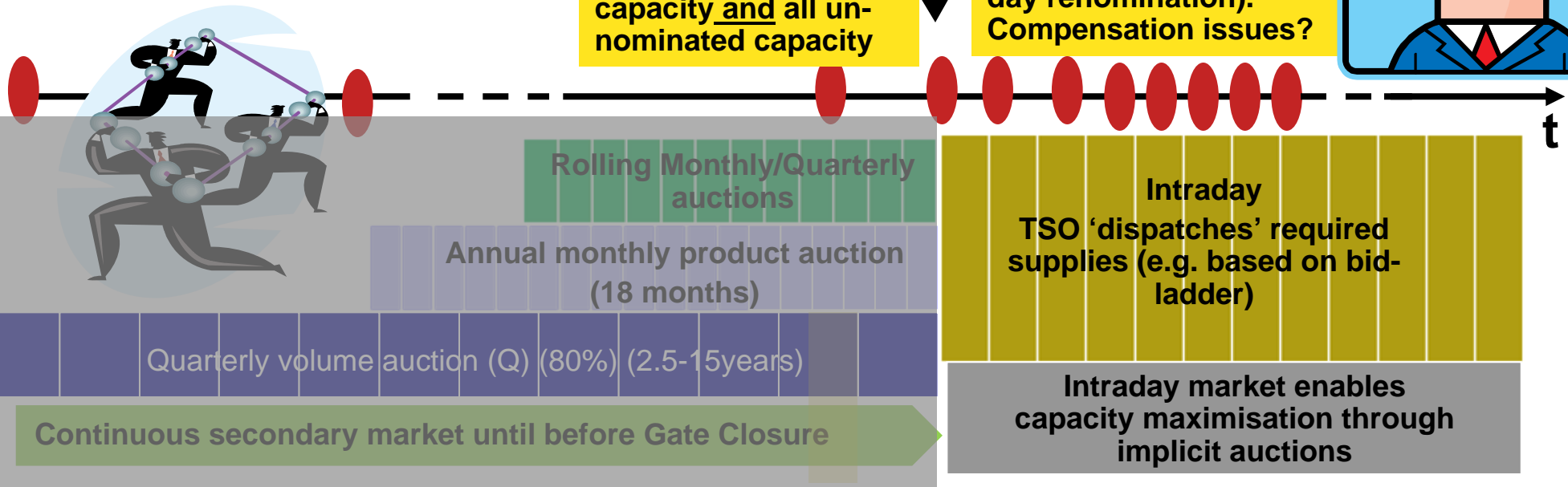
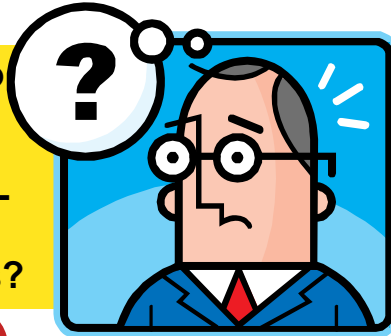
Gate Closure

Market coupling on the day

- Is this a better concept?
- Is it achievable?

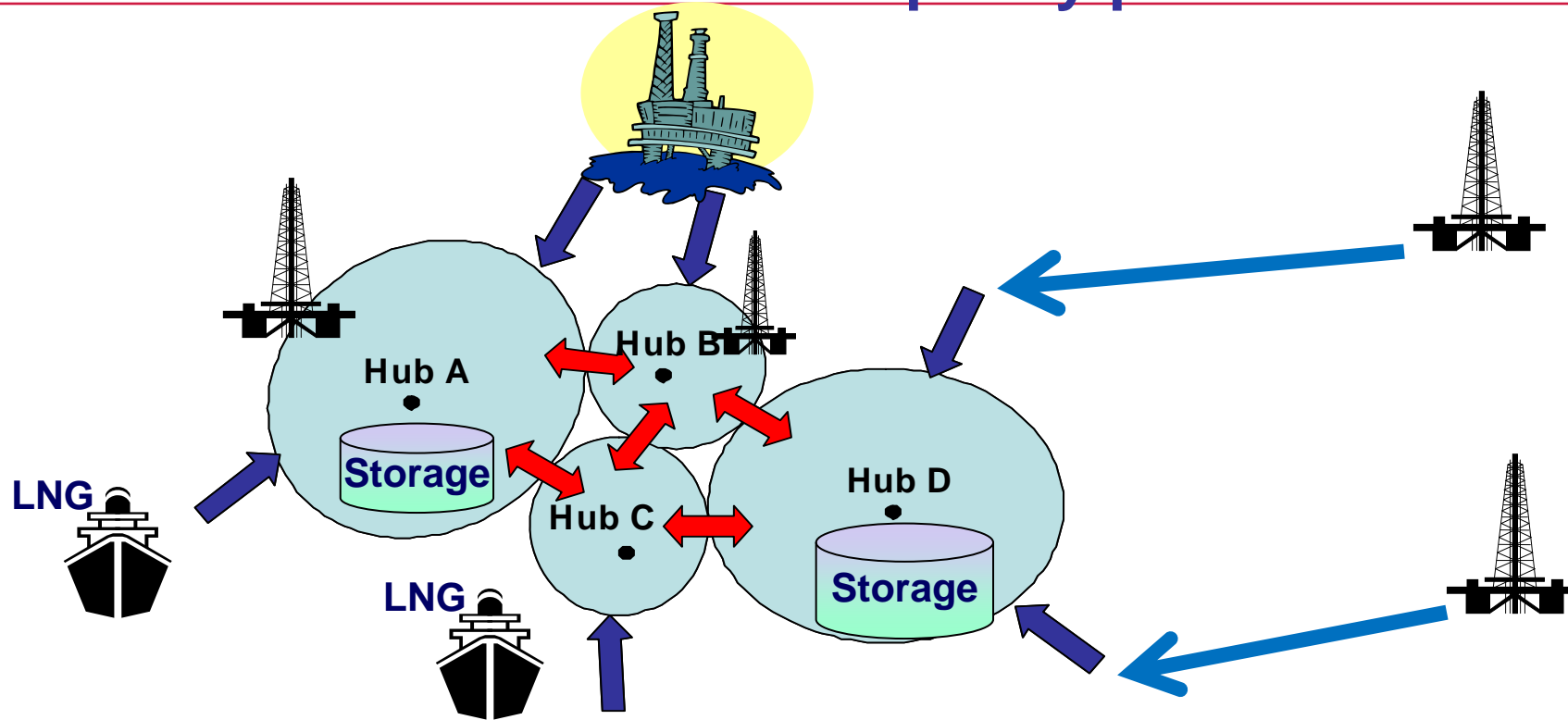
TSO sells (auctions) unbooked firm DA capacity and all un-nominated capacity

