



Bird & Bird

MACSE

Mechanism for the procurement
of electric storage capacity.

June 2025

A mechanism for the procurement of electric storage capacity

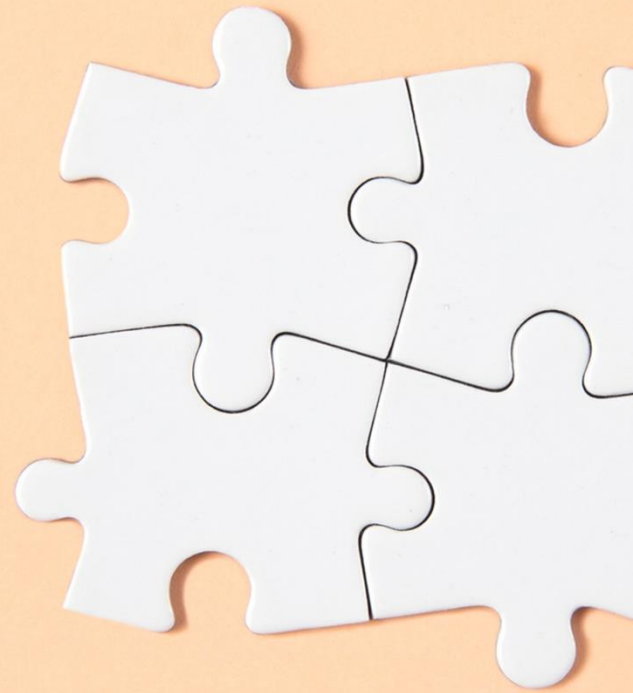
Essential profiles

Legislative Decree 210/21 introduced a new mechanism for the procurement of electricity storage capacity ("**MACSE**"), developed with the aim of integrating renewable energy sources with an efficient level of overgeneration (i.e., when electricity production exceeds demand), based on planned grid developments. This mechanism will allow the system to acquire new storage capacity through long-term procurement contracts awarded via competitive auctions organized by Terna, in which operators owning new storage systems can participate.

The entities selected as a result of the auction are subject to the following obligations:

- the obligation to build the plant;
- the obligation to make the storage capacity available to third-party market operators for use in the energy market, through a platform managed by the GME (*Gestore dei Mercati Energetici*);
- the obligation to offer such capacity on the MSD (*Mercato dei Servizi di Dispacciamento*);
- the right to receive an annual fixed premium from Terna.

Bird & Bird has established a task force of professionals in the energy, regulatory, and tax sectors to assist clients in assessing the applicability of the new regulations to electricity storage projects.



Access to MACSE

1. Regulatory Framework

- Article 18 (*Development of storage capacity*) of Legislative Decree No. 210 of November 8, 2021;
- ARERA Resolution No. 247/2023/R/EEL of June 6, 2023, titled “*Criteria and conditions for the operation of the long-term procurement system for electricity storage capacity, pursuant to Article 18 of Legislative Decree No. 210 of November 8, 2021*”;
- Ministerial Decree No. 346 of October 10, 2024, issued by the Ministry of the Environment and Energy Security, approving the rules of the new Electricity Storage Capacity Procurement Mechanism (“**MACSE**”), published by Terna S.p.A. on October 22, 2024 (the “**Rules**”).

Pursuant to the Rules, the following have been published to date:

- the **proposal for the required new storage capacity by 2028**, as approved by the Ministerial Decree of February 27, 2025;
- the **technical report** referred to in Article 10.1 of the Rules, identifying the parameters of the reference technology (lithium-ion batteries).

The **first auction** for the long-term procurement of new storage capacity related to lithium-ion batteries and other electricity storage technologies (excluding lithium-ion and hydroelectric storage), pursuant to the Rules —i.e., the **auction for 2028**—**will take place on September 30, 2025, starting at 10:00 AM**.

Note: The MACSE auction is also open to storage technologies other than lithium-ion, which is currently identified as the reference technology according to the technical report published by Terna, provided that the specific requirements detailed below are met.

2. Upcoming deadlines

Below is the updated schedule published on Terna's website:

Activity	Key date
Submission of the admission request (Article 4 of the Rules)	from May 13 to June 3, 2025, at 4:00 PM
Upload of data and documentation to the MACSE portal, as specified in Article 7.1 of the Rules. Upload is permitted following confirmation by Terna of the validity of the admission request	by July 17, 2025, at 4:00 PM
Payment of the security deposit as a pre-auction guarantee (Article 7.2 of the Rules)	by August 21, 2025
Upload to the MACSE portal of the declarations made in accordance with the template set out in Annex 2 of the Rules	by August 26, 2025
Auction for 2028	on September 30, 2025, starting at 10:00 AM

The following sections outline the operating mechanism set out in the Rules in view of the upcoming auctions.

