

# **SJWS#2 – Part 3**

**Supply price configurations  
and link to the monetised part of the TYNDP assessment**

**ENTSOG System Development Area**



# TYNDP assessment is multi-criteria

***The TYNDP assessment frame is defined by the CBA methodology. It is a **multi criteria assessment*****

- > Aiming at assessing the situation along the different criteria defined by Reg. 347
- > Aiming at assessing the projects along a wide range of potential benefits

## ***Within this multi-criteria assessment***

- > A part looks a quantitative indicators that are not monetised
- > A part looks a quantitative indicators that could be monetised using a fixed value
- > A last part looks at indicators that are monetised as part of the simulation

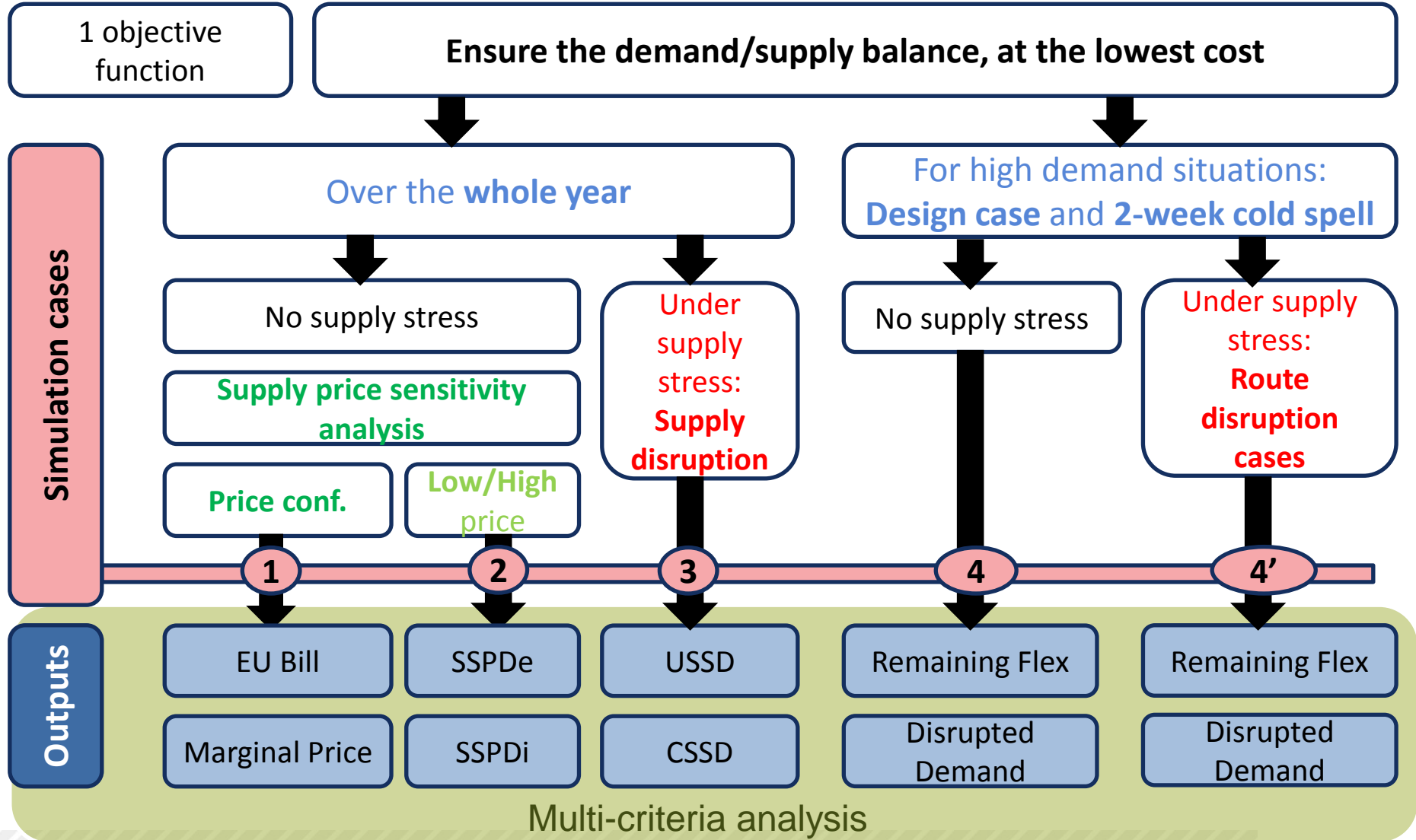
***This presentation focuses on the monetised (simulation-based) part.***

