## Project 283 - TuNur

TuNur is aimed to connect to the European network a Concentrated Solar Power plant with storage to be located in Rejim Maatoug, Kebili, Tunisia. The connection point to the ENTSO-E network is located in Montalto di Castro, Lazio, Italy. The transmission project will comprise +/- 500kV DC submarine cables from the Tunisian Northern coast to Montalto di Castro, DC overhead lines in Tunisia from the power plant to the shoring point, and HVDC converter stations at the terminal points.

Classification	Future Project			
Boundary	Tunisia, Italia			
PCI label				
Promoted by	TuNur Ltd			



Investments								
Investment ID	Description	GTC Contribution	Substation 1	Substation 2	Present Status	Commissioning Date	Evolution since TYNDP 2014	Evolution Driver
1378	HVDC overhead line in Tunisia and submarine cable to Montalto	100%	Rejim Maatoug 400kV	Montalto 400kV	Permitting	2020		
1430	400kV AC underground cable from Montalto HVDC converter to Terna station	100%	Rejim Maatoug 400 kV	Montalto 400 kV	Permitting	2020		

## **Additional Information**

www.tunur.tn

www.nurenergie.com

## **Investment needs**

This project was promoted for TYNDP inclusion by a non-ENTSO-E member, complying with the EC's draft guidelines for treatment of all promoters. This project proposal does not result directly from planning studies coordinated in ENTSO-E's Regional Groups. (additional statement needed from RG in case the project relates to an investment need for which a TSO project is in the list)

To determine the expected grid transfer capability on the Tunisia - Italy border due to the investigated TuNur project several load-flow analyses were carried out considering power flows in both ways, with network in regular and contingency condition. Both in terms of market analyses and according TSOs, there are no potential interferences between the TuNur and Elmed projects, although interesting the same countries. The performed calculations, considering that the GTC value adopted as a basis for benefit calculation must be valid at least 30 % of the time, show that the contribution of the TuNur project to the GTC of Tunisia/Italy Centre-South boundary can be assumed at least equal to 1250 MW, both ways.



## Project Cost Benefit Analysis

This project has been assessed by ENTSO-E in line with the Cost Benefit Analysis methodology, approved by the EC in February 2015.

The indicators B6/B7 reflect particular technical system aspects of projects based on a summation of qualitative performance indicators, in line with the CBA methodology; these cannot be used as a proxy for the security of supply indicator.

General CBA Indicators	
Delta GTC contribution (2020) [MW]	Delta GTC was not checked for 2020 and the 2030 values were considered for SEW, RES and CO2 assessment.
Delta GTC contribution (2030) [MW]	TN-IT: 1000
	IT-TN: 1000
Capex Costs 2015 (M€) Source: Project Promoter	2700 ±200
Cost explanation	The total TuNur project expenditures are estimated between 2500 M€ and 2900 M€, included contingencies.
S1	NA
S2	NA
B6	N/A
B7	N/A

Scenario specific CBA indicators	EP2020	Vision 1	Vision 2	Vision 3	Vision 4
B1 SoS (MWh/yr)	N/A	N/A	N/A	N/A	N/A
B2 SEW (MEuros/yr)	N/A	80 ±10	30 ±0	100 ±20	50 ±10
B3 RES integration (GWh/yr)	N/A	<10	<10	600 ±120	100 ±20
B4 Losses (GWh/yr)	N/A	N/A	N/A	N/A	N/A
B4 Losses (Meuros/yr)	N/A	N/A	N/A	N/A	N/A
B5 CO2 Emissions (kT/year)	N/A	600 ±100	±100	-400 ±100	-200 ± 30

Benefit B2 for improvement of socio-economic welfare for year 2030 can be estimated equal to about 81 M€ (in visions 1 and 2) and about 53.5 M€ (in visions 3 and 4).

As the accurate location and project scope are still under investigation, B4 indicator (impact on losses) was not assessed