3. Subjective admission requirements

Pursuant to Article 3 of the Rules, the following entities may be admitted to the MACSE mechanism, provided that they meet the following requirements¹:

- a they are not in default of any payment obligations towards Terna;
- b they are not in a position of control and/or affiliation, pursuant to Article 2359 of the Italian Civil Code, nor are subject to the same control and/or management and coordination, pursuant to Article 2497 et seq. of the Italian Civil Code, nor they share one or more directors with companies in default of payment obligations towards Terna;
- c they are not undergoing judicial or compulsory liquidation, or composition with creditors, nor are subject to ongoing proceedings for access to such procedures (except as otherwise provided by law regarding business crisis situations);
- d they are not subject to any causes for disqualification, suspension, or prohibition under Article 67 of the Italian Anti-Mafia Code (Legislative Decree No. 159 of September 6, 2011), nor are involved in any attempted mafia infiltration as per Article 84, paragraph 4, of the same Code, unless exempt from the obligation to submit anti-mafia documentation under Article 83, paragraph 3, of the Code;
- e they have not been suspended from the MACSE mechanism, pursuant to Article 9 of the Rules.

The admission request, certifying compliance with the eligibility criteria set out in Article 3 of the Rules, must be submitted at least 120 days prior to the date of the first auction in which the applicant intends to participate.

Participation in the MACSE auction is not permitted through a mandate granted by a third-party operator who owns the plant and the relevant authorizations.

Once the request has been verified for completeness and compliance, Terna will approve the admission request, which shall be considered valid for all subsequent competitive procedures, and will authorize the applicant (*hereinafter*, the participant) to access the MACSE portal.

4. Objective requirements

Which Storage Systems (“SS”) are eligible to participate in the MACSE?

- **The participant holds the necessary authorizations for the construction and operation of the plant**, and, where applicable, the concessions for the use of water for the construction and operation of the pumping facility (excluding environmental operation authorizations);
- The SS falls under one of the following categories:
 - i It does not share grid connection infrastructure and has no functional relationship with any other generation and/or consumption unit; or
 - ii It shares grid connection infrastructure with another generation and/or consumption plant but has no functional relationship with that unit; or
 - iii It has a functional relationship with another generation unit, but that unit uses the same primary energy source for electricity generation;
- The SS has not been awarded a post-auction contract under the Capacity Market, or, if it was, the contract was terminated due to failure to obtain the necessary construction and operation permits;
- The SS has not been contracted under the “ultra-fast reserve” pilot project, or the contract was terminated before the start of the reserve service;
- The participant waives any additional incentives, with reference only to the portion of the SS that may be contracted;
- **Construction works begin after the date of the auction.**

¹ Terna reserves the right to verify at any time the fulfillment of the eligibility requirements, subject to the initiation of a written exchange with the applicant regarding the alleged non-compliance.

New Storage Systems (SS) not belonging to any of the reference technologies identified in the version of the Technical Study in force at the time of the auction procedure. The same requirements apply as those set out for the SS under point no. 1 above.

Repurposed Storage Systems (SS) may qualify for the auction called for the reference technology if:

- The Participant holds (i) the concessions for the use of water for the construction and operation of the pumping facility, and (ii) the authorizations required under applicable law for the Repurposing intervention;
- The SS falls under one of the following categories:
 - i it does not share grid connection infrastructure and has no functional relationship with another generation and/or consumption unit; or
 - ii it shares grid connection infrastructure with another generation and/or consumption unit, but has no functional relationship with that unit; or
 - iii it has a functional relationship with another generation unit, but that unit uses the same primary energy source for electricity generation.
- the existing hydroelectric plant to be converted into a Storage System (SS):
 - i it is already qualified to submit offers on the Day-Ahead Market;
 - ii it is not subject to decommissioning measures approved by the competent authorities;
 - iii it has not been qualified under the Capacity Market for any of the years included in the MACSE Delivery Period.
- The Participant waives any additional incentives, with reference only to the portion of the SS that may be contracted;
- **the Commencement of works (*avvio dei lavori*) takes place after the date of the auction.**

According to the FAQs published by Terna S.p.A., and without prejudice to the above-mentioned requirements, it is possible to qualify a Storage System (SS) for which an integrated construction and operation authorization has been issued (e.g., BESS + PV).