All capacity reverts to TSO (all interruptible contracts are interrupted, no within-day renomination). Compensation issues?





# Market design complicated by supply dynamics. Need internal focus on consistent capacity products



## Reminder of key prerequisites to enable introduction of bundled capacity products:

Implementation of entry-exit and trading hubs, standardised operating rules & products in all markets

Joint maximisation of offered capacity at all interconnection points

Harmonisation of booking and allocation procedures at all interconnection points.

Decrease administrative burden by reduced and harmonised licensing and reporting requirements

# Summary – A target model of ‘building blocks’

## A possible way forward:

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1. TSOs maximise offered inter-TSO capacities and establish flexible, standardised capacity products between each TSO system
  2. Ensure information provision by TSOs includes real-time updates
  3. Concerted effort to establish intra-day markets with daily balancing
  4. Allow economic & technical drivers to optimise balancing zones
  5. Remove other barriers so gas can be freely shipped between balancing zones and trading naturally gravitates to virtual points
- Use the primary capacity and daily balancing building blocks now.
  - Learn from experience and develop a more detailed concept for within-day market integration for gas (e.g. modified electricity market coupling)

# ANNEX GAS MARKET DESIGN

Examples of some building blocks from EFET  
papers during the last 4 years

# Gas Market Design – Some Relevant Gas Committee Positions (2007/8)



ISSUE	PRINCIPLE or PROCESS	EXPECTATION or RESULT
<b>Regional gas grids (November 2007)</b>	Wholesale trading is unimpeded by national borders or barriers to entry. Characteristics are: <ul style="list-style-type: none"> <li>• non-discriminatory access</li> <li>• efficiency</li> <li>• transparency</li> <li>• liquidity and</li> <li>• resilience of the system</li> </ul>	Independent regional grid operators optimise capacity and facilitate trading (at virtual points) for all maturities of contracts for buying and selling wholesale gas on the <ul style="list-style-type: none"> <li>• Forward market</li> <li>• Day-Ahead market</li> <li>• Intra-day &amp; balancing market(s)</li> </ul>
<b>Market-based balancing (May 2008)</b>	Within day balancing markets with cost-reflective cash-out prices	Economic signals ensure within-day market response so flexibility is used efficiently & liquidity improves.
<b>Primary capacity allocation (Sept 2008)</b>	market-based processes for LT to ST capacity allocation with consistent economic models for TSO investment decisions	Pricing based on investment costs for long-term allocations and on market value for shorter-term sales

# Gas Market Design – Some Relevant Gas Committee Positions (2009)



ISSUE	PRINCIPLE or PROCESS	EXPECTATION or RESULT
<b>Regional Cooperation</b> (June-2009) (joint paper)	ENTSOG helps TSOs to develop action plans and timetables for multi-system operation	Creation of larger and more efficient market areas (balancing zones)
<b>Access to storage</b> (July-2009)	Storage is only regulated if so determined by EU approved competition test.	Storage is a competitive service and 'administered allocation' is minimised.
<b>Interruptible capacity</b> (Nov 2009)	A single product for interruptible capacity throughout Europe with market based price mechanism	Simpler interruptible capacity product auctioned with a zero reserve price
<b>LNG</b> (December 2009) (Joint paper)	Standardized terminal rules, regulations, directives, and orders applicable to LNG Receiving Terminals in Europe.	Further development of the secondary capacity market

# Gas Market Design

## Some Relevant Gas Committee Positions (2010)



ISSUE	PRINCIPLE or PROCESS	EXPECTATION or RESULT
<b>Capacity Allocation Essentials (February 2010)</b>	Adjacent TSOs jointly offer (by auctions) harmonised firm and interruptible capacity at interconnection points	Transport between interconnected balancing zones is offered by a single allocation procedure with a single contract and single nomination.
<b>Congestion Management Essentials (March 2010)</b>	Dynamic recalculation of firm capacity, optimal selling of firm capacity (oversubscription and buy-back), remarketing booked capacity and proper facilitation of secondary capacity trading.	TSOs and existing capacity holders obliged and/or incentivised to take action so that capacity is available to those who need it
<b>Guidelines on gas balancing (June 2010)</b>	Transmission system users bid or offer flexibility and balance their inputs and outputs through a cash-out mechanism that uses prices from the local intraday balancing market.	Users have the information and the flexibility tools to balance their portfolios within the (daily) balancing period and contribute to the efficient balancing of the system.