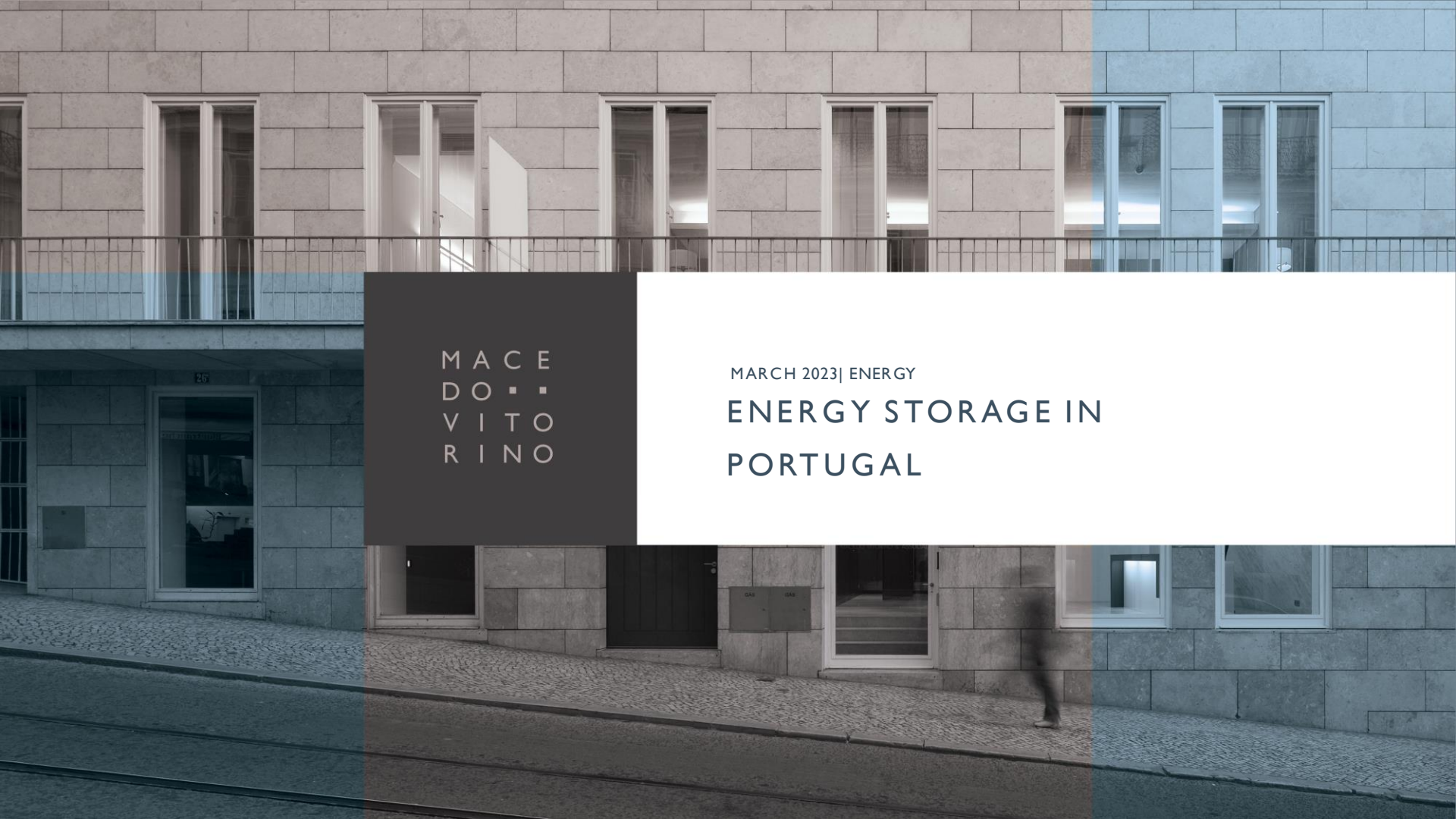

MACEDO VITORINO

MARCH 2023| ENERGY

ENERGY STORAGE IN PORTUGAL

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CONTENTS

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ENERGY STORAGE IN PORTUGAL

ENERGY EFFICIENCY

The European Green Deal has set the roadmap for reduction of greenhouse gas emissions by at least 55% by 2030. Renewable energies are inevitably susceptible to variations in availability, as the sun and wind are not programmable. Energy storage is therefore essential to meet European targets.