***Keep in mind the other parts.***

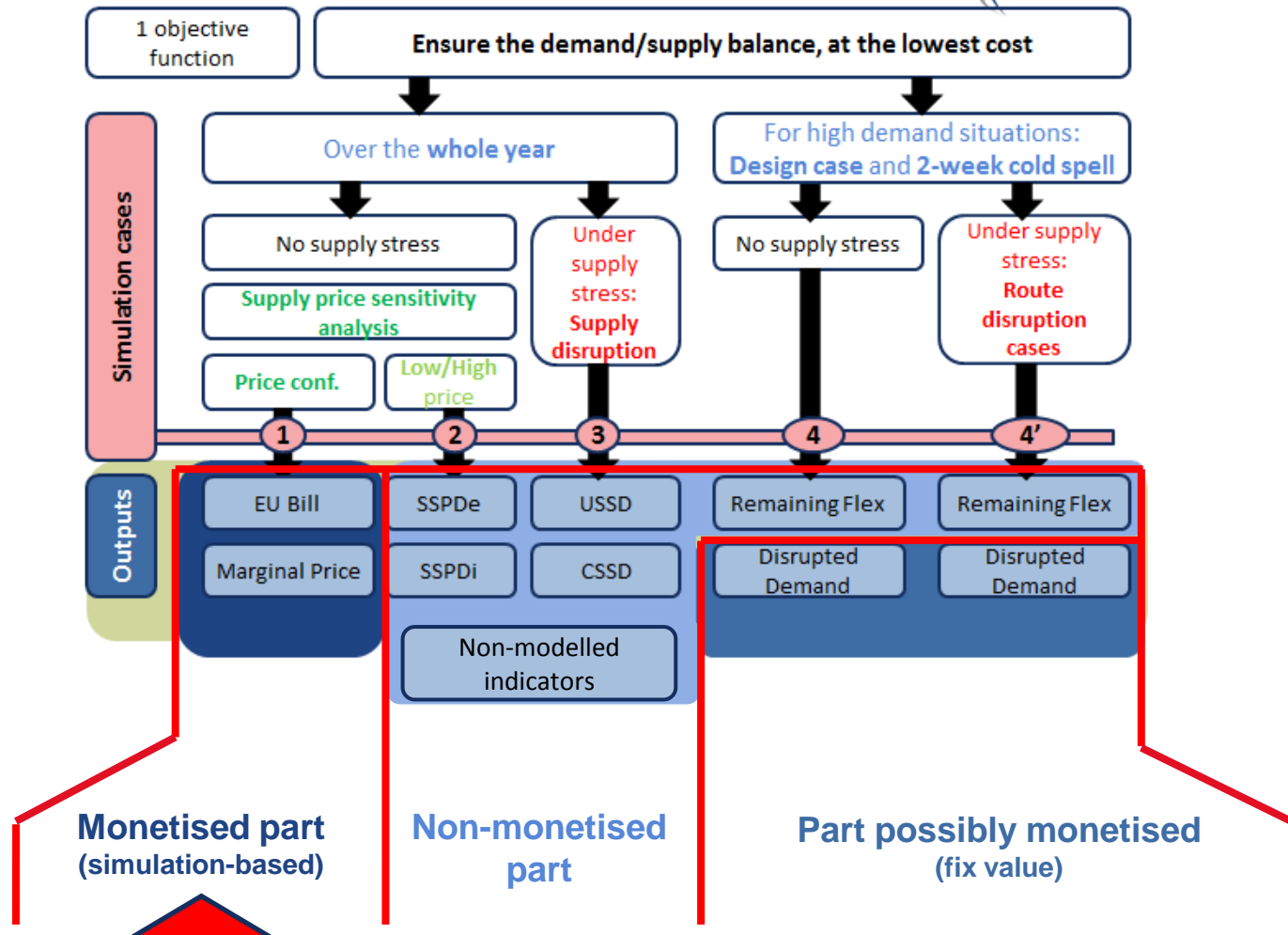
***All parts are as relevant and none should be disregarded.***



# TYNDP assessment is multi-criteria



# 3 different parts in the assessment



Only one part of the assessment is monetised based on simulation



## The monetised part of the assessment

*The monetised (simulation-based) part of the assessment looks at*

- > The **EU supply bill** => to answer the questions: do projects improve the EU supply bill
- > The resulting **marginal prices** at country level => to answer the question: do projects improve the marginal price convergence between countries
- > Marginal prices can be used to compute the **consumer bill** at country level



# The monetised part of the assessment

## *This part of the assessment*

- > requires to model the behaviour of supplies
- > using a **reference supply price, supply price curves**
- > intends at covering **contrasted supply mixes** => triggered by **contrasted supply prices**
- > which is build as a **sensitivity analysis** using **supply price configurations**
- > is based on standardised assumptions: it is not a forecast => it will provide **standardised** results
- > uses the assumption that the **price per source** is the same regardless of the import point
- > The results **depend on supply prices**

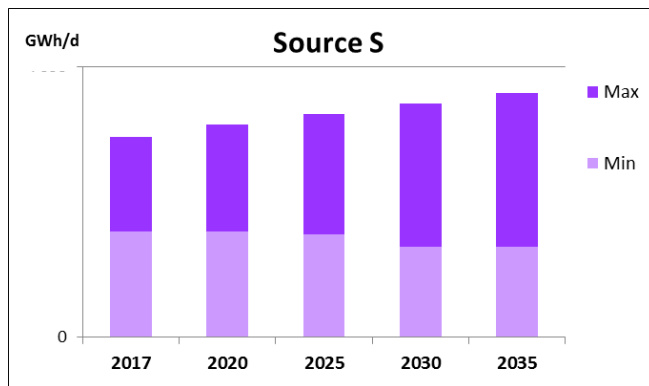
## *The **other parts of the assessment do not depend on supply prices***

- > Non-monetised part and part possibly monetised (based on fix value)

