## Project sheets template -TYNDP 2018 updated

Project description [PROMOTER]: this part includes:

- the name of the project, short technical description of the project
- Specify if the project is an interconnector or is a generation connection project

System Needs addressed by the project [ENTSOE and PROMOTER]:

- Need selected from list prepared by ENTSOE
- Justification by project promoter

#### PROJECT PROMOTERS [PROMOTERS]:

PROJECT CONSIDERED IN THE REFERENCE GRID [ENTSO-E]: [yes/no]

NETWORK BOUNDARY IT HELPS MITIGATE [ENTSO-E]:

PCI LABEL – 3<sup>RD</sup> LIST 23 NOVEMBER 2017 [PROMOTER]:

LAST APPROVED NATIONAL DEVELOPMENT PLAN/S NUMBER & PAGE [PROMOTER]:

- [name country, NDP number and page (for the page mention the page where you have the first time the project description]
- [if not yet in a final NDP then include here the explanation of why not – e.g. currently is only in the draft NDP; the NDP is will be updated in 3 years and the project will opt to be included in the next NDP...]

# Location of the project on the map [PROMOTER]

[Extract from the TYNDP map – note: this map shall include also the boundary the project helps mitigating]

SEW vs. GTC curve (if relevant)

#### INVESTMENTS PART OF THE PROJECT [PROMOTER]

Inv	Short description	NTC increase	Substation 1	Substation 2	Present	Commi	Evoluti	Explanatio
ID		[ENTSO-E]	(country 1)	(country 2)	status	ssionin	on	n in case of
						g date	driver	delay
	[new 200 km,							
	double circuit							
	400kV AC line,							
	between							
	substation							
	(country							
	abbreviation) and							
	substation 2							
	(country							
	abbreviation)],							

#### **CLUSTERING EXPLANATION [PROMOTER]:**

- explain here why the investments above form a project – basically why you clustered them

#### **PROJECT COST BENEFIT ANALYSIS RESULTS**

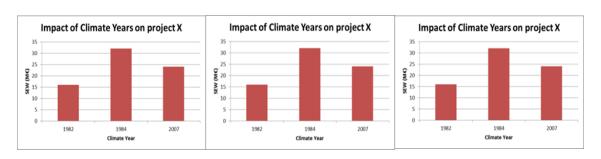
**How to read the CBA results [ENTSO-E]:** [This is expected to be a general text common for all the projects]

**DISCLAIMER [PROMOTER]: [**Any disclaimer we find useful to have for this specific project]

#### PROJECT BENEFITS [ENTSO-E FOR ALL VOICES BUT B4 ASSIGNED TO PROMOTERS ONLY]

CBA indicator		2025 Best	2030	2030 EUCO	2030
		Estimate	Sustainable		Distributed
	T		transition		generation
Transfer capacity increase*	Direction				
[MW] (note: ranges to	A -> B				
cover different climate	Direction				
years)	B -> A				
	er here * it has	to be transparen	tly displayed wh	ether it is a	
	oss-border trans	sfer capacity, an	internal project	with transfer	
	r a combination	of both types of	transfer capacit	ies is provided	
Additional Disclaimer in ca	ase of a sequ	ential project: se	equential results	are available he	re the main
table and non-se	quential resu	ults are shown in	the appendix o	f the project she	et.
B1. Socio-economic well	fare [M				•••
Euro/year] (note: ranges to cover					
different climate yed	ırs)				
Out of which					••
fuel savings due to integratio	n of RES [M				
Euro/year]					
Out of which		•••			
avoided CO2 emission co	osts [M				
Euro/year]					
		[specify the	[specify the	[specify the	[specify
B2. RES integration	n	measuring	measuring	measuring	the
[MW or MWh/year]		unit]	unit]	unit]	measuring unit]
B3. Variation in CO2 em	issions	•••	•••		•••
[k ton/year] ("-" decrease; "-	+" increase)				

## 3 CLIMATE YEARS SENSITIVITY BAR CHARTS ENTSO-E proposal: B1 SEW, B2 RES, B3 CO2



link to the TYNDP report section in which the methodology used to choose the 3 CY is explained and a disclaimer to underline special climate conditions of the region

