



FSR Webinar

Public Consultation on Recommendable
Updates for Gas CBA 2.0

Friday 10 March 2017

The role of the ESW-CBA methodologies

Regulation 347/2013 → The ESW-CBA methodologies should "*enable a harmonized energy-system wide cost-benefit analysis at Union level of projects of common interest [...] and should "be applied for the preparation of each TYNDP"*

The CBA methodology should:

- Be used to prepare TYNDP → assessment of infrastructure needs and aggregated CBA
- Enable the assessment of PCI candidates' eligibility according to the Regulation's criteria → primary indicators needed
- Enable comparison of PCI candidates by Regional Groups and support the establishment of the regional lists → comparison based on costs and benefits, CBA, multi-criteria analysis (CBA)
- Provide necessary data to carry out CBCA and investment requests treatment

Reviewing the gas ESW-CBA

Context and objectives

The Regulation plans for regular updates of the CBA methodologies

Current methodology rolled-out in 2015 → used for TYNDP 2017 and 2nd & 3rd PCI selection process

2017 update to be finalized by end of 2017 and applied for TYNDP 2018 and 4th PCI list

The current gas CBA methodology characterized by shortcomings and overall complexity → motivation for an in-depth study for DG-ENER

Overall objective → propose recommendable updates or improvements to the gas ESW-CBA

Taking into account the best possible ways to conduct CBA, CBA and PCI selection from a theoretical perspective

Integrating the constraints and opportunities for ENTSOG to carry on the updates

Integrating the benefits for ESW-CBA users and stakeholders

Reviewing the gas ESW-CBA

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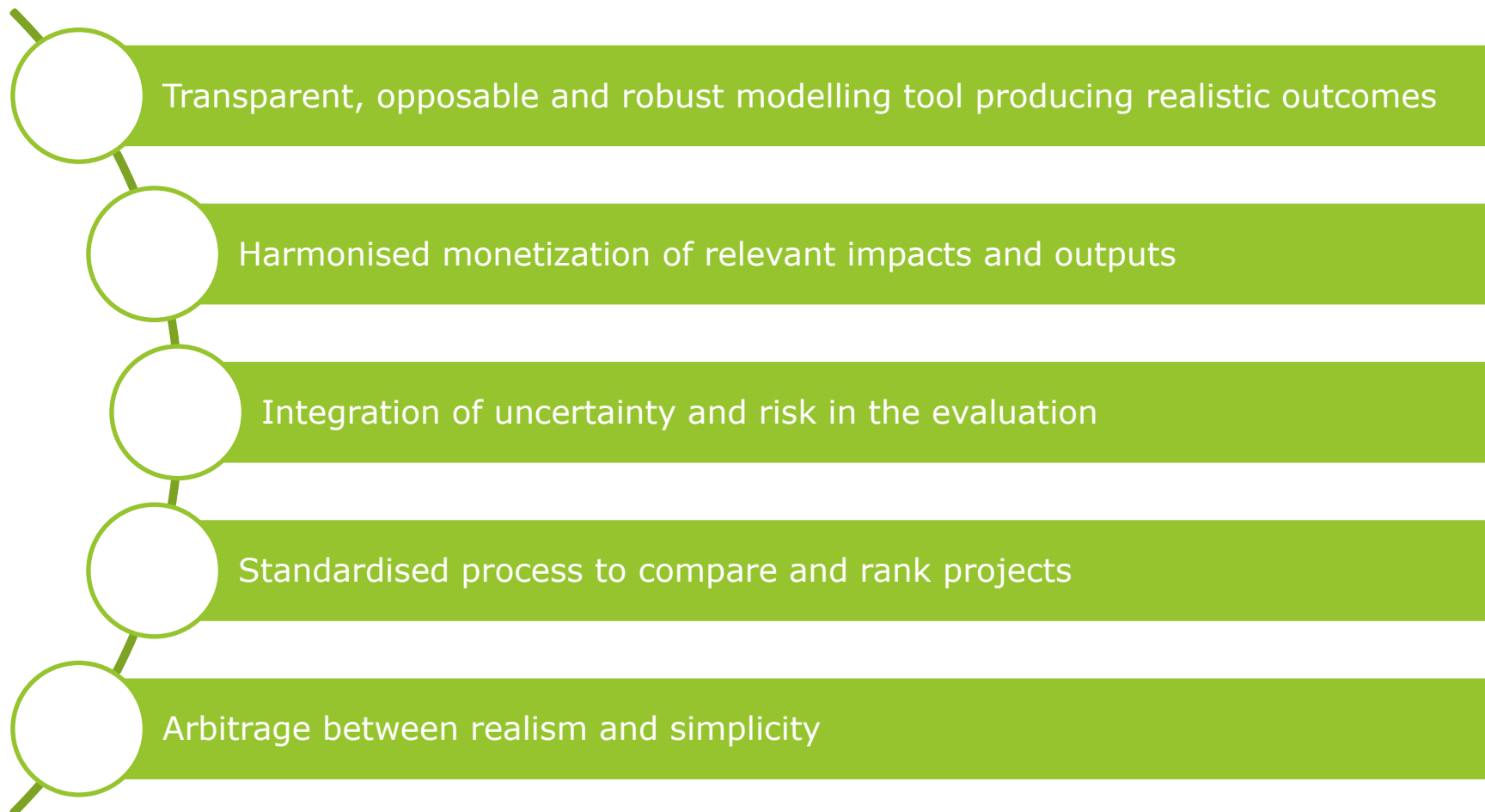
Integrating the constraints and opportunities for ENTSOG to carry on the updates

