



INVITATION TO

MED-TSO TENDER FOR:

Modelling training and supports to perform probabilistic adequacy simulations

TEASIMED Project

General Technical prescriptions

and application procedures

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PART A - Technical Specifications

1. Framework

Med-TSO - Mediterranean Transmission System Operators (Tax Code: 97697840581), is a legally recognized association established in Rome, on April 19th 2012, involving the Mediterranean Transmission System Operators (TSOs) for electricity, operating the High Voltage Transmission Networks of 19 Mediterranean Countries

Med-TSO has legal headquarters at Terna S.p.A., in viale Egidio Galbani 70, 00156 Rome - Italy and Operational Headquarters at Terna S.p.A. , in via della Marcigliana, 911 - 00138 Rome – Italy.

The Association intends to continue supporting the EC in the next years, in the frame of the EU "Promoting the Energy Transition in the Southern Neighbourhood 2019-2022" program, aiming at fostering more efficient, secure and better integrated energy systems and markets in the Southern Neighbourhood region.

In continuity with the organization of the previous projects developed in the period 2015-2020, Med-TSO proposes a new project, named TEASIMED (Towards an Efficient, Adequate, Sustainable and Interconnected MEDiterranean power system), supported and co-funded by the European Commission (EC) through the Grant Contract "EXTERNAL ACTIONS OF THE EUROPEAN UNION (EU) - ENI/2020/417-547".

2. Object and scope of the tender

Med-TSO plans to perform adequacy studies to assess if expected (or planned) availability of supply and transmission infrastructure are sufficient to ensure adequacy to the Members' Power Systems.

A probabilistic Monte Carlo with Unit Commitment Economic Dispatch (UCED) model is planned to be used, ensuring inter zonal and inter temporal correlation of model



variables and considering specificities of assessed geographical perimeters. In particular, the methodology shall follow a Monte Carlo approach to reflect the variability of weather, as well as the randomness of supply and interconnections' outages defined at a glance in [https://www.med-tso.com/publications/Deliverable 3.2.A Guidelines and Methodology for Periodic Adequacy report.pdf](https://www.med-tso.com/publications/Deliverable_3.2.A_Guidelines_and_Methodology_for_Periodic_Adequacy_report.pdf)).

Adequacy assessment shall consist of the following steps:

- Consistency check of the data (e.g. completing missing data with default/public available data)
- Run of Monte Carlo probabilistic assessment with UCED model;
- Nationally/Bidding-zones based analysis on seasonal basis to detect regions with adequacy risk;
- Temporal analysis on weekly basis to detect periods with adequacy risk;
- Focused analysis of adequacy in zones and weeks with high risks identified.

The perimeter of the studies will be all the non-ENTSO-E Med-TSO members: Morocco, Algeria, Tunisia, Libya, Egypt, Jordan, Palestine and Israel. The consultant shall propose an approach for modelling the bordering interconnections with ENTSO-E countries.

Objectives:

- perform simulations for 3 seasonal outlooks (i.e. Winter 2021/2022 (INTERNAL PURPOSE); Summer 2022; Winter 2022/2023);
- perform simulations for Med-TSO Mid-term Adequacy Assessment;
- (up to 100 hours) trainings/webinars on methodology, modelling, simulation results, key drivers, sensitivities, KPIs;



- For each of the studies to be carried out, the consultant should first open the door for any update of the data collected.
- Perform quality checks of the data.
- Perform simulations, using one of the following software: ANTARES, BID3, GRARE or PLEXOS;
- Perform sensitivities with different assumptions and growing complexity with regard to the following variables:
 - isolated market nodes/bidding zones;
 - with/without force outage rate;
- Modelling and validation of the constructed models, ensuring confidence, convergence¹ and robustness of the results;
- Smooth handover all the simulation models, know-how, materials used in the model construction/simulation phases together with the organisation of the needed training to members of Med-TSO Technical Committee Operation
- prepare report for publications;
- presents methodology, results & next steps in dedicated workshops/webinars.

Deliverables:

- editable external reports with results: editable , presentations, spreadsheet, automatic script to produces charts and graphs;
- internal detailed reports covering:

¹ for convergence definition see

https://documents.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions%20Annexes/ACER%20Decision%20No%2024-2020_Annexes/ACER%20Decision%2024-2020%20on%20ERAA%20-%20Annex%20I.pdf



- methodologies details;

- presentations with recommendations & guidelines to develop regularly this exercise;

- summary of resources (e.g. timesheet + profiles + skills + role + licenses)

- trainings materials;

- models used for simulations and associated pre- and post-treatment tools.



3. **Service Provider profile requirements**

Med-TSO is inviting to the tender companies with:

- references in performing Unit Commitment Economic Dispatch (UCED) market studies, preferably involving directly several interconnected TSOs;
- references in performing probabilistic Monte Carlo adequacy studies, preferably involving directly several interconnected TSOs;
- references in using different electricity market Software and in developing ad hoc tools/models;
- references in organisation of training sessions about Power systems; methodologies/implementation of adequacy/market studies.