#### **PROJECT COST BENEFIT ANALYSIS RESULTS**

#### PROJECT BENEFITS [ENTSO-E FOR ALL VOICES BUT B4 ASSIGNED TO PROMOTERS ONLY]

CBA in	CBA indicator			025 Best Estimate	2030 Sustainable transition	2030 EUCO	2030 Distributed generation
B4. Societal well- being as a result of RES integration and a change in CO2 emissions [promoter]	Societias avo	tal well-being a result of grating RES tal well-being a result of biding CO2 missions	<ul> <li>Valorisation (Monetarised value [M Euro]/year, If not possible Quantified value - mention also the unit, If not possible Qualitative information (concise)</li> <li>Justification (Which share of the benefit addresses Electronic Countries, Name of the study the value above resulted from Main assumptions of the study, who has conducted the study, Year of the study, Study horizons, did any national authority approve the study, Link to the study, Link to study from a well-known institute used as solid base for the indicator provided</li> </ul>				
B5. Variation in grid losses [M Euro/year] ("-" decrease; "+" increase)							
B6. Security of sup meet d		• •					
Energy not serv	red [MV	Vh/year]		••••	••••		
Additional adequa				••••	••••		
B7. Security of flexibi	supply lity [%]	- system		_			
B8. Security of sup	Do Socurity of cumply						
system stabilit (invariable ove	y	Voltage Stability					
scenarios)		Frequency Stability					

#### Explanation of the project CBA benefits – this part to not be more than ½ page [promoters]

- This cell is to be used by promoter to comment the CBA results presented above
- Guidelines examples TYNDP 2016

#### How the project fits to the regional trends [promoters using storyline – ENTSO-E]:

Here you can add an additional comment on top of the needs already declared.

You will need to extract the key messages/drivers of the Regional Investment Plans that are matched by your project.

- Region BS: select among the drivers of Section 1.2: Key messages of the region
- Region CCE: select among the key messages of Section 1.2: Key messages of the region
- Region CCS: select among the main drivers of Section 1.2: Key messages of the region
- Region CSE: select among the main drivers of Section 1.2: Key messages of the region
- Region CSW: select among the main findings of Section 1.2: Key messages of the region
- Region NS: select among the challenges of Section 1.2: Key messages of the region

#### PROJECT ALTERNATIVE INDICATORS:

B6 indicator: Security of Supply -Adequacy to meet demand [Test ENTSO-E and/or promoter]

Monetarisation of B7 indicator Security of Supply – System Flexibility [promoter]

- Valorisation (Monetarised value [MEuro]/year, If not possible Quantified value mention also the unit, Justification for the absence of monetarised value)
- Justification (Which share of the benefit addresses EU countries, Name of the study the value above resulted from, Main assumptions of the study, Who has conducted the study, Year of the study, Study horizons, Did any national authority approve the study, Link to the study, Link to a study from a well-known institute used as solid base for the indicator provided, Link to/Upload of a document with methodology presented (it must be aligned with the guidance on the monetisation provided in the "Guideline on the declaration of "Additional benefits" and "monetisation of CBA indicators "in the TYNDP 2018" for alternative indicators, copy the relevant text here and include the reference page and chapter

#### Additional benefits [Promoter]

This cell is to be used by promoters to include additional benefits which are not reflected in the European assessment.

All the benefits highlighted here are expected to be monetized or least quantified and the assumptions behind these additional benefits to be clearly presented and if available the links to the studies behind this information to be added.

The additional benefits will be collected according the process defined in the ENTSO-E document: **Guideline on the declaration of "Additional benefits" and "monetisation of CBA indicators "in the TYNDP 2018** 

#### RESIDUAL IMPACT [PROMOTER + ENTSO-E]

Residual environmental impact [ENTSO-E]	[km]
Residual social impact [ENTSO-E]	[km]
Other residual impacts [promoter]	- Text from the promoter

#### Complementary information about the border on which the project is located [ENTSO-E]

	2025 Best Estimate	2030 Sustainable transition	2030 EUCO	2030 Distributed generation
Average marginal cost difference in the reference case [€/MWh]				generation
Standard deviation marginal cost difference in the reference case [€/MWh]				
Reduction of marginal cost difference due to all mid-term and long-term projects [€/MWh]				
Congestion rates avoided with the project				