Integrating the benefits for ESW-CBA users and stakeholders

Objective of the survey

Reviewing the gas ESW-CBA

Theoretical principles of a cost-benefit analysis applied to gas infrastructure projects



Show of hands

Any update of the CBA methodology...



The update of the CBA methodology should lay out clearly and explicitly the steps for project promoters to follow when doing the assessment



The update of the CBA methodology should offer the tools to do a better calculation of the costs and benefits

Note: there is no right or wrong answer, the icons/colours are just for the show of hands

Findings and recommendations

Key issues along 4 dimensions

1 – Monetisation of benefits

4 monetized indicators

One VOLL for all

2 – Capacity to interpret and use outputs

Tens of indicators and hundreds of scenarios

Every case equally probable, or not?

3 – Alignment with PCI selection, CBCA, ...

No full disaggregation at Member State level for CBCA

4 – Modelling assumptions

Flow model with assumption of perfect competition

15 recommendations to address these issues

1 – Monetisation of benefits

1A: Monetisation roadmap

1B: Go toward monetisation of market power

1C: Improve monetisation of security of supply

1D: Improve monetisation of CO2 impacts

2 – Capacity to interpret and use outputs

2A: Reduce the number of indicators

2B: Highlight the relevant future cases

2C: Go toward aggregation of yearly results per indicator

3 – Alignment with PCI selection, CBCA, ...

3A: Standardised and practical project fiche

3B: Verification of PCI input data

3C: Enable the identification of clusters and competing projects

3D: (Monetised) indicators at MS level for CBCA

4 – Modelling assumptions

4A: More realistic demand assumptions

4B: Correct the impact of commercial constraints and transportation costs on flow setting

4C: Advance market modelling to include gaming

4D: Advance the use of common models

15 recommendations to address these issues

1 – Monetisation of benefits

- 1A: Monetisation roadmap
- 1B: Go toward monetisation of market power
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→ Reinforce the **1. Feasibility and complexity of efforts vs. simplicity**

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Complexity vs. simplicity

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Show of hands

All improvements are equal, but some improvements are more equal than others...



If an improvement is conceivable, the improvement should be implemented



The improvements should focus on improved functionality of the CBA methodology considering its intended purposes

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- These recommendations should be balanced regarding:
1. Feasibility and complexity
 2. Expected benefits (and costs)

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1. Feasibility and complexity of efforts vs. simplicity
 2. Expected benefits (and costs)
 3. Timing: short vs. long term

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2. Expected benefits (and costs)

3. Timing

4. Interdependence

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For each recommendation, the consultation report details

Why?