# Reminder on supplies

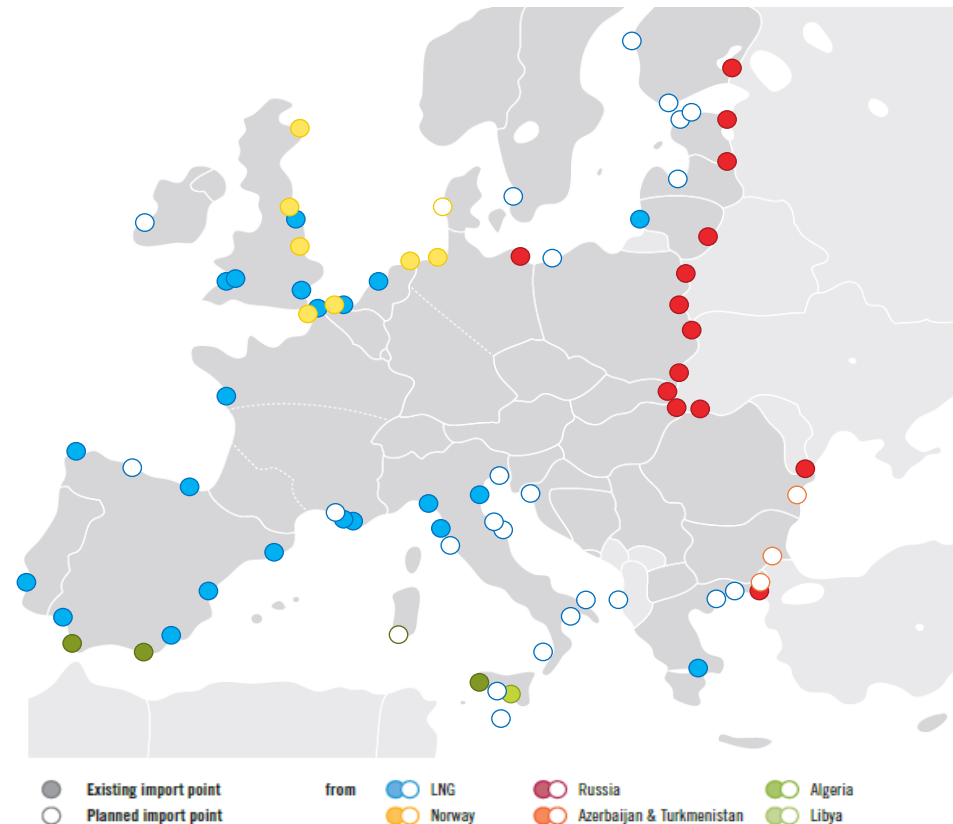
## Supplies

- > 6 sources considered
- > [Min – Max] supply range per source



- > Each source is connected to the relevant import points
  - Existing
  - Or related to projects submitted to the TYNDP (depending on the considered Infrastructure Level)

