

CBA Methodology 2.0

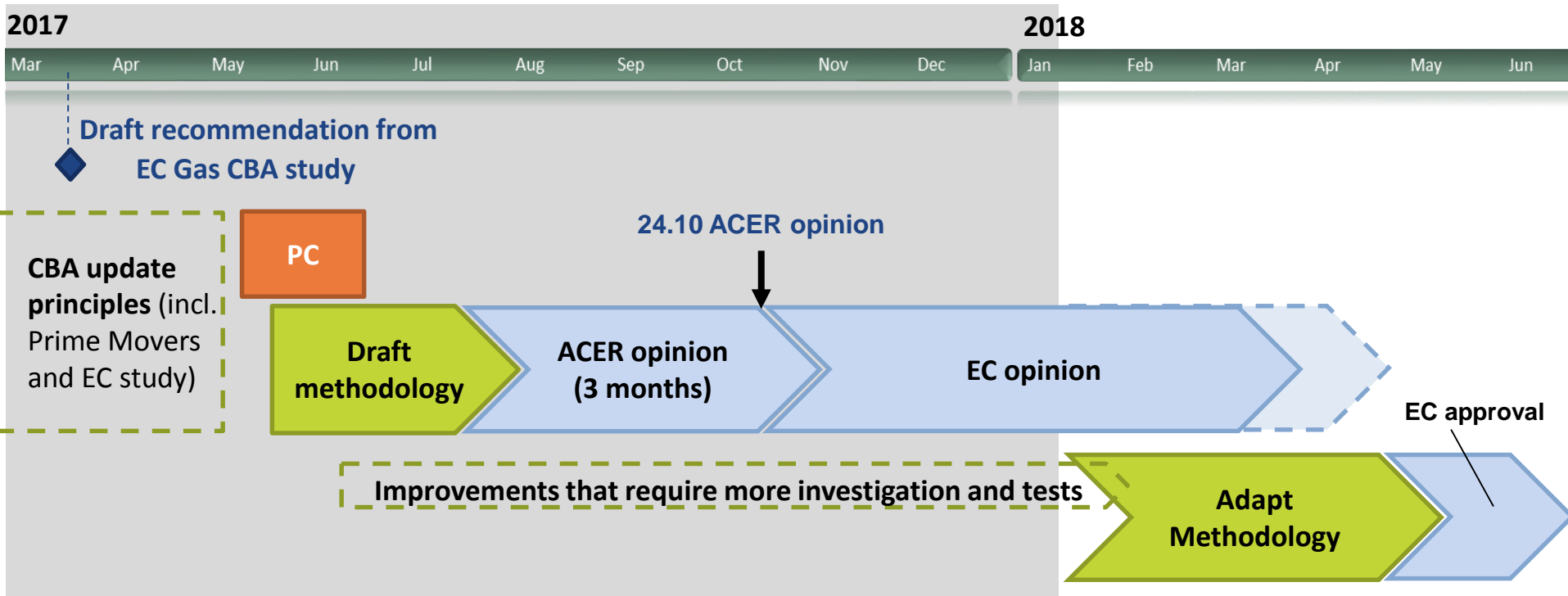
Introduction to the upcoming CBA methodology

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CBA Methodology 2.0 overall timeline



> ENTSOG will develop TYNDP 2018 based on CBA 2.0



Stakeholder engagement in CBA 2.0



- > General feedback received from stakeholders considered
- > Specific stakeholders engagement on CBAM update
 - **Prime Movers** in Jan-Feb 2017
 - Early discussions with EC Gas CBA study consultants
 - **Public Consultation** held from 19th May to 16 June 2017
 - ENTSOG discussions with UGS and LNG operators
- ➔ Stakeholder workshop on 13 February
- > ENTSOG also benefitted from the consultation performed within EC Gas CBA study

1. TYNDP: system assessment and Project-specific CBA

- > TYNDP to set the frame for project assessment
- > Integrate project-specific assessment in TYNDP
- > Ensure transparency towards stakeholders