5. Pre-auction obligations to be fulfilled by the Participant

Pre-qualification auction deadline	Fulfillment
<u>At least 75 days before the date of execution</u> of the SS qualification auction	Submission on the MACSE Portal, for each SS, of the data referred to in Article 7.1 of the Rules.
<u>At least 40 days before the date of execution</u> of the SS qualification auction	Submission on the MACSE Portal of the documentation certifying the establishment of the pre-auction guarantee (Article 34 of the Rules).
<u>At least 35 days before the date of execution</u> of the SS qualification auction	Submission on the MACSE Portal, for each SS, of a declaration by the Participant's legal representative, in accordance with the template set out in Annex 2 of the Rules, which: <ul style="list-style-type: none"> • certifies, pursuant to Articles 46 and 47 of Presidential Decree No. 445 of 28 December 2000, the fulfillment of the requirements set out in Article 6.1, letters a, c, d, and f of the Rules; • includes the commitment to ensure compliance with the provisions of Article 6.1, letters b and e of the Rules.

Pre-auction activities carried out by Terna

- **At least 270 days before the Start** of the Competitive Procedure, Terna shall publish on its website:
 - the date of the Start of the Competitive Procedure;
 - the date of execution of the related auctions, specifying the eligible Technologies;
 - the updated versions of the Documento Fabbisogni and the Technical Report, approved by MASE, relevant for the purposes of the Competitive Procedure.
- At least 50 days before the auction execution date, Terna shall notify the Participant of:
 - a the **value of the qualified capacity**, which—unless contested—shall correspond to the Capacity to be qualified as communicated by the Participant;
 - b the **values of the maximum and minimum qualified power**, which—unless contested—shall correspond respectively to the Maximum and Minimum Power to be qualified as communicated by the Participant
- **At least 20 days before the auction execution date**, Terna shall exclude the SS for which the Participant has not submitted the declarations referred to in Article 7.3 of the Rules or has not complied with the requirements set by Terna pursuant to Article 7.4 of the Rules, and shall publish the national quota, as well as the minimum and maximum quotas for each Area

6. Auction details

- The auctions are structured as single-session discriminatory auctions (offer submission time: 60 minutes).
- For each auction, the demand curve is perfectly anelastic and corresponds to the national quota.
- Offer Criteria:
 1. for each qualified SS, the Participant submits only one Offer via the MACSE Portal;
 2. offered capacity \leq qualified capacity;
 3. adjusted premium² \leq Reserve premium applicable to the auction in which the Offer is submitted.

After a 30-minute period allowed for reporting any material errors, the Offer shall be deemed irrevocable pursuant to Article 1329 of the Italian Civil Code.

At the end of each auction, Terna shall notify each Participant, for each offered SS, of the **Selected Capacity**, the **Selected Maximum Power**, the **Selected Minimum Power**, and the value of the **Awarded Premium**.

In the event of **partial acceptance**, the Beneficiary has the right to decline the capacity commitment. In such case, the Beneficiary must notify Terna within 2 working days from the communication of the auction results. If no communication is received within this period, the capacity commitment shall be deemed accepted by the Beneficiary.

² The 'Adjusted Premium' is, for each SS, the Premium offered by the SS owner multiplied by the coefficients defined for SS with the same Charge Duration and Discharge Duration as specified in paragraph 15.2, and by the coefficient defined for SS with the same Charge-Discharge Efficiency as specified in paragraph 15.5.

7. Obligations

Obligations of the Beneficiarys

Deadline	Obligations
Within 2 working days from the communication of the auction results referred to in Article 17.1 or, in the case of partial acceptance, within 2 working days from the expiry of the deadline referred to in Article 17.3.	Submission of declarations for anti-mafia compliance checks
Within 15 days from the communication of the auction results referred to in Article 17.1 or, in the case of partial acceptance, from the expiry of the deadline set out in Article 17.3	Submission of the Contract related to the reference Technology of the selected SS
	Submission of the Implementing Agreement of the Contract
	Presentation of the post-auction guarantee
	Payment of the contribution to the guarantee fund
By June 30 and December 31 of each year , starting from the date of signing of the Contract and/or the Implementing Agreement and until the fulfillment of the Obligation to realize	Descriptive report on the progress of works, indicating the expected date of fulfillment of the Obligation to realize

Obligation to realize

The Obligation to realize shall be deemed fulfilled upon satisfaction of the following conditions:

- a at the end of the testing period, if required by the dispatching user of the SS;
- b the dispatching user of the SS is authorized to submit offers on the MSD **for the entire committed Capacity, the entire committed Maximum Power, and the entire committed Minimum Power**;
- c the Beneficiary has established a generation auxiliary services production unit (hereinafter: UPSA) dedicated to the individual contracted SS, equipped with metering points and corresponding metering equipment for at least N-1 elements within the plant, in accordance with Annex A78 of the Grid Code.