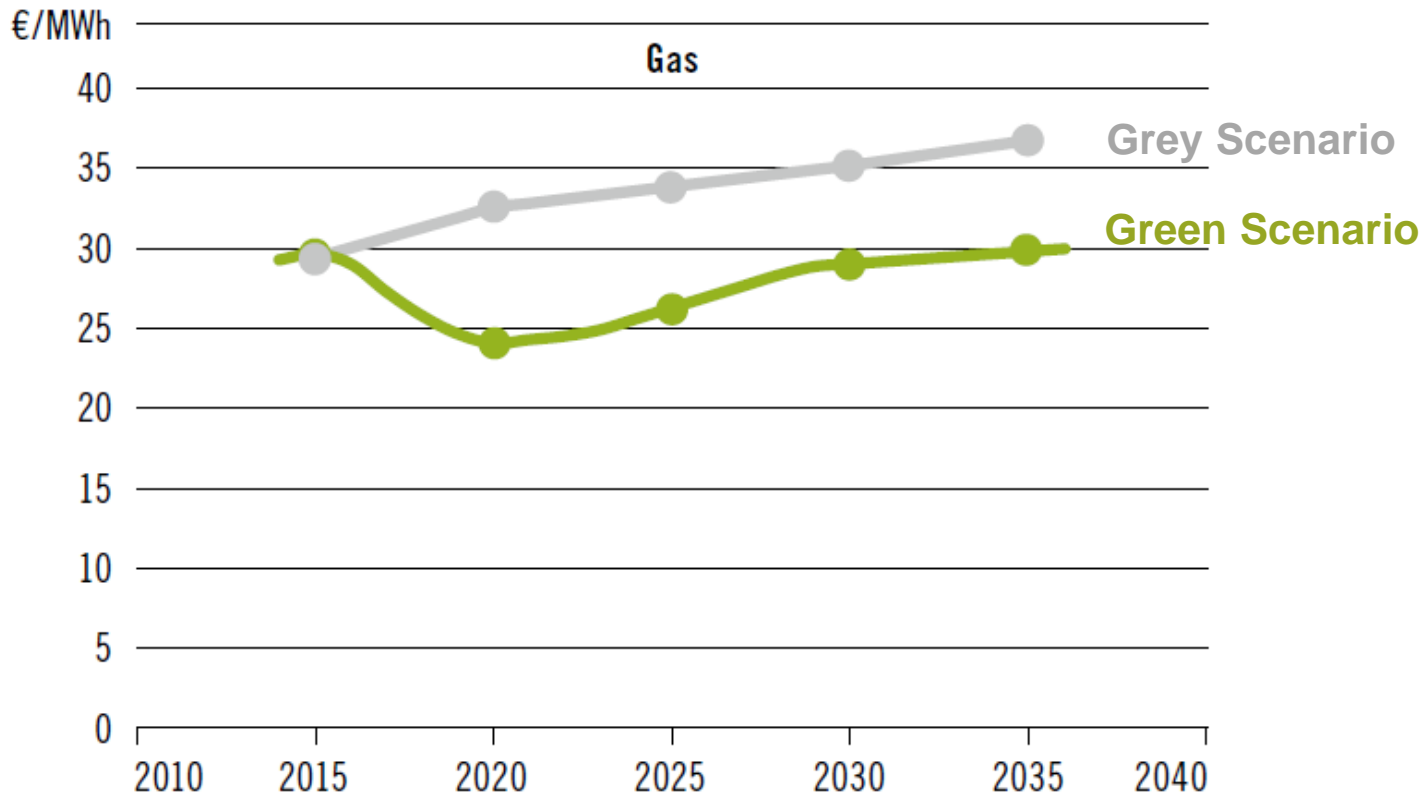
## Imports points in TYNDP 2015





# Reference supply price

*TYNDP 2015 data...*



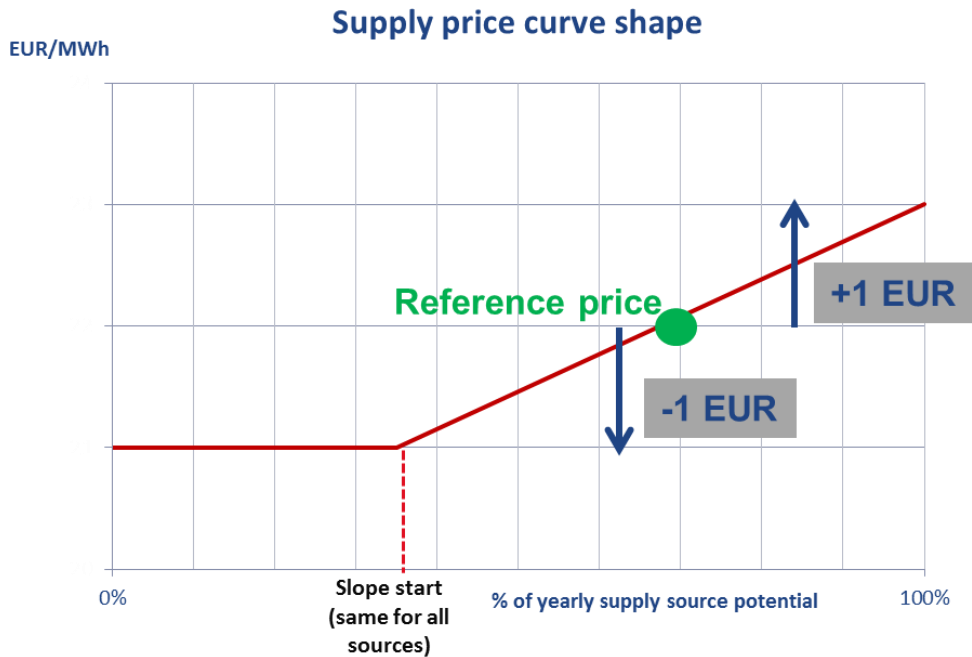
*...will be updated based on EIA World Energy Outlook*





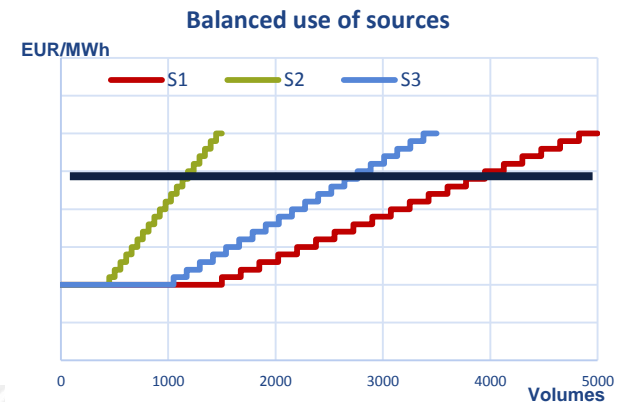
# Supply Price Curves

> Same curve's shape for all supply sources. Within-year.



> The curve is shaped for modelling purpose, to trigger

- Storages use (curve use per season)
- Balanced use of sources (when at same price)



# Supply price configurations

## *What for?*

- > Assess infrastructures under **contrasted supply mixes**=> **sensitivity analysis**

## *Contrasted supply mixes: how?*

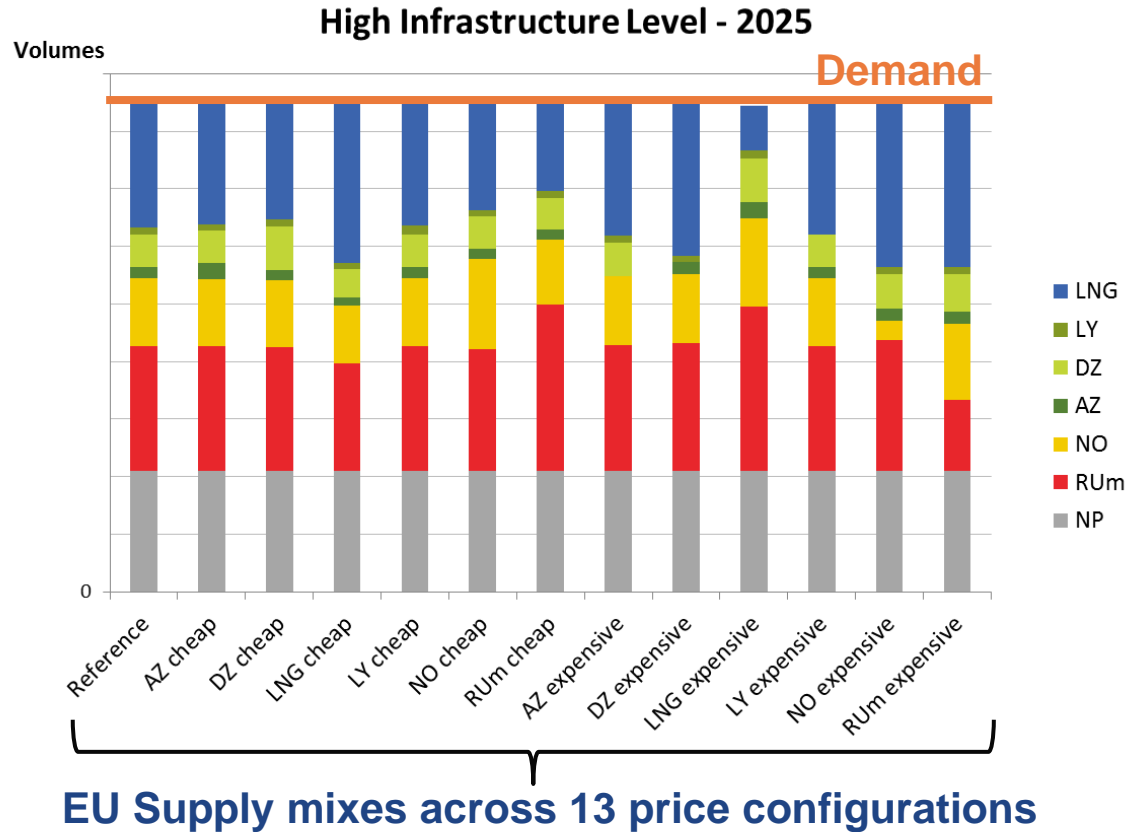
- > A **standardised** approach
- > Triggered through **price configurations**: combination of different supplies' price curves
- > Intended at representing potential future **temporary** rankings of supply **prices** to the EU
  - Should not be understood as long-lasting situations
  - Should cover potential price situations over the next 20 years
- > Designed to maximise, resp. minimise, a given source => source expensive, resp. cheap