Energy storage installed capacity in Portugal is still predominantly based on hydropower pumping, which is today over 3 GW, and will increase to 4,164 GW when the Alto-Tâmega dam is completed this year. However, this paradigm is about to shift with the democratization of energy storage solutions with wind and solar production.

Storage solutions outside hydro generation have been in the electricity legislation since 2019, and they have been considered in the auctions for the allocation of reception capacity in the public service electricity grid ("**RESP**") or for the purpose of project assessment in agreements with the grid operator.

The new National Electricity System Law enacted by Decree-Law no. 15/2022, of 14 January, which establishes the rules applicable to the licensing of these facilities, also sets some, few, specific rules for storage.

Energy storage activity can be carried out in one of the following ways:

- **Autonomous Storage**: when the facility has a direct connection to the RESP and is not associated with a power plant or an self-consumption production unit ("**UPAC**"); or
- **Associated Storage**: when the facility does not have a direct connection to the RESP and is associated with an electricity generation.

With 21 318 GWh of electricity generated in Portugal between January and June 2022 - 57% of which of renewable origin - storage will be decisive for the much-desired energy transition for two major reasons. On one hand, storage will offset the intermittent generation of renewable energy. On the other, storage ensures that the price of electricity injected into the grid never exceeds a particular value in case of price fluctuations.

PRIOR CONTROL: AUTONOMOUS STORAGE

Electricity generation and autonomous or stand-alone storage facilities are subject to prior control by the Portuguese energy authority (*Direção-Geral de Energia e Geologia* - "**DGEG**") according to the following procedures:

- **Production and Operation License**: applicable to facilities with an installed capacity greater than 1 MW, or if subject to environmental impact assessment ("**AIA**") or environmental incidences assessment.
- **Prior Registration and Operation Certificate**: applicable to facilities with installed capacity greater than 30 kW and less than or equal to 1 MW and autonomous storage with installed capacity less than 1 MW.
- **Prior Notice**: applicable to facilities with an installed capacity greater than 700 kW and equal to or less than 30 kW.
- Generation facilities' projects with an installed capacity of 700 W or less are exempt from prior control.

The award of a Production License is subject to the prior obtaining a grid capacity reservation title in the RESP (*título de reserva de capacidade* - "**TRC**").

TRC can be acquired in one of three ways:

- **General Access**: applicable if there is reception capacity at the RESP. It is subject to a deposit or bond of EUR10,000.00/MVA to DGEG for a minimum period of 30 months, or until the power plant or storage facility reaches commissioning.
- **Agreement with RESP operator:** applicable if there is no reception capacity at RESP and subject to a maximum annual injection capacity set by the Government until 15 January of each year. Requires a deposit to the RESP operator in the amount of EUR15,000.00/MVA for a minimum period of 24 months. After the agreement is executed, this deposit is returned, and a General Access deposit to DGEG must be provided.
- **Tender Procedure:** Applicable when the Government sets up a competitive procedure for the award of TRC. The terms and conditions for the award of TRC and the provision of the deposit are established in each tender documents.

PRIOR CONTROL: ASSOCIATED STORAGE

The licensing of a storage facility associated with a generation plant may occur:

- ***Ab Initio***: where the permitting process for the generation and storage facilities start at the same time; or
- ***A Posteriori***: where a storage facility is installed in an already existing power plant.

In the case of associated storage *Ab Initio*, the prior control procedure is integrated in the generation plant permitting procedure, which will cover simultaneously the two activities (generation and storage).

The associated storage *A posteriori* will be construed as a non-substantial amendments to the Production License or Prior Registration, as the case may be. Non-substantial amendments are subject to the prior approval of DGEG and then recorded in the Production License or Prior Registration and, if applicable, in the Operating License or Operating Certificate. DGEG may require a new inspection of the facilities before authorising the amendment.

The filings to amend the Production License are submitted to DGEG with the documents set out in Annex I to Decree Law n.º 15/2022. In turn, amendments to the Prior Registration are processed through DGEG's electronic platform.

Within five days of receipt of the application, DGEG will promote a new consultation to the external entities - such as the Portuguese environment agency (*Agência Portuguesa do Ambiente* - "**APA**") - that have given their opinion in the context of the award of the Production License or Prior Registration. When the amendment relates to a project that has been submitted to an AIA procedure, a new consultation with this entity is waived, if the amendment does not entail any change:

- To the AIA decision and underlying reasons; and
- To the increase of the the footprint of the power plant.