The selection of the invited companies has been conducted by a dedicated Task Force composed of some Med-TSO Members and has been approved by Med-TSO Executive Board.

4. **Timetable for the call for tenders**

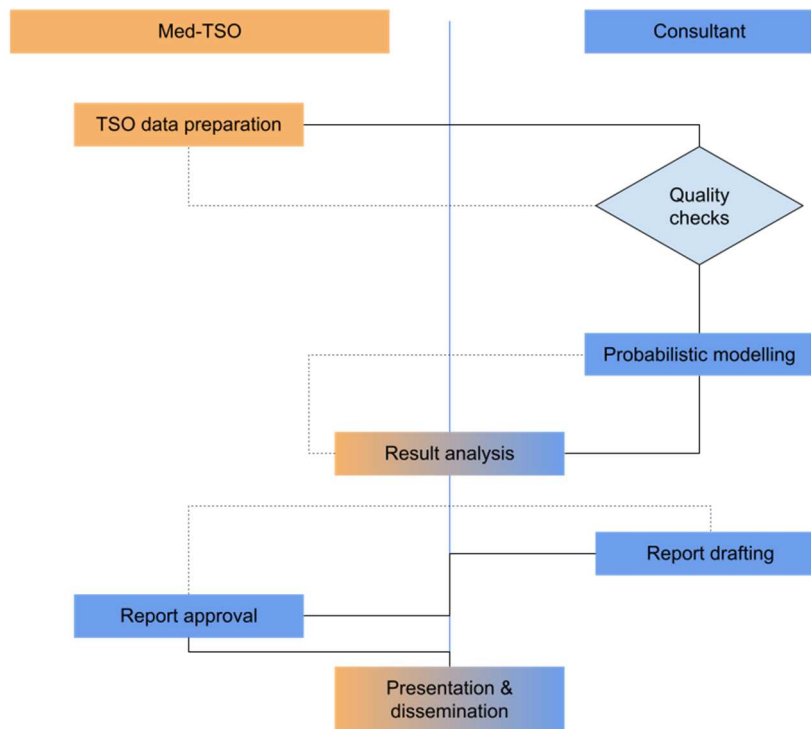
Stages	Indicative dates
a) Publication of the call	by 8th October 2021
b) Deadline for submitting applications	by 30th October 2021
c) Evaluation period	by 16th November 2021
d) Information to tenderers	by 30th November 2021



e) Signature of contract	by 30th November 2021
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5. Milestones & activity schedule

- Weekly call to discuss results & next steps should be scheduled.



Milestone	What	When
Dry run Winter Outlook 2021/22	Final internal report to be presented in an internal webinar (+ editable presentation)	by end February 2022



	Internal workshop about methodologies with presentations of Winter Outlooks results	first week of March 2022
publication of the summer outlook 2022		30th May 2022
publication of Mid-term Adequacy Assessment		30th September 2022
publication of the winter outlook 2022-2023		30th November 2022

6. **General Conditions**

The Service Provider must be aware that the activity is co-funded by the EC and subject to all EU standard procedures.

All the documents proposed by the Service Provider are subject to approval. The approval does not change the responsibility of the Service provider on the final result. All the documents can be updated during the activity, whenever unpredictable facts arise. In all cases, major changes introduced by the Service Provider have to be notified to Med-TSO for approval. The final documentation has to be consistent with the activity, in terms of scope and time.



PART B Procedures and evaluation criteria

1. Tenderers

The tender is organized by invitation. The following companies have been invited to apply for this call:

Company / Institution	Contact	E-mail
ARTELYS BELGIUM	Christopher ANDREY	Christopher.Andrey@artelys.com
CESI	Daniele CANEVER Valerio D'ARCO Roxana ZLATE	Daniele.canever@cesi.it valerio.darco@cesi.it roxana.zlate@cesi.it
Consentec GmbH	Thaddäus Kreisig	kreisig@consentec.de
EDF	JanChristophe HOOGENDOORN Alain REGNIER Oliver Armand MOREAU Mustapha GUESMIA Rachana CHHOEUN	jan-christophe.hoogendoorn@edf.fr alain.regnier@edf.fr olivier-armand.moreau@edf.fr mustapha.guesmia@edf.fr rachana.chhoeun@edf.fr
EKC-LTD	Dragana ORLIC Zoran NESOVANOVIC Miroslav VUKOVIC Biljana MIJAJLOVIC	dragana.orlic@ekc-ltd.com zoran.nesovanovic@ekc-ltd.com miroslav.vukovic@ekc-ltd.com biljana.mijajlovic@ekc-ltd.com
ELIA GRID INTERNATIONAL	Aymen CHAOUACHI Khrystyna GEVKALYUK Georgios PAPAETHYMIU Fabian GEORGES Anais SOUSSI Frederic VANCAUTEREN Viktorija KOROL	aymen.chaouachi@eliagrid-int.com khrystyna.gevkalyuk@eliagrid-int.com georgios.papaefthymiou@eliagrid-int.com Fabian.Georges@eliagrid-int.com Anis.souissi@eliagrid-int.com frederic.vancauteren@eliagrid-int.com Viktorija.Korol@eliagrid-int.com
COMPASS LEXECON	Fabien Roques	froques@compasslexecon.com
r2b energy consulting GmbH	Robert Diels Martin Lienert	robert.diels@r2b-energy.com martin.lienert@r2b-energy.com



TRACTEBEL	ENGIE	Anais DANIELS	anais.daniels@engie.com
IMPACT			

Consortia are allowed but must be led by one of the companies listed above.

