

# LNG in the Gas Mix of Greece – Its Role for the Regional Gas Market

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*Sofia, 17 May 2019*

**8<sup>th</sup> Regional Energy Conference:  
Today's Agenda of the Regional Energy  
Development**

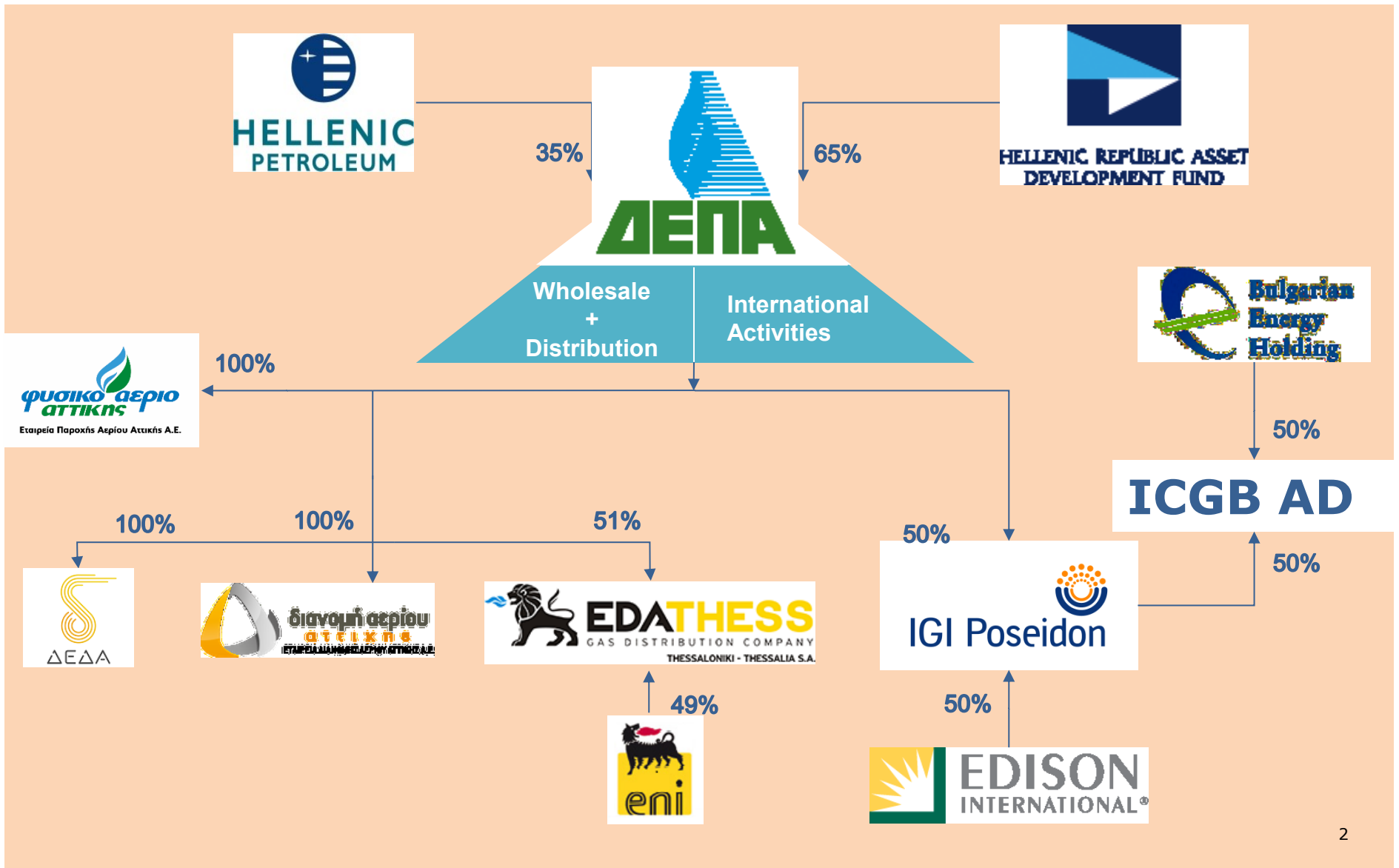
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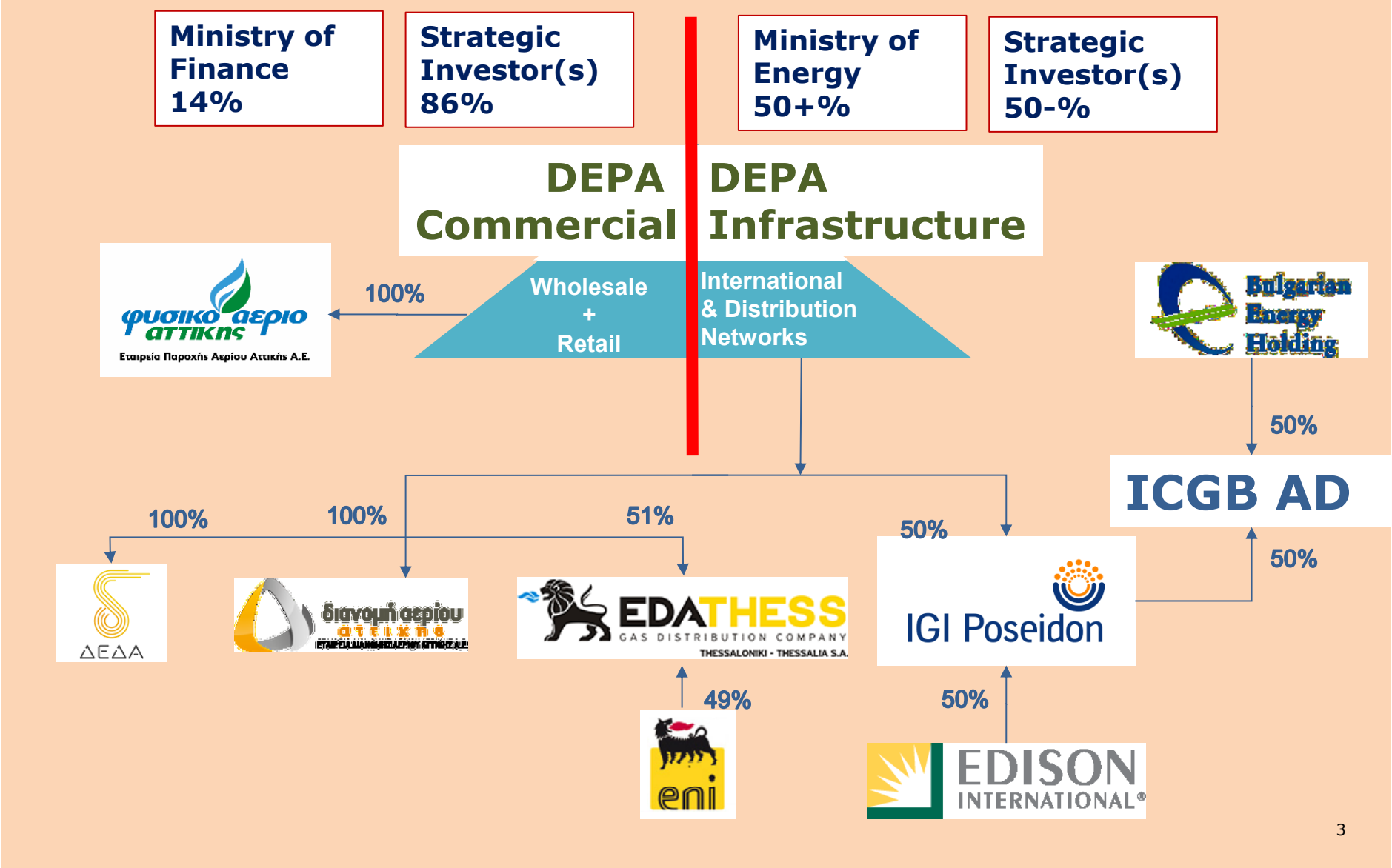
# A short introduction to DEPA