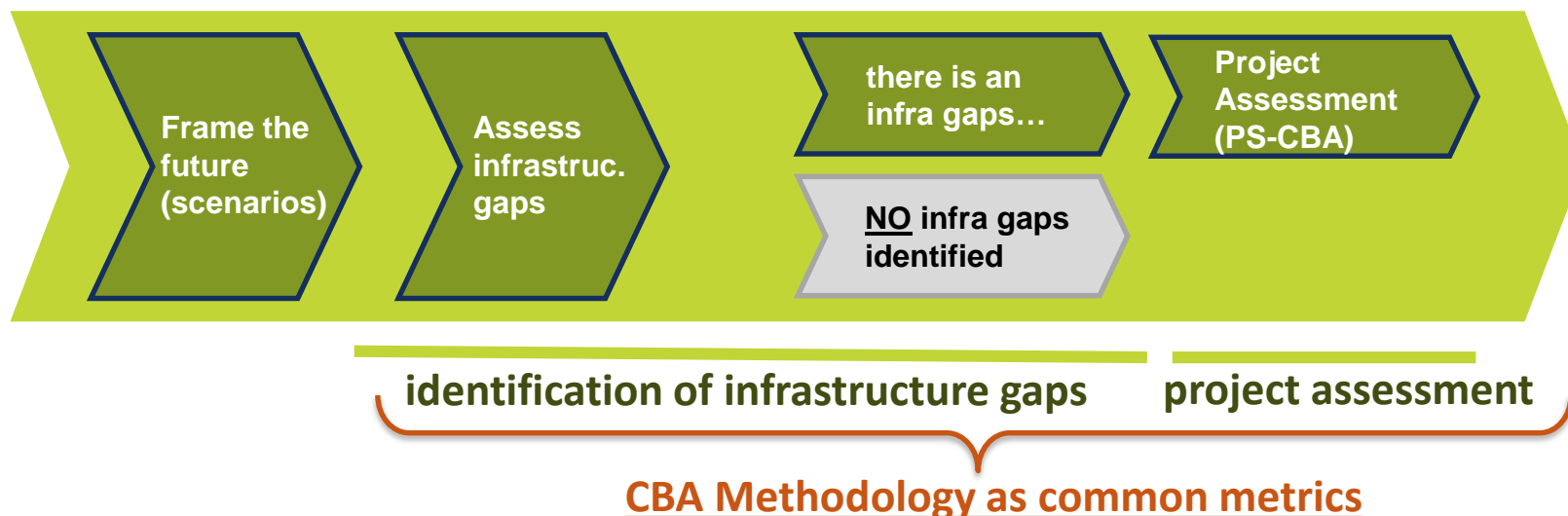
2. Market modelling & monetisation

- > Multi-criteria analysis
- > LNG diversification and supply prices differentiation
- > Inclusion of infrastructure costs assumption

3. Simplification

- > Emphasis on methodological aspects
- > Focus on significant
- > Map overlap indicators and remove redundant ones

Integrated System and PS-CBA assessment

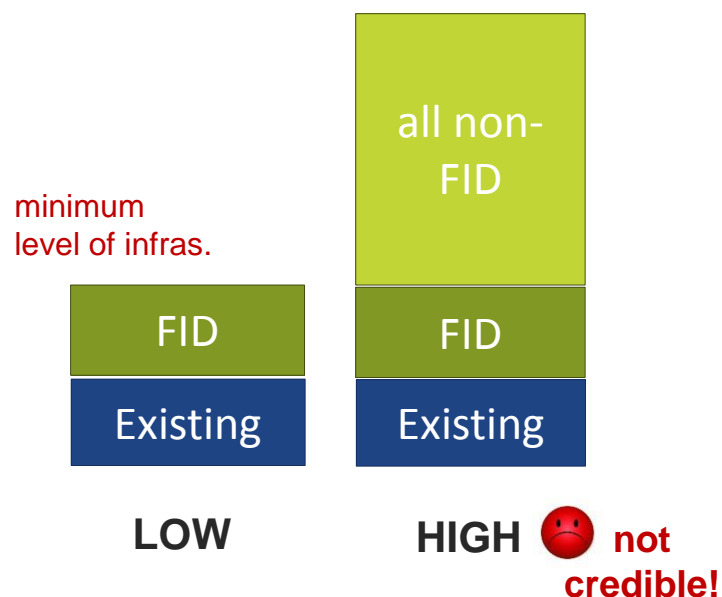


- > **System assessment to set the frame** for the project-specific assessment
 - > To ensure a **focused project assessment** against identified infrastructure gaps
 - > While keeping a **comparable basis** for all projects
 - > To be complemented by promoters qualitative assessment