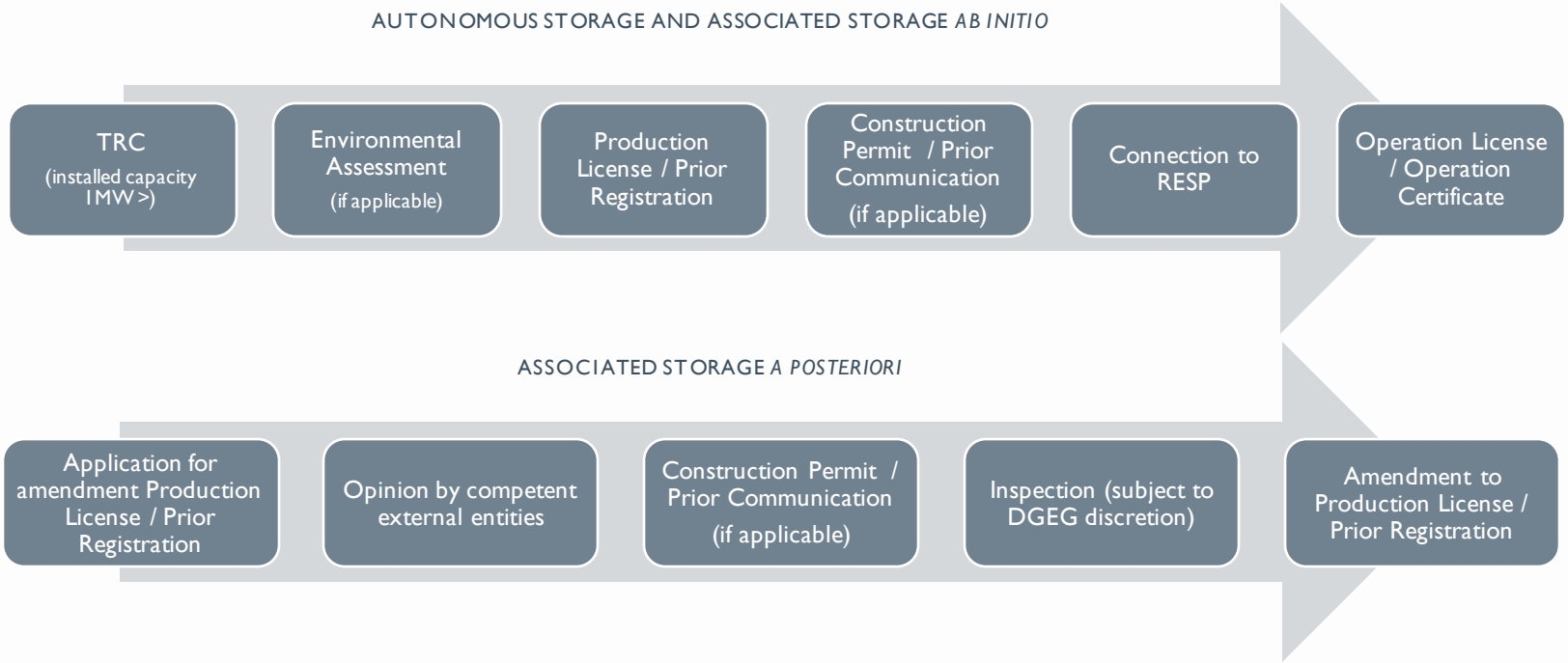
DGEG decides within 15 days after the deadline for reply from the consulted external entities. If the decision is of refusal, DGEG must submit it to prior hearing of the interested party.

GENERAL LICENSING RULES

In addition to the prior control procedure described in the two slides above, for the installing of an electricity plant with associated storage or of an autonomous storage facility, other licensing steps will be required:

- **Environmental assessment**: Projects with an installed capacity exceeding 50 MW, or with more than 20 MW but located in sensitive areas are subject to AIA, or to an environmental incidences assessment procedure if, regardless of installed capacity, they are in sensitive areas.
- **Local Government Control**: Construction of power plants or storage facilities are subject to comply with a licensing construction procedure before the Municipality through the obtainment of (i) a building permit, or (ii) an approval to a prior communication request.
- **Connection to the RESP**: Connection between infrastructures connecting to RESP are built at the promoter's expense. Promoters may request expropriation for public utility, as well as request easement rights regarding the properties required for the installation of the electricity infrastructures that will be part of the RESP.
- **Operation License**: Must be applied within one year after the award of the Production Licence, Deadline can be extended for another year on grounds beyond the promoter’s control.
- **Operation Certificate**: Must be applied within nine months after the award of the Prior Registration. Deadline can be extended for a further half of the initial period on grounds beyond the promoter’s control.