# Supply price configurations

## Feedback from TYNDP 2015

- > Many results
- > For a given source: redundant behaviour across several configurations



**For TYNDP 2017: focus on fewer configurations**

# Which configurations?

## ***LNG is a world market, depending on numerous parameters.***

- > LNG price formation independent from Europe. Both situations are plausible
- > **LNG cheap**, as foreseen for coming years
  - Over-supply: US shale exports, Australia
  - Slowing South-East Asia demand: China industry to service growth, nuclear in Japan
- > **LNG expensive**, as observed over the past years: Fukushima, booming China demand
  - Plausible in the future: India demand, US shale crack, large scale coal to gas

## ***Russia is a major supplier for Europe***

- > Assessment of infrastructures should consider contrasted situations
- > **Russian gas cheap** to maximise volumes to the EU
- > **Russian gas expensive**: focus on margins, on the Asian market, EU-RU crisis

## ***Azeri gas is a promising new source for EU***

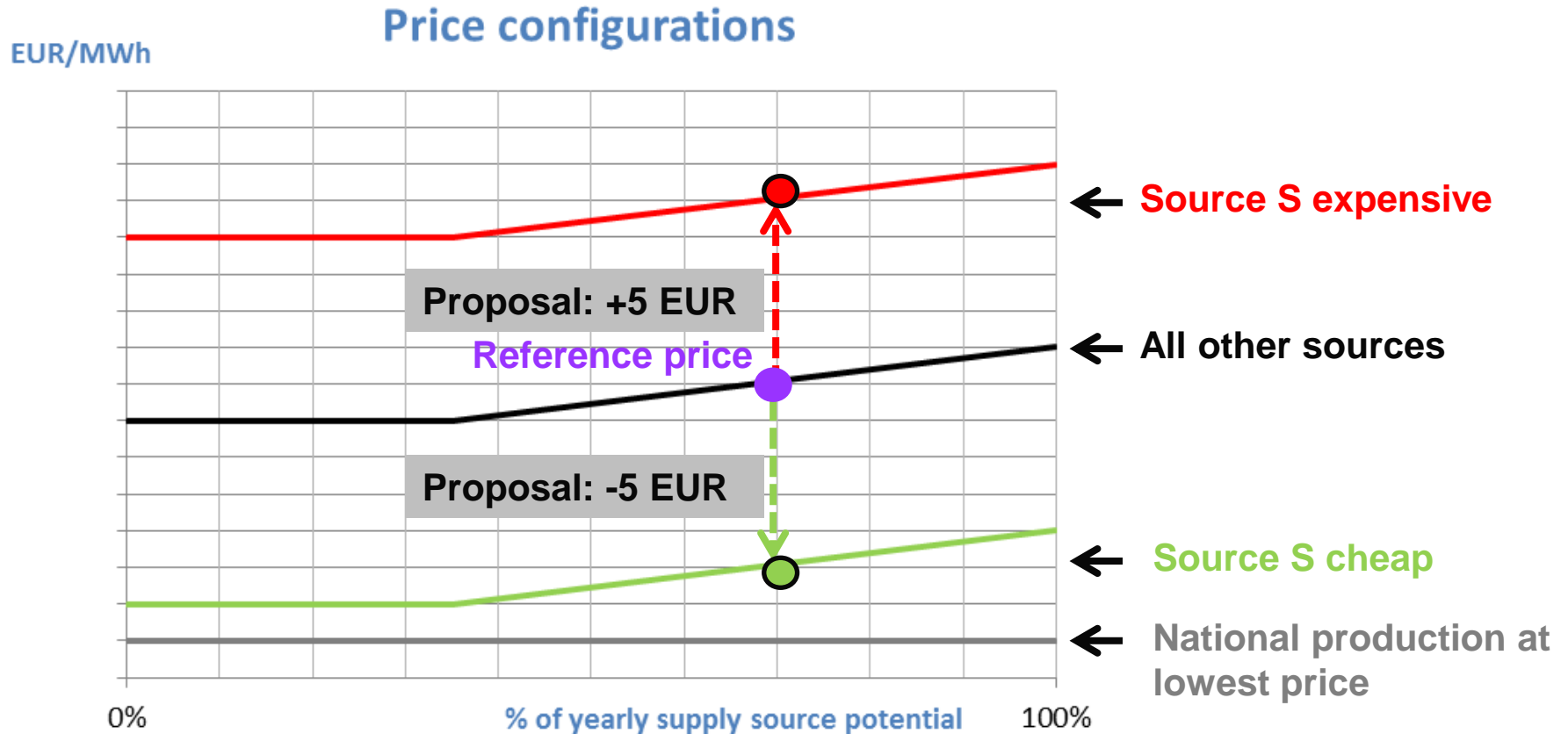
- > Maximisation case to assess import infrastructures => **Azeri gas cheap**

**And Neutral** => balanced use of sources



# Modelling of price configurations

> Price spread approach: standardised value (not real value nor forecast)