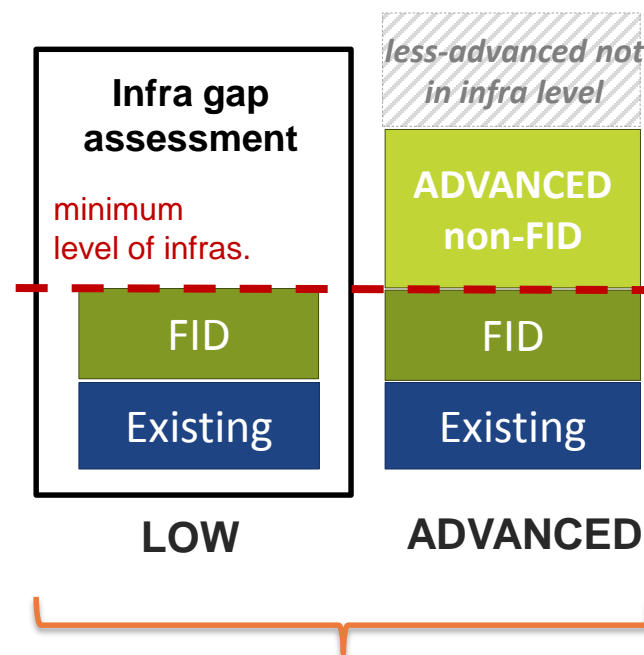
Infrastructure levels

> System Assessment ensuring infrastructure and a view on further realistic project development

CBA 1.0



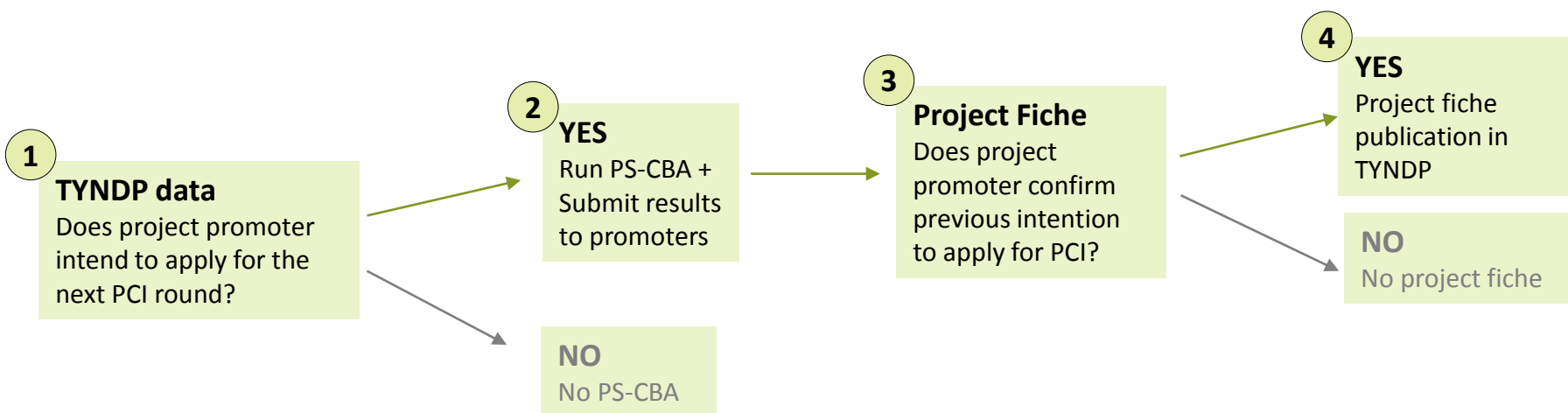
CBA 2.0



...and basis for PS-CBA

PS-CBA in TYNDP

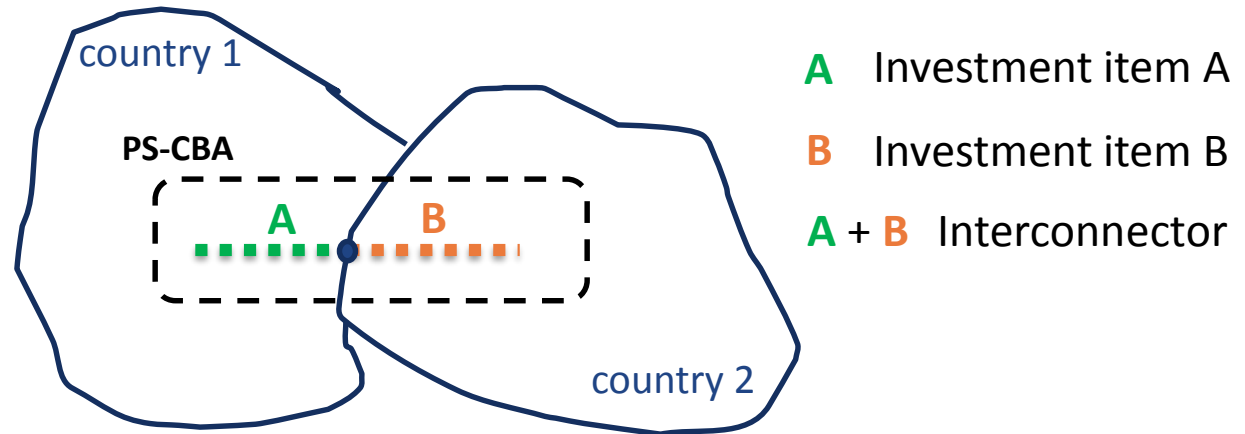
- > *A centralised process ensuring level-playing field, transparency and timely delivery for PCI process*
- > *Transparent PS-CBAs providing a key input to PCI process and CBCA*