The Service Provider will present its CV according to the knowledge and skills requested and names and CVs of the proposed experts who will work in the contract must be clearly declared. The substitution of an expert can only take place with an expert with similar professional experience and, in every case, the substitution must be approved by Med-TSO.

2. ***Procedure for the Submission of Proposals***

The tendering Service Provider shall submit its Proposal in three folders, named:

“[NAME OF THE TENDERER_Folder A]”

“[NAME OF THE TENDERER_Folder B]”

“[NAME OF THE TENDERER_Folder C]”

Folder A - *Administrative documentation* – the following documents shall be included:

This request for offer, signed by the legal representative of the Service Provider, with a copy of its ID attached; the request can also be signed by a solicitor of the legal representative and, in this case, a certified copy of the attorney has to be attached;

A valid chamber of commerce Service Provider registration for the Service Provider. This document must have an international format and in any case must be in English.

Folder B – *Economic offer* - the cost of the work including VAT, taxes, expenses, contributions and other due fiscal charges, according to the applicable law of the Service Provider, shall be indicated.

PLEASE NOTE: Med-TSO is an international non-profit Association. Due to its nature and in compliance with Italian tax law, Med-TSO has no VAT number, but only a tax code: 97697840581, like a natural person.

Since Med-TSO is unable to manage any VAT transaction (credit and / or debit VAT) deriving from the contractual relationship with the supplier (e.g. reverse charge), Med-TSO pays all goods and services including VAT.

Therefore, all offers must include VAT to be added to the price of the offered service.

Economic offer should separate the option for Mid-term Adequacy Assessment as in the following table.

	Price (VAT included)
Base case: 3 Seasonal Outlooks report + trainings	____,00 €
+ Mid-term Adequacy Assessment with 1 target year only (e.g. 2025)	____,00 €
+ Mid-term Adequacy Assessment with 2 target years	____,00 €

The legal representative of the Service Provider, with a copy of its ID attached, shall sign the Economic offer; a solicitor of the legal representative can also sign the offer and, in this case, a certified copy of the attorney has to be attached.

Folder C - Technical offer – The Technical offer shall describe how the activity will be performed including all details deemed relevant, list of references and CVs of experts that will perform the activities.

The Technical offer shall not include any economic information. Any violation of this requirement will determine the exclusion of the Service Provider from the bidding procedure.

The legal representative of the Service Provider, with a copy of its ID attached, shall sign the Technical offer; a solicitor of the legal representative can also sign the offer and, in this case, a certified copy of the attorney has to be attached.



Financial and Technical offers shall be drawn in English. Folders A, B, and C shall be sent by electronic mail to tenders@med-tso.com. This email shall have as object: “Probabilistic adequacy assessments”. The deadline for the submission of the proposal is 30th October 2021. The date of the email received will be valid. Any queries could be submitted by 16th October 2021. Answers to those queries will be sent to all prospects by 22th October 2021. Med-TSO reserves the right to verify self-attested titles, competencies and experiences and the faculty of this Administration to not proceed to the award shall not be affected. If there is a need to have other information, Med-TSO Secretariat may contact the tenderer for this purpose during the tender process.

3. Awarding criteria

The offers will be evaluated according to the following scoring table:

EVALUATION ELEMENTS		MAXIMUM SCORE
	REFERENCES	20
	TECHNICAL OFFER	50
	ECONOMICAL OFFER	30
	TOTAL	100

Criteria and Scores	Maximum score	Minimum threshold
References	20	14
<ul style="list-style-type: none"> adequacy Studies & simulations performed (preferably with/for several interconnected TSOs), preferably in Mediterranean region; training organized related to adequacy & Market studies; CVs of key experts 	12 8	
Technical Offer	50	35
<ul style="list-style-type: none"> example of charts & graphs to be produced after simulations and with data input for final report; sensitivities proposed; approach to ensure calibrations of models and quality checks of input data and results; flexibility in the selections of the SW project management: gantt with details of activity (including intermediate deliverables, assumptions and results validation process, time for feedbacks) + CVs of key experts + ability to express in french & english synergies with existing Med-TSO technical activities & feasibility of a further internalization; methodologies's detail to model reserves requirements & grid outages draft training programme 	8 5 5 5 8 5 7 7	



Only tenders who exceed the set threshold (reference & technical) will be admitted to the financial evaluation phase.

The formula for **Economic offer evaluation** is:

$$ES = 100 \times \frac{CP}{EP}$$

where ES is the Economic Score, CP is the value of the Cheapest Proposal and EP is the value of the Economic Proposal under consideration.

The tenderer obtaining the highest combined score is invited to sign the contract.