

ACER

Agency for the Cooperation
of Energy Regulators



Recommendations to project promoters

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This presentation is for informative purposes only and does not constitute a legal advice by the Agency.

Outline

- Why a second ACER recommendation on CBCA?
- Guidance for submissions of investment requests
 - » Steps to prepare the submission
 - » Assessment of sufficient maturity
 - » Information to be provided
 - » Preparation of the project-specific CBA
 - » Calculation of the national net impacts
 - » Consultation of transmission system operators
 - » Addressees of the investment request
- Reporting requirements
- An example

Regulation (EU) No 347/2013

- Deals with the potential barrier of net negative impact in countries hosting a project, to facilitate appropriate investments based on **ex-ante analysis of costs and benefits** across countries
- **Allows** project promoters to submit to NRAs **an investment and cross-border cost allocation (CBCA) request** as soon as a project has reached sufficient maturity
- Requires **NRAs to take coordinated decisions** on the allocation of investment costs

- Regulation (EU) No 347/2013 does not specify:
 - » details of the information to be submitted
 - » rules for cost allocation decisions
- ACER issued its **first CBCA Recommendation** (No. 07/2013) to contribute towards:
 - » submission of complete and adequate requests
 - » a consistent approach among National Regulatory Authorities (NRAs), streamlining the NRAs' decision-making processes
- It aimed to be pragmatic and focus on the most crucial issues. Review and completion of the Recommendation was already envisaged

- ENTSOs' methodologies for cost benefit analysis (CBA) were approved by EC in February 2015
- ENTSOs' latest TYNPDs were finalised in January 2015 (electricity) and in October 2015 (gas)
- ACER issued its **second CBCA Recommendation** (No. 05/2015) in December 2015, considering:
 - » the CBA methodologies and their application in the TYNDPs
 - » the experience with the first decisions on investment requests and CBCA; and
 - » challenges and open issues raised by NRAs, TSOs and other stakeholders

http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Recommendations/ACER%20Recommendation%2005-2015.pdf

Steps to prepare an investment & CBCA request

- After promoters' evaluation of significant complementarities and of sufficient maturity:

1. preparation of detailed technical description and project specific CBA *(to assure a good request)*

3. coordination, exchange of (different) views to improve the project-specific CBA *(to assure a good consultation)*

2. TSO consultation **(and information to NRAs)** on project description & CBA, including input data and calculations *(indicatively 4 to 8 weeks)*

4. submission of the investment request to NRAs *(see guidance to NRAs)*

Complementarities between projects

- As project benefits can be influenced by the potential development of other projects, promoters should:
 - » Aim at identifying significant complementarities between projects
 - » Discuss them with the relevant transmission system operators (TSOs)
 - » Aim at preparing joint analyses and, for significant complementarities, **joint investment requests**
- “Complementary”: if the benefits of joint development are higher than the sum of stand-alone projects’ benefits

Sufficient maturity of projects

- As soon as the project has reached 'sufficient maturity', Regulation (EU) No 347/2013 allows project promoters to submit an investment and CBCA request
 - Sufficient maturity (for CBCA), if all the following:
 - » Sufficient certainty about **costs** and their ranges
 - » Good knowledge of factors affecting them
 - » Max investment cost below 120% of min. inv. cost (*)
 - » Reasonable foresight of **benefits** and their ranges
 - » Reasonable knowledge of factors affecting them
 - » **Permitting procedures having started** in all hosting countries
 - » **Commissioning** indicatively within 60 months (*)
- (*) If higher, promoters should justify the reasons

Information to be provided in the requests

- The Recommendation **specifies the details** of the information to be provided in promoters' requests ([Section 1.5 of the Recommendation](#))
 - » Facilitates the submission of **complete** requests of **adequate quality**
- Focus on the most relevant information, while making information provision **not too burdensome** for project promoters

Project-specific CBA

- CBA input data (for TYNDP, PCI selection, TSO consultation, investment request) to be identical – if different, provide a reasoned justification
- The project-specific CBA should comprise:
 - » Information on input data and assumptions
 - » Details of cost estimates
 - » Details of benefit estimates
 - » Details for other cross-border monetary flows
 - » Calculation spreadsheets
 - » Summary of results by country
 - » Sensitivity analysis