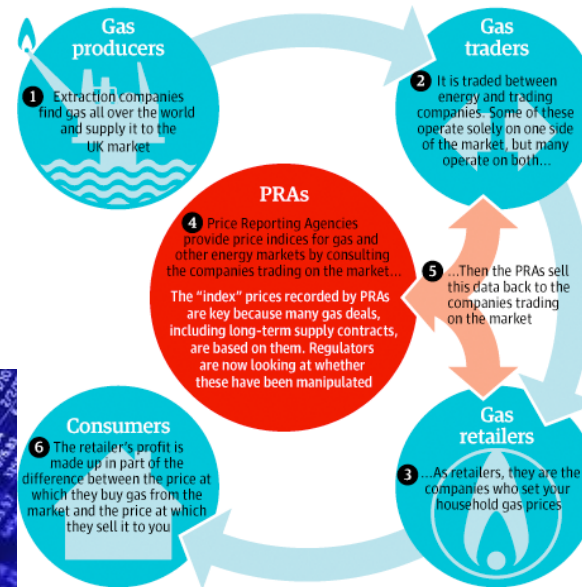
# DEPA Group structure



# DEPA Group Structure under development



# LNG – A tool of versatility

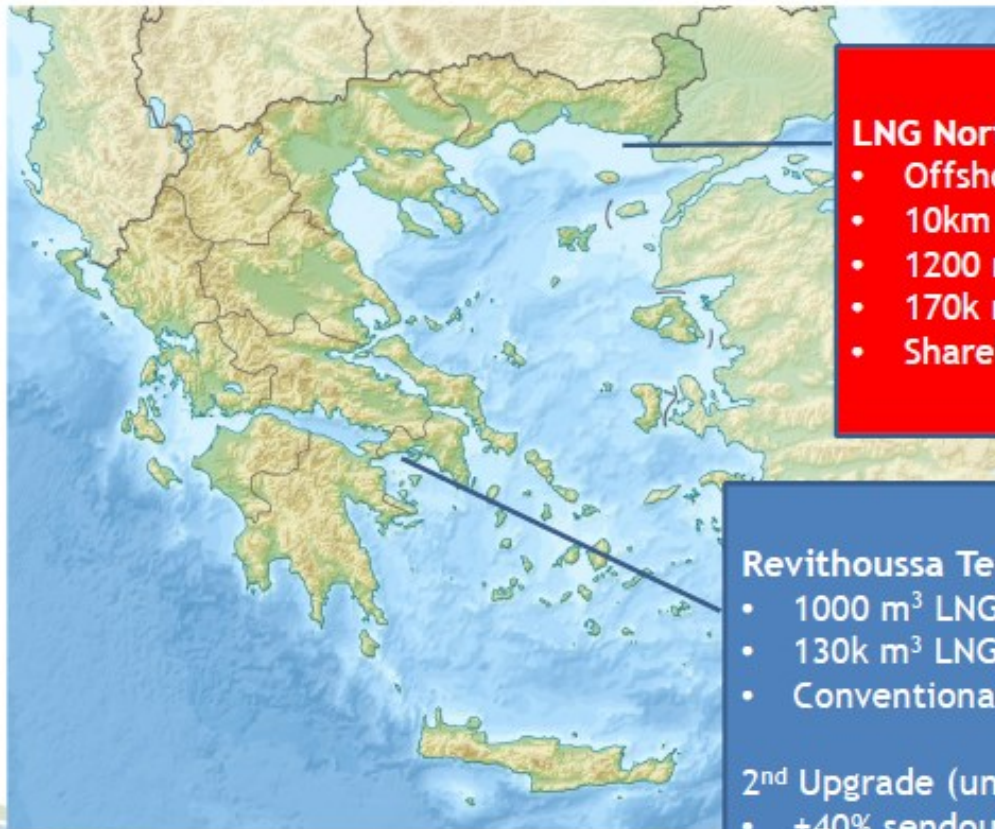




# LNG Plants in wider region



## LNG Terminals in Greece



### LNG Northern Greece (Indie)

- Offshore FSRU
- 10km from nearest shore
- 1200 m<sup>3</sup> LNG/h sendout
- 170k m<sup>3</sup> LNG storage
- Shareholding still shaping