In the event of failure to fulfill the Obligation to realize by the start of the Delivery Period:

- For each month of the first calendar year of the Delivery Period during which the Obligation to realize remains unfulfilled:
 - i the portion of the fixed remuneration related to the SS shall be proportionally reduced based on the share of the Obligation to realize that remains unfulfilled during that month (calculated pursuant to Article 23.3 of the Rules);
 - ii the Beneficiary shall not be subject to the payment of the unavailability penalty for the portion of the committed Capacity, committed Maximum Power, and committed Minimum Power for which the Obligation to realize remains unfulfilled during that month;
 - iii the Beneficiary shall not be subject to the payment of any variable remuneration related to the portion of committed Maximum Power and Minimum Power.
- Starting from the beginning of the second calendar year within the Delivery Period, regardless of the actual fulfillment of the Obligation to realize, the Beneficiary:
 - i receives the portion of the fixed remuneration related to the SS;
 - ii is fully subject to the payment of any unavailability penalties;
 - iii is fully subject to the payment of any variable remuneration.

Availability Obligation

At the start of the Delivery Period, the Committed Capacity for which the right of withdrawal under Article 22 of the Rules has not been exercised is subject to the Availability Obligation, regardless of the actual fulfillment of the Obligation to realize.

The Availability Obligation is fulfilled, for each contracted SS (Service Delivery System), if, in each MTU (Market Time Unit) of the Delivery Period, the dispatching user of the SS declares on Terna's systems, respectively: (i) values for Maximum Storable Energy, Maximum Power, Minimum Power, and (ii) the Charge-Discharge Efficiency value, according to the parameters set out in Article 20.2 of the Rules.

Repayment Obligation

At the start of the Delivery Period, the Beneficiary is subject to the **repayment of the upward variable fee, determined pursuant to Articles 21.2 – 21.5 of the Rules**, and the **downward variable fee, determined pursuant to Articles 21.7 – 21.10 of the Rules**, calculated in relation to each contracted SS (Service Delivery System).

For each SS, the quantity subject to repayment of the **upward** variable fee is equal to the positive difference, if any, between: (a) the committed Maximum Power, and (b) the proportional share of the final cumulative schedule resulting from the execution of the time-shifting Contracts.

For each SS, the quantity subject to repayment of the **downward** variable fee is equal to the absolute value of the negative difference, if any, between: (a) the committed Minimum Power, and (b) the proportional share of the final cumulative schedule resulting from the execution of the time-shifting Contracts.

8. Right of withdrawal

The Beneficiary **has the right to exercise the right of withdrawal** in relation to the Committed Capacity of a contracted SS (or part thereof), by sending a notice via certified email (PEC) to Terna **during the Planning Period** (i.e., the period defined in the Technical Report between the date of communication of the auction results pursuant to Article 17.1 of the Rules and the start of the Delivery Period), and in any case no later than the deadline for fulfilling the Obligation to realize.

The exercise of the right of withdrawal entails the payment to Terna of the amounts calculated pursuant to Article 22.4 of the Rules.

The Beneficiary **IS NOT** entitled to exercise the right of withdrawal during the Delivery Period.

9. Fees

Fixed fee

In each month of the Delivery Period, the Beneficiary **is entitled to receive from Terna** a fixed fee, for each Contract, equal to

$$CF = \sum_{i=1}^N \frac{P_i}{12} * K_i$$

where

- a K_i is the Committed Capacity;
- b P_i is the Premium related to the i -th contracted SS under the Contract (subject to ISTAT indexation pursuant to Article 24.2 of the Rules).

Variable fee

Except as provided in paragraph 8 (Obligations) above, in each month of the Delivery Period, the Beneficiary is required to repay to Terna a variable fee, for each Contract, equal to:

$$CV_m = \sum_{i=1}^N \sum_{j=1}^M [CV_{up\ i,j} + CV_{down\ i,j}]$$

Where

- a CV_m is the variable fee to be repaid in month m ;
- b N is the number of SS contracted under the same Contract;
- c M is the number of MTUs in month m ;
- d $CV_{down\ i,j}$ is the downward variable fee applied to the i -th SS in the j -th MTU of month m .