Calculation of national net impacts

- Identify **beneficiaries** and **cost bearers**
- Three steps:
 - » Analysis of costs
 - » Analysis of benefits
 - » Analysis of other cross-border monetary flows (not used in a system-wide CBA, but affecting the national net impact)
- Carefully **avoid double-counting** effects

Analysis of costs

- Net present values of **investment costs** and **total costs** per country should be presented

Description	Treatment for calculation of national net impacts
Development costs (e.g. studies, rights of way, environmental planning) and project management costs	Negative
Material and assembly cost, including installation and commissioning	Negative
Other construction costs, including temporary solutions, waste management and environmental costs	Negative
Consenting costs	Negative
Maintenance costs	Negative
Replacement costs during life cycle	Negative
Financing costs	Not to be counted
Cost for taxes	Not to be counted
Decommissioning costs where relevant	Negative
Cost of variation of losses	Already counted as benefit

Scenarios, sensitivity and uncertainties

- Promoters should provide results per country for the various **ENTSOs' TYNDP scenarios**. They are free to provide additional robust scenarios
- Promoters should provide sensitivity analyses on **key assumptions** and critical parameters (those with greatest impact on economic results)
- Promoters should provide an **uncertainty range** (-x%; +y%) for the expected costs and benefits in each country and a description of the underlying reasons

Analysis of benefits (gas)

- At least the following categories of benefits are **monetised**:
 - Market integration
 - Competition
 - Security of supply
 - Sustainability
- Benefits should be **presented per country** separately

Analysis of benefits (electricity)

- **At least*** the following benefits should be **monetised**:
 - » Socio-economic welfare SEW (calculated by a European market study)
 - » Variation in losses (calculated by network studies)
 - » Security of supply (load) (calculated by network studies)
 - » Relieving national constraints (SEW variation calculated by local market studies, while avoiding double counting effects with other SEW figures)
 - » Variation in generation curtailments (SEW variation calculated by network studies, while avoiding double counting effects with other SEW figures)

*A broader list of 11 benefit components is available in the ACER's position of 30 January 2013 on the ENTSO-E guideline to CBA of grid development projects

Analysis of cross-border monetary flows

- To be presented separately **per country**

Description	Treatment for calculation of national net impacts
Expected congestion rents for electricity PCIs	Already counted in SEW benefit
Expected revenues (payments) of ITC mechanism for electricity PCIs	Positive (negative)
Expected income (payments) for other charges	Positive (negative), if not already counted
Awarded non-national grants	Positive
Awarded national grants	Not to be counted
Potential grants	Not to be counted
Expected revenues (payments) related to capacity bookings for gas PCIs	Positive (negative)

Consultation of TSOs

- Regulation (EU) No 347/2013: “significant net positive impact”
- ACER recommends that all countries above a “significance threshold” should be deemed as having a significant net positive impact
- All TSOs of such countries (including non Member States) should be consulted, to favour adequate quality of the CBA
- NRAs of such countries (Member States) should be informed, with the consultation documents

Addressees of the investment request

- Address the investment request to the NRAs of:
 - » Member States hosting the project
 - » Any other Member States having a potentially significant net positive impact based on the project-specific CBA

Reporting requirements after CBCA decisions

- Promoters to submit, by 31 March of each year:
 - » The annual report already sent to ACER and authorities competent for permitting
 - » Expected costs and incurred costs by country
 - » Amount of grants awarded
 - » For gas projects, if relevant for adjustments of cost allocation, an update of expected revenues from capacity bookings
- After commissioning:
 - » The incurred investment costs
 - » Explanations in case of deviations from expected investment costs
 - » A validated proof of commissioning

The scope of the illustration

- This simple example - on a fictitious project - is presented for illustration purposes to help understanding some elements of the Recommendation:
 - » computation of some costs, benefits and other impacts
 - » some double counting effects
 - » calculation of national net impacts
- The example is not intended to tackle other complexities of the CBA & CBCA process, e.g.:
 - » uncertainties about costs, neither cost efficiency
 - » robustness and treatment of scenarios
 - » uncertainties about benefits and other monetary impacts
 - » sensitivity analyses
 - » all potential double counting effects
 - » tariff impacts, business plan