Guidance for project grouping

Project grouping is a prerequisite for project-specific assessment

- > TYNDP projects are “investment items” at promoter level
- > PS-CBA requires grouping functionality-related investment items





Project fiche principles

Project fiche: an overview of project information and assessment

Group Fiche

Group reference: **Group name - To be filled in by promoters**

CAPEX (Million EUR 2017) To be filled in by promoters

Description - To be filled in by promoters

<please provide the necessary description>
<Should you have any change in the schedule compared to project submission in TYNDP please report it here>

Projects Constituting the Group

Project Code	Project Name	Promoter	Applied for 3rd PCI list	2nd PCI List No.

Complementarity - based on PCI call information

Project Code	Project Name	Promoter	Complementarity	Comments

Project Overview - based on TYNDP project data

Transmission Projects

Project Code	Country	Operator	Interconnection Point	Entry Capacity Increment	Exit Capacity Increment	Commissioning Year	Dist. (km)	Yearly average

LHG Projects

Project Code	Country	Operator	Interconnection Point	Increment Capacity (GW/d)	Commissioning Year	Expected Yearly Volume	Site Incon.

Underground Storage Projects

Project Code	Country	Operator	Interconnection Point	Injection Capacity Increment (mcm)	Withdrawal Capacity Increment (mcm)	Commissioning Year	WOU (m)

Group Benefits - Pre-filled by ENTSG based on selected needs by promoters as part of PCI call

Comments on benefits - To be filled in by promoters

<please provide the necessary information>

[here](#)

Simulation Results - based on PS-CBA results

Delta values are the incremental impact of the group up to (and down to) the threshold defined by Regional Groups

	LOW 2020		2025		Green Evolution		EU Green Revolution		2030		Green Evolution		EU Green Revolution	
	Green Evolution Value	Delta	Blue Transition Value	Delta	Value	Delta	Value	Delta	Blue Transition Value	Delta	Value	Delta	Value	Delta
Access to supply sources (nb of sources)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dependence to LNG (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dependence to Russia (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disruption Rate (%) - Ukraine route disruption	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disruption Rate (%) - Belarus route disruption	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disruption Rate (%) - Without any supply disruption	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRID	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-1 for ESW CBA (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	ADVANCED 2020		2025		Green Evolution		EU Green Revolution		2030		Green Evolution		EU Green Revolution	
	Green Evolution Value	Delta	Blue Transition Value	Delta	Value	Delta	Value	Delta	Blue Transition Value	Delta	Value	Delta	Value	Delta
Access to supply sources (nb of sources)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dependence to LNG (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dependence to Russia (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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IRID	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-1 for ESW CBA (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

... simplifying the assessment/valuation of projects

Cost information

Cost information refer to planned CAPEX, OPEX and cost ranges (+/- %)

CBA 2.0 setting that TYNDP should collect and publish

- > Promoters` costs **unless declared confidential...**
- > Alternatively, for projects **intending to apply to PCI**, alternative cost will be used for publication (Project Fiche)
 - to ensure transparency and level-playing field
- > For PS-CBA only costs submitted by promoters should be used