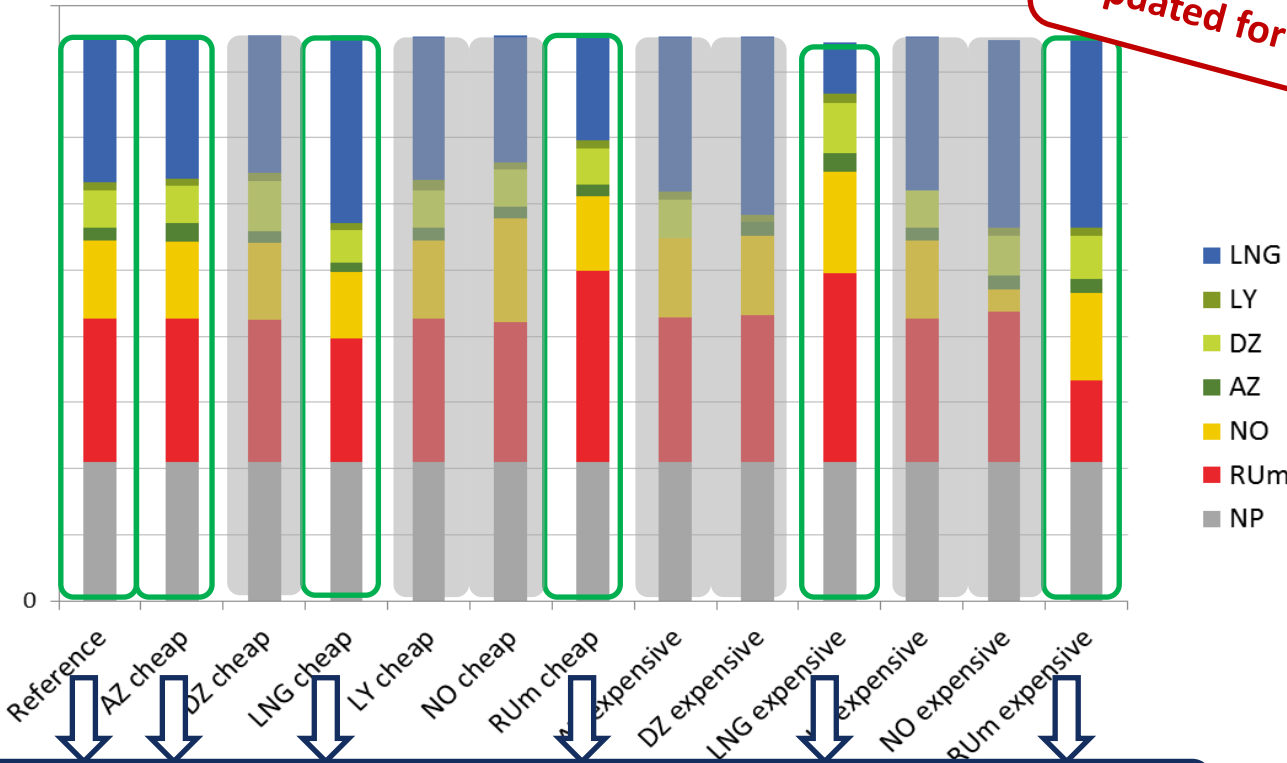
# What to expect?

***In terms of supply mixes, looking at TYNDP 2015 results***

> Proposed configurations cover high use of each individual source

### High Infrastructure Level - 2025

Volumes



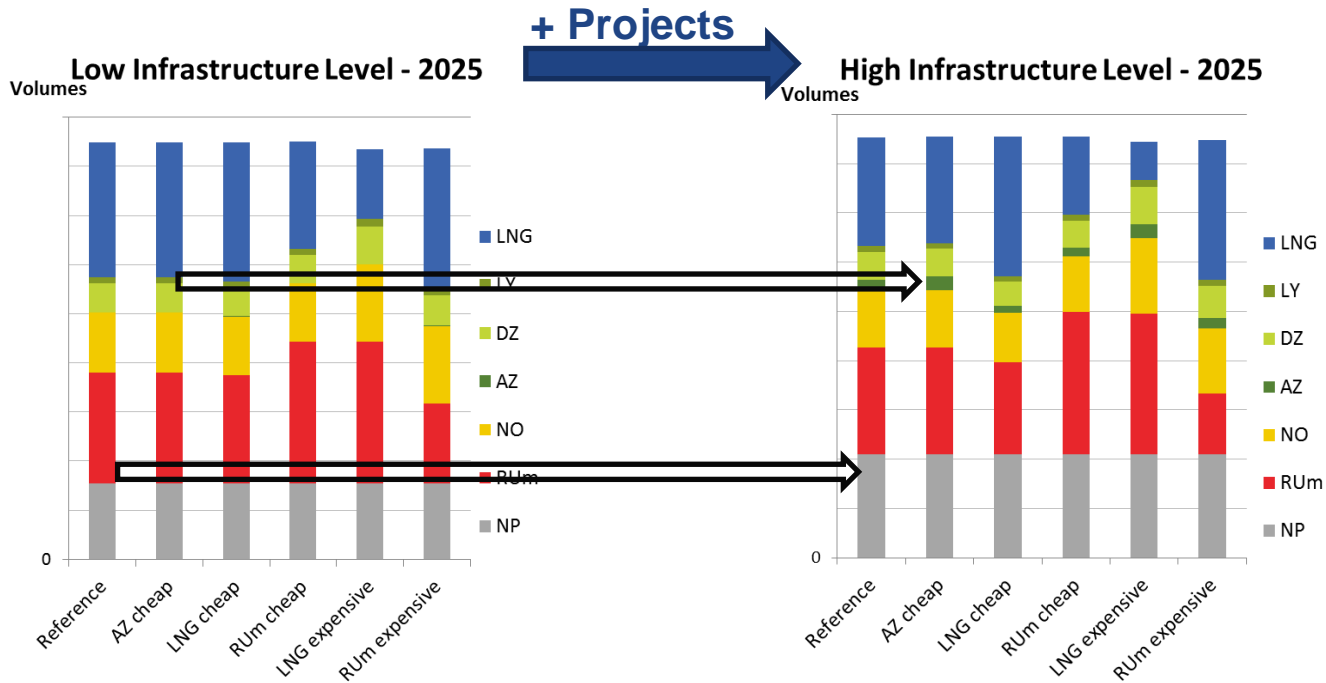
**Supply potentials will be updated for TYNDP 2017 !**