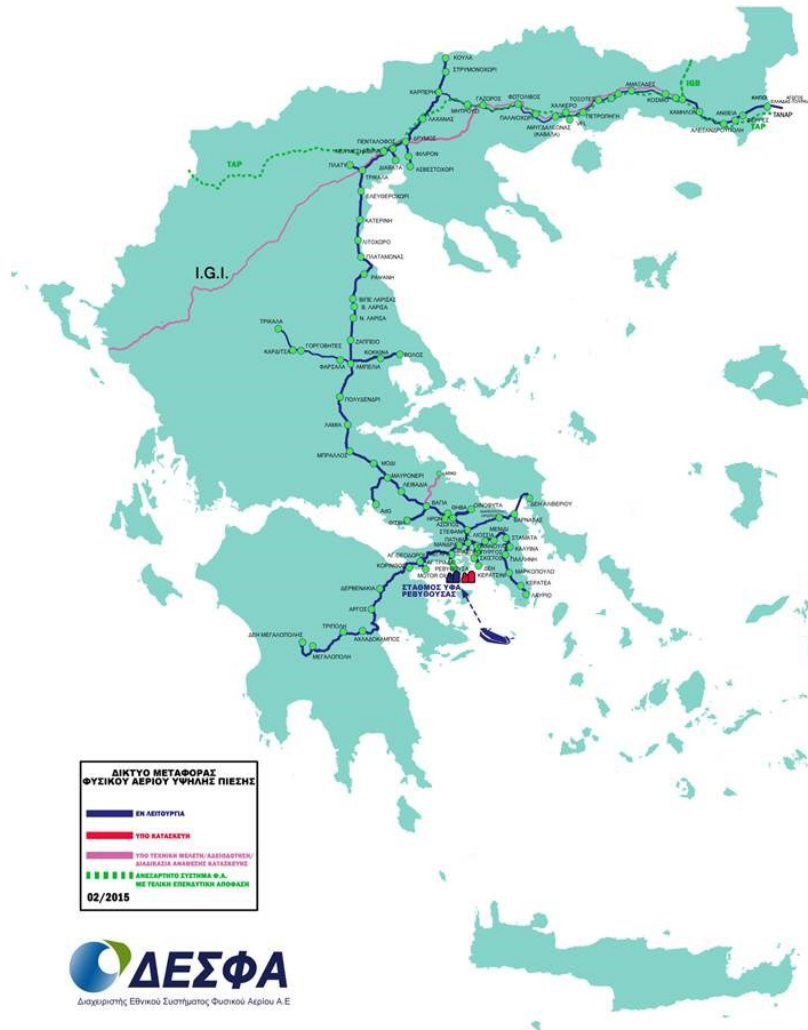
### Revithoussa Terminal (DESFA)

- 1000 m<sup>3</sup> LNG/h sendout
- 130k m<sup>3</sup> LNG storage
- Conventional carriers

