



SANI ZANGRANDO
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Navigating the legal landscape of MACSE procurement



Sani Zangrando and its energy team



Track record of over **2,000 MW** of renewable energy plants



Dozens of **energy communities** assisted



Utility-scale projects supported

Sani Zangrando is a law firm with offices in **Milan** and **Rome**, founded in 2019 by lawyers Emilio Sani and Stefano Zangrando. We're a team of **50 highly qualified professionals** who provide both judicial and extrajudicial assistance in the **energy, environmental** and **industrial sectors**.

We support our clients in all phases of their projects: from development to implementation, including financing, operation and management, as well as assistance in litigation.

We offer **full assistance on all relevant legal aspects** – administrative, commercial, corporate and tax – including **contracts, corporate transactions** and **M&A**.

We provide legal assistance and advice to all players in the energy sector: from energy service companies to investors and financiers, from EPC and O&M contractors to traders, suppliers and energy consumers. We also assist financial institutions, municipalities, regions and public bodies, as well as local utilities and companies operating in the transport sector.

MACSE: background and overview (I)

“ The future of the electricity system will be dominated by an increasing use of non-programmable renewable sources, which are essential for achieving the decarbonisation targets [...]. In order to optimise the use of these sources, it is necessary to integrate this development with that of the transmission and distribution networks and with that of storage capacity. The latter is necessary to maximize the use of renewable energy by storing energy when in excess (**overgeneration**) and returning it in times of shortage (**time-shifting service**). This service is particularly important, given the significant weight of solar energy in the projected energy mix, to contain overgeneration, helping to achieve decarbonization targets with less renewable installed capacity than would be required in the absence of storage capacity.”

(New storage capacity requirements to 2028 approved by Ministerial Decree of 27 February 2025, Terna s.p.a., <https://www.terna.it/it/sistema-elettrico/mercato-termine-stoccaggi/documento-fabbisogni>)

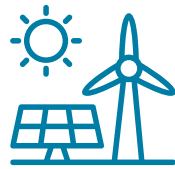
MACSE: background and overview (II)

MACSE is an Electricity storage capacity procurement mechanism, approved by the EU Commission with State Aid SA.104106, 2023/N, managed by Terna S.p.A. (the Italian TSO, a public entity).



Regulatory References

- Art. 18 paragraph 3 of Leg. Decree no. 210 of 2021
- ARERA Resolution no. 247/2023/R/eel
- MACSE Discipline approved by MASE (Ministry of Environmental and Energy Safety) with Decree no. 346 of 2024



Potential

The storage systems allow the **energy arbitrage**, i.e. the storage of the energy produced during peak hours and the subsequent release of that energy when the energy production is lower and the energy demand is higher, exploiting the relevant differences in the energy prices.



State Support

MACSE is a mechanism under which the installation and operation of storage systems is **incentivized and remunerated by the Italian State**.

Key facts

- First tender: **September 30, 2025**
- Procurement target for the 2028 Delivery period: **10 GWh**.
- Target expected regarding the Delivery Periods starting in 2029 and 2030: **40 GWh**.
- **Pay as bid** mechanism: the base price will be discounted by the applicants.
- **Fixed Premium:** expressed in €/MWh/year (currently proposed by ARERA at Euro 32,000/MWh/year, still under discussion).
- **Margin of contribution:** the storage system can generate profits on the ancillary services market (but 80% of them will be paid back to the TSO).
- **Auxiliary Services consumption consideration:** MACSE covers the costs linked to the consumption of the auxiliary services of the storage system.
- The **market operation** of the plant in the day ahead market is **managed by Terna S.p.A.** which pays a “rent”.

The mechanism (I)

- Participation to tenders held by TERNA for the provision of storage systems.
- If the plant is selected, the sponsor shall proceed to:
 - **execution** of long term contracts with TERNA
 - **construction** of the storage system
 - **abilitation** to the balancing and re-dispatching services market
- The Sponsor will receive a monthly fixed premium in return for the storage system made available to Terna in the day ahead market and for the allocation of the capacity of the storage system through the so called time-shifting products.
- The Sponsor will manage the ancillary services in the balancing market, paying back to Terna S.p.A. the 80% of the profits.

The mechanism (II)

- Successful bidders are required to make the storage capacity, once built and operational, available to the TSO, which will offer the pooled storage capacity to third parties, in the form of standardized time-shifting products on a new centralized trading platform which will be organized and managed by GME.
- The time-shifting products will give their buyers the possibility to use a virtual storage asset as if was theirs, to store and sell electricity when they wish to do so.

Requirements (Part I)

1

The applicant or other companies of the relevant group of companies shall have no outstanding debts towards TERNA

2

The applicant shall not be subject to insolvency or liquidation proceedings

3

The applicant shall not be subject to antimafia proceedings or measures

4

No previous suspension from MACSE

Requirements (Part II)

5

Authorization for the installation and construction of the storage system already obtained

6

Stand-Alone storage system or functional separation between the storage system and the integrated energy plant

7

Non participation to Capacity Market Tenders or Fast Reserve Program

8

Waiver to other incentives with reference to the storage capacity committed through the MACSE

9

Installation works shall start after the tenders

Focus on: requirement 5 - Authorization

- The MACSE Participant must be in **direct possession of the construction and operating permits (inclusive of the permits for grid works)** and, where required by applicable regulations (i.e. for pumping systems), the water use concessions related to the construction and operation of the plant; therefore, **it is not possible to participate in the MACSE auction through a mandate from the holder of the permits.**
- BESS can be integrated with a PV Plant, but **functional independence** (autonomous dispatch of the plant) shall be granted, in any case.
- The mere filing of an **appeal** against the authorization before the administrative court – as long as it does not affect the validity and effectiveness of the challenged act – does not preclude participation in the tender.