LICENSING STEP BY STEP



COMPENSATION TO MUNICIPALITIES

Holders of renewable power plants or of storage facilities, with an allocated connection power greater than 50 MVA are obliged to transfer, on a one-off basis and free of charge, to the municipality or the municipalities where the power plant or storage facility is located:

- An UPAC with an installed power equal to 0.3% of the connected power of the power station or storage facility; or
- A storage facility for installation in municipal buildings or collective use equipment; or
- Electric vehicle charging stations for public use with an equivalent capacity

The municipality may request instead a compensation in the amount of EUR 1,500.00/MVA of connection power in case it already owns the above infrastructures.

Municipalities are not allowed to request any other or higher concessions or compensation.

The holder of the power plant or storage facility installs the infrastructures in the locations indicated and provided by the beneficiary municipalities and after the award of the relevant prior control titles.

Compensation are subject to a protocol to be entered into between the holder of the power plant or storage facility and the municipality or municipalities where the power plant or storage facility is located in the period between the issue of the Production License and the issue of the Operation License.

Execution of the protocol constitutes a requirement for award of the Operation License. In cases the municipality refuses to sign the protocol, the owner of the power plant or storage facility may substitute the transfer of the UPAC by compensation.

For power plants or storage facilities with an allocated connection power greater than 1 MVA and less than or equal to 50 MVA, a one-off payment of EUR 1,500.00/MVA of connection power shall be made.

COMPARATIVE LOOK INTO THE FUTURE

The National Energy and Climate Plan 2030 - which embodies the country's energy and climate policy - establishes a set of ambitious goals for the period 2021-2030. The following ones stand out:

- Reduction between 45% and 55% of greenhouse gas emissions, by reference to the emissions recorded in 2005;
- Incorporation of 47% of energy from renewable sources in gross final energy consumption;
- 35% reduction in primary energy consumption;
- Increase in the installed capacity of renewable energy sources to 28.8 GW compared to 11.8 GW recorded in 2015.

Although Portugal has been a pioneer in the enactment of specific storage regulations, the lack of injection capacity in the RESP, together with the uncertainty and delay in the publication of available capacity to obtain TRC, have made it difficult to develop in Portugal autonomous storage projects with more than 1 MW.

In Spain - although an autonomous storage regime is still pending publication - the Strategy for Storage was approved in 2021, with plans to install capacity of around 20 GW by 2030 and 30 GW by 2050. More recently, the Spanish Government announced a competitive procedures plan to allocate 5.84GW for renewable energy generation projects and storage projects for 2023.

In France, the focus on autonomous storage is made through the allocation of capacity in competitive procedures, with about 900 MW of new storage projects expected to achieve commissioning until the end of 2023.

Establishment of swift, transparent and pre predictable criteria in the allocation of reserve capacity in the RESP, namely through the approval - as in Spain - of a storage strategy with specific calendars for carrying out the procedures for its allocation, is of essence for the true commitment in the development of energy storage projects in Portugal.

Until this happens, promoters can only wait until the recently appointed new Portuguese Energy Secretary of State announces new injection capacity in the RESP and allocates part of it to connect stand-alone storage projects.

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ABOUT MACEDO VITORINO

ABOUT US

MACEDO VITORINO was founded in 1996, focusing its activity on advising domestic and foreign clients in specific sectors of activity, namely the financial sector, telecommunications, energy and infrastructures.

Since its foundation, MACEDO VITORINO has established close correspondence and partnership relationships with some of the most prestigious international law firms in Europe and the United States, enabling us to provide effective advice on international transactions.

Our practice is cited by the international directories Legal 500, IFLR 1000 and Chambers and Partners, namely in the areas of Banking and Finance, Corporate and M&A, Capital Markets, Tax, Projects and Litigation.

Our practice is multifaceted. We advise some of the largest national and international companies in various sectors of commercial and industrial activity, with particular relevance in banking, industry, telecommunications, venture capital and technology.

MACEDO VITORINO advises:

- NATIONAL AND MULTINATIONAL COMPANIES
- BANKS AND OTHER FINANCIAL INSTITUTIONS
- FUNDS
- INVESTMENT COMPANIES AND «PRIVATE EQUITY» FUNDS
- BUSINESS AND SCIENTIFIC ASSOCIATIONS
- EMBASSIES AND GOVERNMENTS
- INDIVIDUAL ENTREPRENEURS
- PRIVATE CLIENTS

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