Each month, Terna determines the value of the variable fee referred to in Article 25.1, ensuring that the corresponding amount does not exceed the product of the parameters set out in Article 25.2, letters (a), (b), and (c) of the Rules.

For each SS and each MTU, the portion of Committed Maximum Power and/or Committed Minimum Power exempted from the Availability Obligation pursuant to Article 29.7 of the Rules is also exempted from the Repayment Obligation.

Contribution margin

For each contracted SS, the Beneficiary is required to repay to Terna, **in each month m of the Delivery Period, 80% of the contribution margin, if positive**, calculated pursuant to Article 26 of the Rules

Fee for ancillary services

For each MTU of the Delivery Period, Terna grants the Beneficiary a fee to cover the costs related to ancillary service consumption, equal to the product of:

- a the ancillary service consumption – as measured through the UPSA referred to in Article 19.1, letter c of the Rules;
 - b the portion of the consumption referred to in point (a) attributable solely to the contracted share of the SS, conventionally equal to the ratio between:
 - i the Committed Minimum Power of the SS;
 - ii the Minimum Power of the entire SS;
 - c the P_{zonal} (MGP),
- subject to compliance with the overall maximum values set out in Article 27.2 of the Rules.

10. Penalty mechanisms

Pursuant to Articles 28, 29, 30, and 31 of the Rules, the following sanctioning mechanisms shall apply in the event of non-fulfillment and/or termination of the Contract:

Category	Rules	Penalty
Penalty for Failure to Implement	Failure to Fulfill the Obligation to realize related to a contracted SS by the end of the Delivery Period	Payment of the penalty for failure to implement, according to the calculation parameters set out in Article 28 of the Rules.

Category	Rules	Penalty
Penalty for Unavailability	Failure to Fulfill the Availability Obligation, the Beneficiary shall be subject to	Payment of the penalty for unavailability, according to the criteria set out in Article 29 of the Rules
Penalty for Contract Termination	In the event of termination of the Contract and/or one or more Implementing Agreements by Terna.	Payment of a penalty equal to the sum of the products of: a the Committed Capacity of each contracted SS subject to termination (MWh); b the Reserve Premium of the auction in which the Reference Technology with the shortest Planning Period among those admitted to the Competitive Procedure in which the SS was contracted participated, updated monthly in accordance with the revaluation method set out in Article 24.2 for the Premium; c the number of years in the Planning Period of the Reference Technology with the shortest Planning Period among those admitted to the Competitive Procedure in which the SS was contracted.
Suspension of payments due by Terna for the Fixed Fee and the Fee for Ancillary Services	Non-payment pursuant to the Contract and the related Implementing Agreements, until full satisfaction of all financial claims.	/

11. Guarantees

The system of guarantees consists of:

- a** pre-auction guarantees;
- b** post-auction guarantees;
- c** the guarantee fund.

The use of the guarantee fund is subject to the enforcement of all post-auction guarantees provided by the Beneficiary under the Contract to which the default refers.³

	Pre-auction guarantee	Post-auction guarantee	Contribution to the Guarantee Fund
Frequency	For each auction	For each Contract	For each Contract
Deadline	At least 40 days before the auction execution date	Within 15 days from the date of notification of the auction results	

³ Terna establishes a single Guarantee Fund for the MACSE, into which the contributions paid by each Beneficiary are pooled with reference to all the Contracts entered into by the latter.

	Pre-auction guarantee	Post-auction guarantee	Contribution to the Guarantee Fund
Amount	<p>Sum of the products between:</p> <p>a Qualified capacity of each qualified SS (MWh);;</p> <p>b Reserve premium of the auction open to the Reference Technology with the shortest Planning Period among those admitted to the Competitive Procedure;</p> <p>c 10%.</p>	<p>Sum of the products between:</p> <p>a Committed capacity of each contracted SS (MWh);</p> <p>b Reserve premium of the auction open to the Reference Technology with the shortest Planning Period among those admitted to the Competitive Procedure in which the SS was contracted;</p> <p>c Number of years of the Planning Period of the Reference Technology with the shortest Planning Period among those admitted to the Competitive Procedure in which the SS was contracted;</p> <p>d 15%.</p> <p>Amount subject to adjustment in line with the monthly revaluation of the Reserve Premium</p>	<p>Sum of the products between:</p> <p>a Committed capacity of each contracted SS, expressed in MWh;</p> <p>b The reserve premium of the auction open to the Reference Technology with the shortest Planning Period among those admitted to the Competitive Procedure in which the SS was contracted;</p> <p>c 15%.</p> <p>Amount subject to adjustment in line with the monthly revaluation of the Reserve Premium</p>
Reduction of the amount	N/A	(Upon request) for the portion related to the Committed Capacity already fully settled financially with Terna	N/A
Format	Non-interest-bearing security deposit	<p>Alternatively:</p> <p>a Non-interest-bearing security deposit;</p> <p>b First-demand bank guarantee issued by banking institutions registered in the register referred to in Article 13 of the Italian Consolidated Banking Act (TUB), with a rating of \geq BBB-/Baa3 (S&P, Fitch, and Moody's)</p>	Interest-bearing security deposit