# What to expect?

*In terms of projects' impact, looking at TYNDP 2015*



**Supply potentials  
will be updated  
for TYNDP 2017 !**

- > Change triggered by **projects impacting the EU supply mix**
  - Connecting a new supply source
  - Lifting a bottleneck preventing EU to make full use of a source
  - Arbitration between same price sources

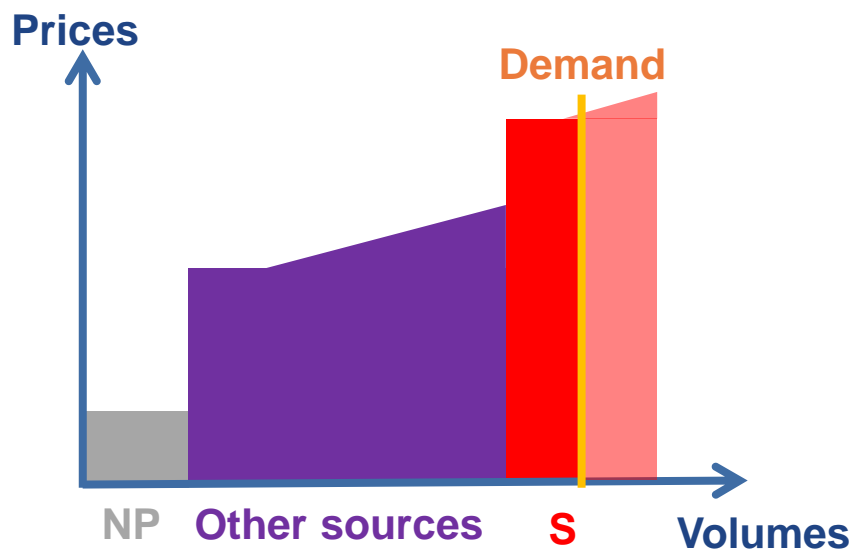
# EU supply Bill

*EU supply mix will turn into EU supply bill*

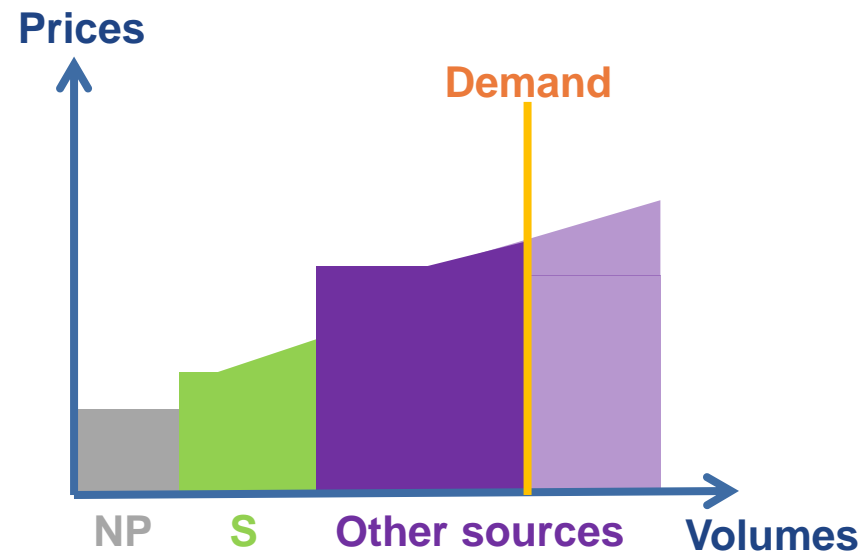
> A general principle, numerous possible situations