Multi-Criteria Analysis

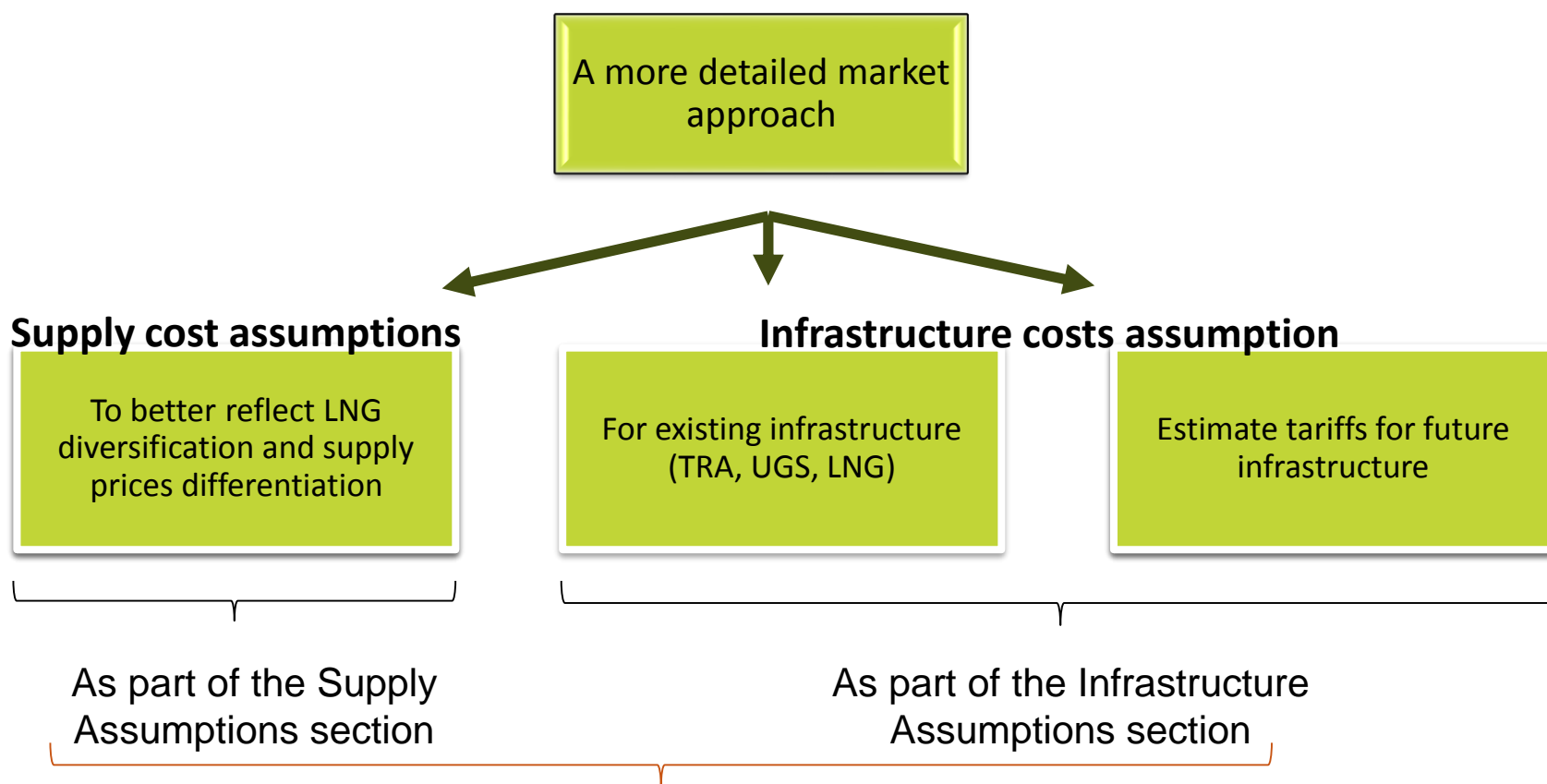
- > **Comparing costs and benefits in EUR terms is appealing, but...**
 - Monetization depends on assumptions and inputs, and market behavior
 - Monetary benefits: uncertain and hard to capture while costs more certain
 - Expressing project's impact only in EUR terms may not be sufficient for a fully-informed decisional process
 - Is monetization always compatible with promoting “most needed” projects?
 - Further monetization potentially in conflict with expected simplification

➔ ***Multi-Criteria Analysis (MCA) to allow 3 types of benefits to co-exist and to ensure project comparison:***

- > quantitative (non monetised) outcomes
- > direct monetised outcome of the modelling
- > monetisation of a quantitative outcome of the modelling

Market modelling assumptions

ENTSOG currently investigating how to refine market assumptions



Indicators

Improvements under investigation building on....

- > 3rd PCI selection process
 - problems and infrastructure needs identification
 - feedback from stakeholders
- > ACER opinions on past TYNDPs and CBAM 1.0
 - focus on non-overlapping indicators
 - more monetisation when possible
- > ENTSOG experience with SOS simulation

Objective:

- > Cover all meaningful benefits in lin with TEN-E criteria
- > Map potential overlap of indicators
- > Remove redundant indicators



Thank You for Your Attention

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