Introduction

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Workshop on gas market modelling for the Quo Vadis project
26 July, 2017
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Objective of workshop

- Improve the transparency of the modelling background for the QV project
- Review the major characteristics of the European Gas Market Model (EGMM)
- Partially reflect on stakeholders’ comments relevant for modelling
- Illustrate the welfare analysis characteristics of the EGMM
- Collect feedback on modelling approach and assumptions
- Make more explicit the limitations of EGMM modelling
- **Not** to define a task force to refine EGMM
Major uses of the EGMM

- Policy scenario analysis by comparing welfare impacts of changes in
  - infrastructure topology (new infrastructure) and performance (existing infrastructure) (PCI, PECI, DRS, PA2)
    - system use tariffs (CESEC)
    - LTC / LNG prices (Cheniere)
- CBA/CBCA analyses
- Supply security analyses
- Wholesale price forecasting
Project approach and status

Qualitative phase I.
Formulation of alternative regulatory scenarios & modelling framework

Quantitative phase II.
Scenarios modelling, testing and adjustment

March 2017
Project kickoff

June 2017
Preliminary report

September 2017
Modelling results

Autumn 2017
Final report

Inputs
Current gas market status and inefficiencies

Third Energy Package

Stakeholder papers

Reference Scenario

Considered alternative scenarios

Selected alternative scenarios

Excluded scenarios
Phases of scenario analysis

1. Status Quo scenario: 2016 IGM and global supply structure
2. Reference Scenario (2020): based on Status Quo, fully implemented Third Package. Compare welfare change to Status Quo
3. Regulatory Scenarios (2020): marginal and non-marginal regulatory changes and welfare effects compared to Reference scenario
   ▪ Supply shocks: domestic production (eg. Ukraine, Romania, Netherlands), higher LNG penetration, failing North African supplies
   ▪ Demand shocks: fuel switching in the electricity sector
   ▪ Extreme scenarios: combination of shocks to create extreme conditions.
EGMM references

• LNG & Storage strategy follow up study (ongoing, European Commission)
• Effect of tariffs on natural gas pipeline utilisation and flows in the CESEC region (2016, European Commission)
• CBA of PECI projects for the Energy Community (2016, 2013)
• LNG receiving capability of Europe at different price scenarios and pricing strategies and infrastructure bottlenecks (2015, Cheniere and 2016 Danube region)
• CESEC gas infrastructure corridor modelling (2015, European Commission)
• How can renewables and energy efficiency improve gas security in selected Member States? (2015, Towards2030 – Dialogue project)
• CBA of PCI projects for the Hungarian Energy and Public Utility Regulatory Authority (2014-2015, MEKH)
• The impact of gas infrastructure corridors on the regional gas market (MoFA RoBoGo, March 2014), FGSZ South Stream (April 2014)
• Supply Security analyses related to the Ukrainian crisis (2014, Atlantic Council, EFET, IDDRI)
• Measures To Increase The Flexibility And Resilience Of The European Natural Gas Market (2014, IEA)
• Latest significant upgrade supported by FGSZ (Hungarian TSO) (2013)
• Analysis of the CSEE gas storage market; the impact of system use charges on the demand for gas storage capacity (E.ON, 2012) and (MoFA, 2013)
CBA and CBCA related references

- CBA of the PL-SK gas interconnector (Hungarian Regulator MEKH)
- CBA analysis of the RO-HU-AT gas corridor (Hungarian Regulator MEKH)
- SI-HU interconnector (Slovenian TSO Plinovodi 2016-17)
- Evaluation of PECI infrastructure for Energy Community Secretariat (2016)
- Expert opinion on the Krk LNG CBA (Hungarian Regulator MEKH 2015)
- CBA analysis of the HR-SI gas interconnector (MEKH 2015)
Thank you for your attention

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