	Pre-auction guarantee	Post-auction guarantee	Contribution to the Guarantee Fund
Return of the guarantee	<p>Terna shall return the pre-auction guarantee:</p> <p>a To each Participant who is awarded, within 15 days from the date on which Terna sends the countersigned copy of the Contract and/or the Implementing Agreement to the same;</p> <p>b To each Participant who is not awarded, within 15 days from the communication of the auction results referred to in Article 17.1 of the Rules.</p>	Upon request of the Beneficiary, following the full settlement of the financial obligations arising from the Contract and the related Implementing Agreements.	Upon request of the Beneficiary, following the full settlement of the financial transactions arising from the Contract and the related Implementing Agreements.

12. Frequently Asked Questions (FAQs)

On May 23, 2025, Terna published the FAQs related to the Rules on its website. Among the questions of greatest interest to operators, the following are worth noting:

- In the event that an **appeal is filed against the authorization** for the construction and operation of an SS (Storage System), and judicial measures are possibly adopted (such as a precautionary suspension) either before or after the auction award or after the signing of the procurement contract with Terna, it has been clarified that:
 - i** the mere filing of an appeal 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 auction;
 - ii** a ruling by the judicial authority, prior to the auction, that suspends or annuls the authorization, precludes participation in the auction;
 - iii** A ruling by the judicial authority after the auction award, which suspends or annuls the authorization, entitles the Beneficiary to invoke the force majeure clause, provided that such a measure is not caused, even partially or indirectly, by the conduct of the recipient of the authorization⁴.
- If a Participant has fulfilled the obligations set out in Articles 7.1 and 7.2 of the Rules, but does not obtain the authorizations for the SS within the deadline provided by the Rules or does not submit bids in the auction, the pre-auction guarantee will be returned in accordance with Article 35.2 of the Rules.

⁴ For the recognition of 'force majeure', the acts in question must be such that their adoption could not have been foreseen, with ordinary diligence, by a good-faith operator. This circumstance must, in any case, be appropriately assessed on a case-by-case basis, also with supporting documentation.

Contacts



Simone Cadeddu

Partner

+390669667000
simone.cadeddu@twobirds.com



*Pierpaolo
Mastromarini*

Partner

+390669667000
pierpaolo.mastromarini@twobirds.com



Gloria Bernardini

Associate

+390669667000
gloria.bernardini@twobirds.com

twobirds.com

Abu Dhabi • Amsterdam • Beijing • Bratislava • Brussels • Budapest • Casablanca • Copenhagen • Dubai
• Dublin • Dusseldorf • Frankfurt • The Hague • Hamburg • Helsinki • Hong Kong • London • Lyon
• Madrid • Milan • Munich • Paris • Prague • Rome • San Francisco • Shanghai • Shenzhen • Singapore
• Stockholm • Sydney • Tokyo • Warsaw

The information given in this document concerning technical legal or professional subject matter is for guidance only and does not constitute legal or professional advice. Always consult a suitably qualified lawyer on any specific legal problem or matter. Bird & Bird assumes no responsibility for such information contained in this document and disclaims all liability in respect of such information.

This document is confidential. Bird & Bird is, unless otherwise stated, the owner of copyright of this document and its contents. No part of this document may be published, distributed, extracted, re-utilised, or reproduced in any material form.

Bird & Bird is an international legal practice comprising Bird & Bird LLP and its affiliated and associated businesses.

Bird & Bird LLP is a limited liability partnership, registered in England and Wales with registered number OC340318 and is authorised and regulated by the Solicitors Regulation Authority (SRA) with SRA ID497264. Its registered office and principal place of business is at 12 New Fetter Lane, London EC4A 1JP. A list of members of Bird & Bird LLP and of any non-members who are designated as partners, and of their respective professional qualifications, is open to inspection at that address.