### 2<sup>nd</sup> Upgrade (underway)

- +40% sendout
- +82% storage to Users
- Q-max carriers

# Revithoussa LNG Terminal: a balancing act

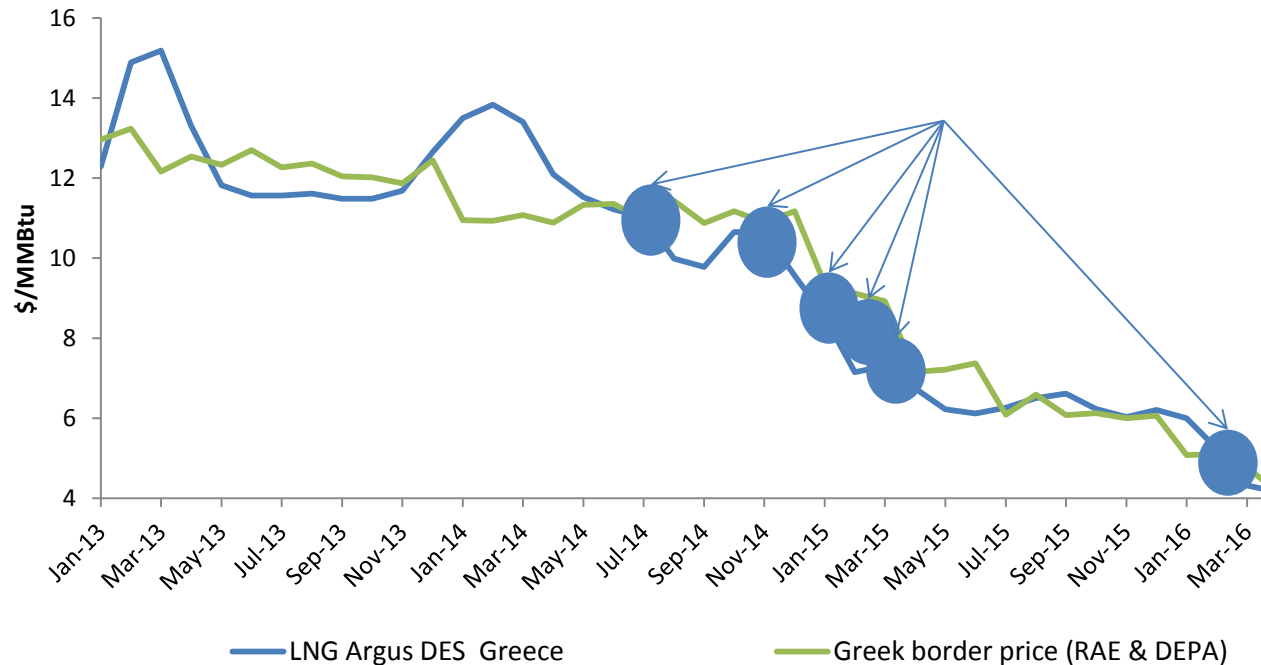


- 1996: only Russian gas from Kulata/Sidirokastro (North)
- No UGS
- Main consumption around Athens (South)
- Need for hydraulic balance
- 2000: Revithoussa to balance
- Upgraded Dec 2018
  - 225.000 m3 LNG storage
  - 1400 m3LNG/h sendout
  - Reloads as of May 10<sup>th</sup> 2019
- Over 300 cargoes so far
- Poor utilisation when  $P_{LNG}$ =high
  - However, need elbow room to serve peaks
- Flexible delivery in a non-UGS system



# Greek imports agile to prices

## Greek Spot LNG imports vs. Market Prices



- When the Greek Border Price exceeds LNG prices, SPOT LNG imports are motivated into the Greek market
- LNG price slump on Q1-2014 motivated SPOT LNG imports to the Greek market
- However, decrease in long-term oil-indexed contract price caught up in Q3-2015



## A Terminal and LNG commodity are not sufficient

- Major factors in helping LNG penetrate a market:
  - If market is not liberalised
    - Features similar to pipeline gas, namely security of supply, price stability, a willing incumbent
  - When market is liberalised by regulation but illiquid
    - Similar to non-liberalised + willing and able independent importers
    - Price competitiveness
  - When market is liberalised and liquid
    - Definite price competitiveness
- Price Competitiveness = Delivered Price Competitiveness
  - Commodity + Terminal Fees + Transportation to Consumer Costs
  - e.g. in Bulgarian market: LNG delivered from Revithoussa to BG VTP must cost less than Regulated Price + cost to BG VTP



# Can LNG help the region?

- Define “Region”
  - Greece, Bulgaria, Romania, Ukraine, Western Balkans?
- Define “help”
  - Access to gas?
  - Access to cheaper gas?
  - Access to flexible gas?
  - Access to non-Russian gas?
- LNG has a role to play when :
  - Consumers are far from the gas network (Small Scale LNG)
  - Consumers need gas in a liquid form (Marine LNG)
  - LNG comes cheaper than pipeline gas (index is a secondary issue)
  - LNG pricing provides more financial security to suppliers (ability to hedge)
  - LNG adds to security of supply, even at a sensible premium (differentiation of sources/routes)
  - LNG can cover flexibility that pipeline gas cannot (congestion, seasonality, lack of UGS)
- Where parts of the Region sees value in part of these circumstances, LNG can help!
- The more circumstances, the larger the size of the help, the larger the LNG contribution.



# Bulgaria: from Coal to Gas?

- Today:
  - 60+% of gas in Greece consumed to produce power
  - 25 → 40% of power produced in Greece from natural gas
  - 50-60% of gas in Greece imported from Russia
- ‘Tomorrow’ (2030)
  - 50+% of power produced in Greece from RES
  - The rest from gas
    - Fossil imports (Russia, Azerbaijan, etc.)
    - Fossil imports from new sources (East Med)
    - Fossil indigenous production (including coal gasification?)
    - Renewable Gas (including synthetic gas and waste digestion/gasification?)
- Why?
  - Methane is only second to hydrogen in quality as a fuel (clean, easy to burn, easy to handle)
  - Methane increasingly mobile through liquefaction
  - Methane trade increasingly global, liquid, trustworthy (commodisation)
- Bulgaria may follow the same path,
  - By exploiting diversified sources of gas
  - as long as it secures social redeployment



# Thank you!

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