Evolution of the 10% and 15% interconnection target - impact of the project implementation [ENTSO-E]

- Computation NTC/NGC currently and with the project implemented; including the explanation of the evolution

-	Include useful links: [ project website, NDPs links, national legislation where the need for the project is specified, etc.]
Addition	al Information [PROMOTER]:

### **COST [PROMOTER]:**

- for more advanced projects the costs is the promoters own estimation

Invest nr.	CAPEX [M Euro]	Uncertainty range	OPEX [M Euro/year]
Total project cost			

**Explanation of the cost values and uncertainty range [promoter]** 

 for investments under consideration the costs is derived by using the standard cost multiplied complexity factor

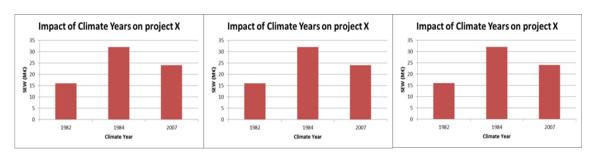
Invest nr.	Standard cost [M Euro] [source: ENTSO- E/ACER]	Complexity factor	OPEX [M Euro/year]	
Total project cost				

<b>Explanation</b>	af tha	chacan	complayity	factor	[promotor]
EXDIANALION	OI THE	CHOSEH	COHIDIEXILV	IACIOI	

#### PROJECT BENEFITS — APPENDIX NON SEQUENTIAL RESULTS

CBA indicator		2025 Best Estimate	2030 Sustainable transition	2030 EUCO	2030 Distributed generation
Transfer capacity increase* Direction [MW] (note: ranges to A -> B					
cover different climate years)	Direction B -> A				
	regular cr	oss-border trans	to be transparent fer capacity, an it of both types of	internal project	with transfer
B1. Socio-economic welfare [MEuro/year] (note: ranges to cover different climate years)		***	***	***	
Out of which fuel savings due to integration of RES [MEuro/year]		***	***	***	••
Out of which avoided CO2 emission costs [MEuro/year]		***	***	***	
B2. RES integration [MW or MWh/year]		[specify the measuring unit]	[specify the measuring unit]	[specify the measuring unit]	[specify the measuring unit]
B3. Variation in CO2 emissions [kT/year] ("-" decrease; "+" increase)		•••		•••	

## 3 CLIMATE YEARS SENSITIVITY BAR CHARTS ENTSO-E proposal: B1 SEW, B2 RES, B3 CO2



link to the TYNDP report section in which the methodology used to choose the 3 CY is explained

PROJECT COST BENEFIT ANALYSIS RESULTS [ENTSO-E UNLESS SPECIFIED OTHERWISE]

PROJECT BENEFITS - APPENDIX NON SEQUENTIAL RESULTS

CBA indicator		2025 Best Estimate	2030 Sustainable transition	2030 EUCO	2030 Distributed generation	
Societal well-being as a result of integrating RES  of RES integration and a change in CO2 emissions [promoter]  Societal well-being as a result of avoiding CO2 emissions		<ul> <li>Valorisation (Monetarised value [MEuro]/year, If not possible Quantified value - mention also the unit, If not possible Qualitative information (concise)</li> <li>Justification (Which share of the benefit addresses EU countries, Name of the study the value above resulted from, Main assumptions of the study, Who has conducted the study, Year of the study, Study horizons, Did any national authority approve the study, Link to the study, Link to a study from a well-known institute used as solid base for the indicator provided</li> </ul>				
[MEuro/year] (* incre	B5. Variation in grid losses [MEuro/year] ("-" decrease; "+" increase)  B6. Security of supply – Adequacy to		•••			
meet d		. ,				
Energy not serv	ed [MV	Vh/year]	0000	0000	0000	0 0 0 0
Additional adequa	асу таг	gin [MWh]	0000	0 0 0 0	***	0000
	B7. Security of supply - system flexibility [%]					
B8. Security of sup	DO Consider of overall					
system stability (invariable ove	У	Voltage Stability				
scenarios)		Frequency Stability				