- Main **features** of the project:
 - » Overhead line interconnecting A and B (hosting countries) and works in existing substations A1 and B2
 - » It will increase NTC at A-B border after comm. Q4-2019
- Investment and operational **costs** in A and B
- **Benefits:**
 - » The NTC increase will determine benefits in terms of increase of Socio-Economic Welfare (named Benefit 1)
 - » Further, the project will improve local security of supply in the area of substation A1 (named Benefit 2)
 - » The project will determine larger benefits in countries A, B, C and D and smaller benefits in few other countries
- Other **monetary impacts:**
 - » The project received EU grants for studies
 - » The project and its impacts on transits will modify the outcomes of the ITC mechanism
 - » The variation of congestion rents is not separately (double) counted, as included in the SEW benefit

Reference: ACER Recommendation No 05/2015 (p. 22), ENTSO-E CBA

Inputs: Real costs (in million Euro), counted as negative

	2014	2015	2016	2017	2018	2019	2020	2021	...	2044
Cost of studies	-2.000	0.000	-2.000						...	
Cost rights of way	0.000	-3.000	0.000						...	
Cost project management	-1.000	-1.000	-1.000						...	
Material assembly costs				-100.000	-150.000	-100.000			...	
Other construction costs				-10.000	-15.000	-10.000			...	
Consenting costs				-5.000	0.000	0.000			...	
Other cost				0.000	0.000	0.000			...	
Cost O&M personnel							-4.000	-4.000	...	-4.000
Cost O&M replacement							-2.000	-2.000	...	-2.000
Decommissioning cost									...	

Calculation of net present values - current year (2016) - using 4% discount rate (real)

	2014	2015	2016	2017	2018	2019	2020	2021	...	2044
Cost of studies	-2.163	0.000	-2.000	0.000	0.000	0.000			...	
Cost rights of way	0.000	-3.120	0.000	0.000	0.000	0.000			...	
Cost project management	-1.082	-1.040	-1.000	0.000	0.000	0.000			...	
Material assembly costs	0.000	0.000	0.000	-96.154	-138.683	-88.900			...	
Other construction costs	0.000	0.000	0.000	-9.615	-13.868	-8.890			...	
Consenting costs	0.000	0.000	0.000	-4.808	0.000	0.000			...	
Other cost	0.000	0.000	0.000	0.000	0.000	0.000			...	
Cost O&M personnel							-3.419	-3.288	...	-1.334
Cost O&M replacement							-1.710	-1.644	...	-0.667
Decommissioning cost									...	

- Sum of net present values for each cost category

	Aggregated value (in MEur)
Cost of studies	-4.163
Cost rights of way	-3.120
Cost project management	-3.122
Material assembly costs	-323.737
Other construction costs	-32.374
Consenting costs	-4.808
Other cost	0.000
Cost O&M personnel	-55.552
Cost O&M replacement	-27.776
Decommissioning cost	0.000
Total	-454.65

- Results

- » The total NPV of costs for country A (subject of the project specific CBA) amount to 454.65 MEur
- » Investment costs are those in the first six rows. The total NPV of investment cost for country A (subject of cost allocation) amount to 371.32 MEur

References: ACER Recommendation No 05/2015, (pp. 19-20), Agency's Position on CBA (Table 2), ENTSO-E CBA

Input parameters, including benefit values (MEur), real, for each study year

Economic lifetime of the project	25 years (after commissioning)
Study years	2020, 2030
Residual value	0 (not to be counted)
Discount rate	4% (real)

	Benefit mid-term study year (2020)	Benefit long-term study year (2030)
Benefit 1 (SEW)	40.000	20.000
Benefit 2 (SoS)	25.000	30.000

Calculation of benefits for each of 25 years by using the ENTSO-E “interpolation rule”

Undiscounted values	2020	2021	2022	2023	2024	...	2029	2030	2031	...	2044
Benefit 1 (SEW)	40.000	38.000	36.000	34.000	32.000	...	22.000	20.000	20.000	...	20.000
Benefit 2 (SoS)	25.000	25.500	26.000	26.500	27.000	...	29.500	30.000	30.000	...	30.000