Issues identified with regard to economic theory on CBA

Perceptions on actual benefits of the recommendation for stakeholders

How?

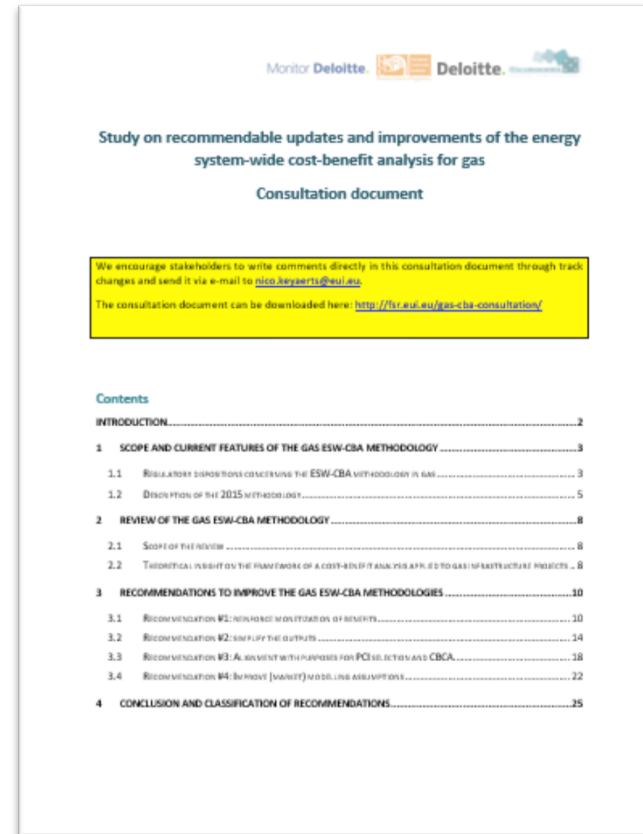
Steps and timing

Alternative methods

Feasibility

Technical requirements

Allocation of responsibilities



Focus

on specific recommendations

Focus

1 – Monetisation of benefits

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→ **Reinforce the monetization**

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→ **Simplify the outputs**

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Recommendation 2B

Highlight the relevant future cases

Why?

The current approach considers future scenarios concerning demand, supply, CO₂, price configurations, disruptions leading to **hundreds of simulation cases**

Challenging to filter and interpret the resulting output indicators, especially with respect to the **uncertainty** of the cases

How?

3 options

- Co-define a **limited number of future cases** that are of interest to the users of the CBA outputs
- Consider **all future cases** and discard information afterwards
- Automate the **probability analysis** of output values by Monte Carlo analysis

Feasibility?

Who should have the **final say** on the selected cases (preselection and discarding)?

In all the options **data collection and validation remains a challenge**

Show of hands

On relevant future cases (2B)



The methodology is indifferent to all possible futures and must offer as much information as possible to the CBA users



The CBA users are interested in a subset of futures; these cases have to be co-defined with ENTSOG before performing the CBA

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Recommendation 4B

Correcting the impact of commercial constraints and transportation costs on flow setting

Why?

Pipelines are modelled as a set of pipeline slices with increasing weight if a next slice is used to maximize spreading of flows.

How?

Explicit modelling of the market assumptions regarding demand, marginal cost of supply and marginal cost of using pipelines as perceived by grid users and contractual constraints

Feasibility?

The inclusion of detailed transmission costs based on hydraulic modelling or the inclusion of entry-exit tariffs is **non-trivial**.

Show of hands

On modelling gas flows (4B)



The methodology should focus on checking feasible flows independent of grid users; it provides sufficient information for CBA users



The methodology should have an assumption on how the grid and the grid users behave to model flows

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The remaining recommendations and the complete consultation report are available at:

<http://fsr.eui.eu/gas-cba-consultation/>

We welcome and thank you in advance for your feedback by March 24

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Open discussion

Proposed starting point

Preliminary classification of recommendation

- Monetization
- Interpret and use results
- Alignment with PCI selection & CBCA
- Modelling assumptions