Storage technologies admitted



Lithium-ion BESS



Hydroelectric pumped storage systems



Other technologies admitted (with a limitation on the maximum assignable supply set at 10% of the total allocation): CAES, other electrochemical storage technologies, power-to-gas-to-power, power-to-heat-to-power electrostatic/magnetic storage, Flywheel

The storage system cannot have performances lower than those declared for the auction (better performances, therefore, are allowed).

Rights and obligations of the Applicant (Part I)



- **Right** to receive the Fixed Premium, paid by means of monthly instalments, for all the Delivery Period (15 years for BESS).
- **Right** to receive a consideration for the consumptions of the auxiliary services.
- **Right** to participate to balancing market and withhold the 20% of the profits accrued on ISP-MSD during the Delivery Period.
- **Right** to withdraw during the planning period (i.e. the period indicated and expected for the installation of the storage system according to the long-term contract entered into with Terna) paying a withdrawal penalty to Terna.

Rights and obligations of the Applicant (Part II)



- **Obligation** to install and make operational the storage system within the deadline specified in the long-term contract signed with Terna (2 years for BESS)
- **Obligation** to register the storage system as an autonomous production unit and to enable it to ancillary services market (ISP-MSD)
- **Obligation** to make available the storage system during the Delivery Period (15 years for BESS) for time-shifting products
- **Obligation** to send to Terna periodical reports regarding the progress of the installation works and the operation of the storage system
- **Obligation** to provide Terna with different guarantees (pre-tender guarantee, post-tender guarantee, contribution to the guarantee fund)
- **Obligation** to reimburse to Terna the variable consideration provided in the MACSE Discipline and the 80% of the ISP-MSD profits

Key Strengths

Safe revenues and easy business plan

- Monthly premium (up to 32,000 €/MWh per year (maximum premium indicated by Terna in relation to September 2025 tender: please note that the amount of the premium is still under consultation and not definitive), adjusted with the application of the ISTAT Index through the years.
- Right to receive a consideration for the consumptions of the auxiliary services.
- Right to withhold the 20% of the profits realized on ISP-MSD during the Delivery Period (If any)

Financial viability

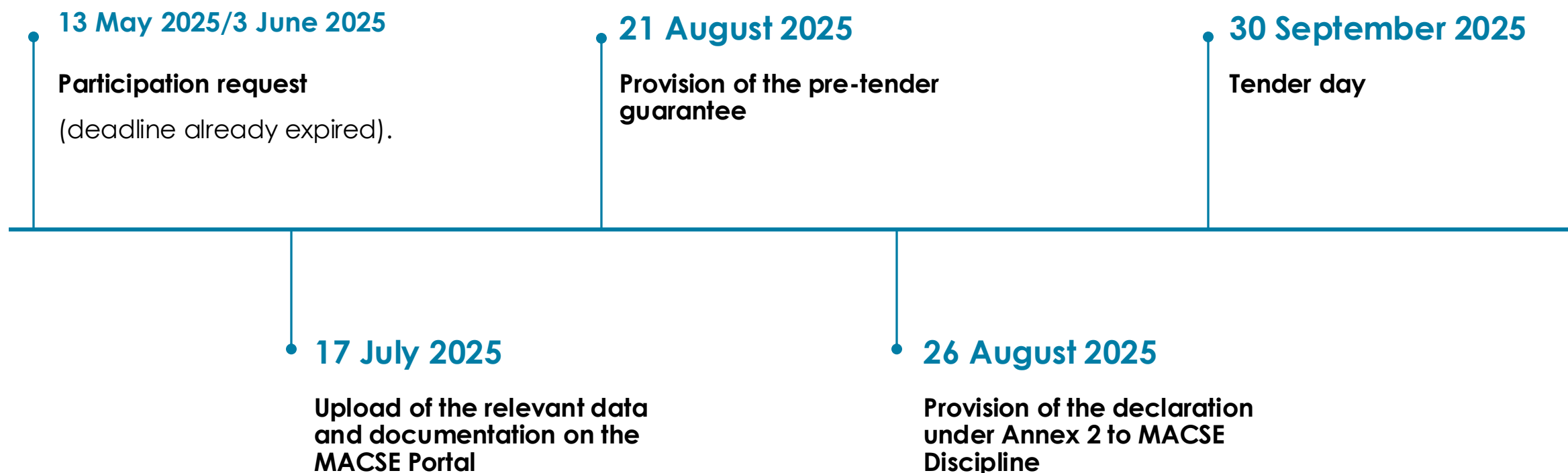
Duration of the Delivery Period (and of the related MACSE consideration): **15 years** for BESS and **30 years** for hydroelectric storage systems. Also, Terna S.p.A. is a **reliable counterparty** for investors and lenders.

Challenges

- High amounts of pre- and post-auction **guarantees** (n.b. the pre-auction guarantee shall be provided at least 40 days before the tender and is equal to 10% of the assumed revenues for the qualification, whereas the post-auction guarantee is equal approx. to the 15% of the revenues at the signing of the contract)+ contribution to a Guarantee Fund.
- Currently accessible only for storage systems in **Center/South of Italy**.
- Doubts about the **adequacy of the maximum premium**.
- Technical challenges related to **functional separation** in the case of hybrid storage systems.
- Uncertainties about whether MACSE **deadlines** align with project completion timelines.
- The tender is **highly competitive**. The capacity will be limited to 80% of the potential applicants that filed the pre-qualification.
- **Consistency** with State Aid regulation in the future?

Deadlines

First tender (only for lithium-ion BESS and other technologies – no hydroelectric pumped storage systems): **30 September 2025** (with reference to **10 GWh** to be assigned – subject to adjustment after the pre-qualification phase - and Delivery Period starting in **2028**).



Thank you for your attention!

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