Calculation of net present value of benefits for each year - using 4% discount rate (real)

Discounted values	2020	2021	2022	2023	2024	...	2029	2030	2031	...	2044
Benefit 1 (SEW)	34.192	31.233	28.451	25.837	23.382	...	13.213	11.550	11.105	...	6.670
Benefit 2 (SoS)	21.370	20.959	20.548	20.138	19.729	...	17.717	17.324	16.658	...	10.004

- Sum of net present values for each benefit category

	Aggregated value (in MEur)
Benefit 1 (SEW)	361.730
Benefit 2 (SoS)	395.647
Total	757.377

- Results
 - » The total NPV of benefits for country A (subject of the project specific CBA) amount to 757.38 MEur

Reference: ACER Recommendation No 05/2015 (p. 23)

Inputs: Real values (MEur) – Positive impacts are counted as positive values

	2014	2015	2016	2017	2018	2019	2020	2021	...	2044
Monetary flow 1, grants	1.000	0.000	1.000						...	
Monetary flow 2, ITC							2.000	1.900	...	1.000

Calculation: Net present value (2016) of monetary flows, using 4% discount rate (real)

	2014	2015	2016	2017	2018	2019	2020	2021	...	2044
Monetary flow 1, grants	1.082	0.000	1.000						...	
Monetary flow 2, ITC							2.000	1.562	...	0.333

Calculation: Aggregation of monetary flows

Monetary flow 1, grants	2.082
Monetary flow 2, ITC	18.086
Total	20.168

Results:

The total amount of (positive) monetary flows for country A amounts to 20.17 Meur

Reference: ACER Recommendation No 05/2015 (pp. 7-8 and pp. 19-20)

● Computation of net impact per country

	Country A	Country B	Country C	Country D	All other beneficiary countries
Total costs	-454.65	-230	0	0	0
Total benefits	757.38	140	236.93	50	48.27
Total monetary flows	20.17	-10	0	0	-8.09
Net impact	322.89	-100	236.93	50	40.18

● Results

- » Hosting country A: sum of the economic impacts is positive
- » Hosting country B: Assume a negative net impact equal to 100 MEur (i.e. B is a cost bearer)
- » In C, D and other countries (non-hosting) there is a positive net impact (i.e. A, C, D and some other countries are beneficiaries)

Thank you for your attention!



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Information and evidence about: (1/3)

1. Detailed technical description of the project
 - *Including an explanation of the rationale behind the choice of the technology and a map of the planned route*

2. Detailed implementation plan
 - *Information about the progress achieved in the development of the project and its status*
 - *Assessment of critical and risk factors and mitigation measures adopted*
 - *15 progress steps - see section 1.5 of the Recommendation. Promoters to indicate start date and end date (potentially expected dates) for each step*

3. Preliminary investment decision (if applicable)

4. Short description of the status of permitting process in all hosting countries, a detailed schedule and corresponding evidence

Information and evidence about: (2/3)

5. Information about sufficient maturity
6. Information on TSO consultation and its results
 - *The documents shared*
 - *The feedback - Indicate elements where TSOs can agree and where they cannot agree and the reasons*
 - *The treatment of comments - If rejected, indicate why*
7. Project specific CBA for the various ENTSOs' scenarios, including
 - *Sensitivity analysis*
 - *Analysis of the impact of ITC revenues and payments (ele)*
 - *Analysis of other revenues and charges*
 - *Assessment of market demand and capacity bookings (gas)*
 - *Assessment of efficiency of investment costs*
 - *Summary of national net impacts*

Information and evidence about: (3/3)

8. Business plan including the financing solution (and tariffs)
 - *Description of the financing solution (including tariffs)*
 - *Information on awarded grants*
 - *Information on applied for or expected grants and loans*
 - *Estimation of financing costs*
 - *Description of the applicable methodologies for tariff calculation*
 - *Project impact on network tariffs*

9. A substantiated proposal for CBCA (if agreed by project promoters)

In addition, the Agency recommends promoters to use the “summary data template” available in Annex IV to the ACER Recommendation