For a given Infrastructure Level

Source S expensive



Source S cheap



*Different supply mixes*



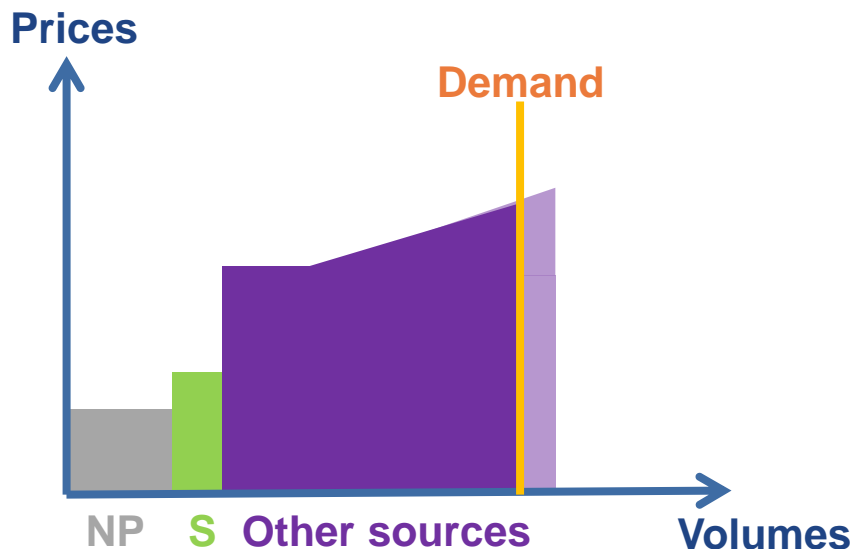
# EU supply Bill

***EU supply mix will turn into EU supply bill***

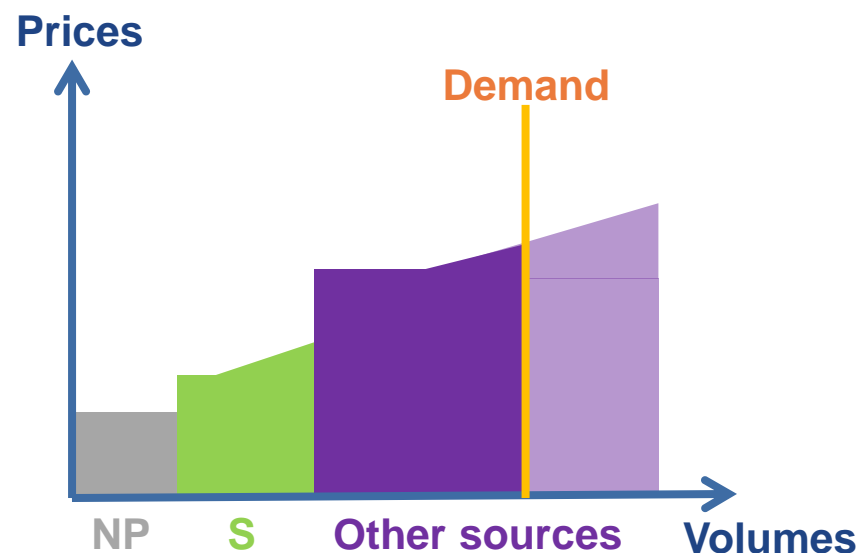
> A general principle, numerous possible situations

**For a given Source**

**Low Infrastructure Level**



**High Infrastructure Level**



***Projects impacting the supply mix will impact the EU supply bill***



# Conclusions



## *The monetised part of the assessment*

- > It looks into
  - The **EU supply bill** at EU level
  - The **marginal price** and possibly **consumer surplus** at country level
  
- > It is handled through supply price curves and price configurations
  - ENTSOG proposes to focus the assessment on **6 price configurations**
  - These configurations cover high use of all individual sources
  
- > Projects impacting the EU supply mix will show monetised benefits (impacy on EU bill)

## *Further monetisation?*

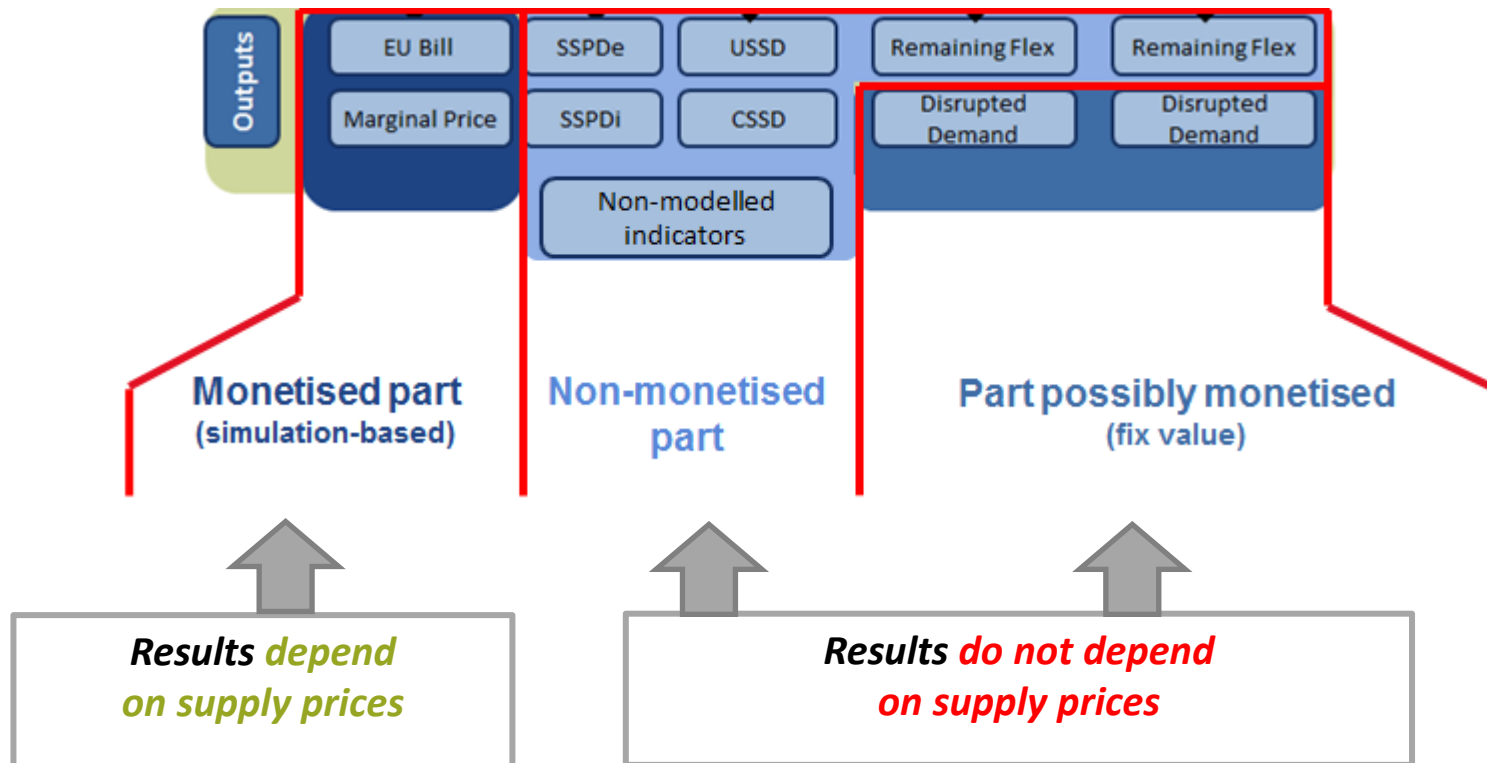
- > ACER and EC have called for it. ACER has recommended to consider in the model the existing barriers between markets where gas price differentials persists
- > ENTSOG is currently investigating the topic



# Conclusions

***All parts of the assessment are as relevant***

> Only the monetised part depends on supply prices





# Thank You for Your Attention

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