

GLOSSARY OF TERMS

[This document is not an integral part of the Grid Code]

<u>Acquirente Unico</u>	<u>Single Buyer</u>	The subject pursuant to Art. 4 of Legislative Decree no. 79/99.
<u>Acquisto a termine (Vendita a termine)</u>	<u>Over-the-counter purchase (over-the-counter sale)</u>	Amount of energy purchased (sold) outside the bidding system, including details on the significant period. Over- the-counter purchases (sales) conventionally have plus (minus) sign.
<u>Acquisto netto a termine (Vendita netta a termine)</u>	<u>Over-the-counter net purchase (over-the-counter net sale)</u>	Net balance of the Forward Energy Account, positive algebraic sum of forward purchases and sales registered (related to registered purchases and sales) by the operator on the Forward Energy Account, with reference to the same significant period.
<u>Alleggeritori automatici del carico (EAC)</u>	<u>Automatic load reducers (ALR)</u>	A relay sensitive to electricity frequency and voltage levels, which orders the interruption of predefined load units when the frequency and/or voltage, following outages, reach values which are not compatible with the operation of the electricity system.
<u>Alta tensione (AT)</u>	<u>High voltage (HV)</u>	Nominal voltage greater than 35 kV and lower than or equal to 220 kV.
<u>Altissima tensione (AAT)</u>	<u>Extra high voltage (EHV)</u>	Nominal voltage greater than 220 kV.
<u>Altre reti elettriche</u>	<u>Other electrical grids</u>	Electricity grids other than grids with third-party connection obligations.

Altri servizi

Other services

Resources for the dispatching service provided on the MSD, excluding resources for secondary power reserve (or load-frequency control), i.e. resources for:

- congestion management,
- secondary or tertiary power reserve,
- balancing.

Altri sistemi esistenti (ASE)

Other existing system (ASEs)

Systems, not falling within the other configurations defined in the context of Simple Production and Consumption Systems (SSPCs), in which a transport power line connects one or more production units managed, as a producer, by the same legal person or by different legal persons provided that they all belong to the same corporate group, to a consumption unit managed by a natural person as a final customer or to one or more consumption units managed, as a final customer, by the same legal person or by different legal persons provided that they all belong to the same corporate group.

Altro sistema di Auto-produzione (ASAP)

Other Self-Production System (ASAP)

System in which a natural or legal person produces electrical energy and, through private connections, uses at least 70% of it annually for their own use or for the use of subsidiaries, the holding company, or companies controlled by the same holding company.

Altro sistema semplice di produzione e consumo (ASSPC)

Other Simple Production and Consumption System (ASSPC)

Set of the following subcategories of Simple Production and Consumption System (SSPC):

- Efficient User Systems (SEUs);
- Existing systems equivalent to efficient user systems other than historical cooperatives and historical consortia;
- Other Self-Production Systems (ASAPs);
- Other Existing Systems (ASEs).

<u>Apparecchiatura di misura (AdM)</u>	<u>Metering equipment</u>	Set of devices required to guarantee metering and acquisition of metering data for power and electrical energy. This includes the metering unit and, where necessary, voltage transformers (VT) and current transformers (CT), devices for processing, recording and communication of electricity metering data, software and all equipment necessary to guarantee transmission of electricity metering information.
<u>Apparecchiatura di misura principale</u>	<u>Primary metering equipment</u>	The metering equipment whose metering data is given priority and used for subsequent processing.
<u>Apparecchiatura di misura di riscontro</u>	<u>Reference metering equipment</u>	Metering equipment, normally installed in a point different to the primary metering equipment, used for validating and estimating missing metering data.
<u>Area di controllo</u>	<u>Control area</u>	A coherent part of the 'Continental Europe' of ENTSO-E Interconnected System (ex UCTE) (generally coinciding with the territory of a country, a geographical area whose borders are physically delimited by meters for power and energy exchanged with the remaining part of the interconnected grid) where a single system Operator is in charge, and on which the physical loads and controllable generation are connected inside the same Control area.
<u>Area sincrona</u>	<u>Synchronous Area</u>	An area covered by interconnected systems whose control areas are interconnected in a synchronous way. The system frequency is equal for the entire synchronous area.
<u>Asta idroelettrica</u>	<u>Hydroelectric Cascade</u>	A set of hydroelectric generating units, identified by the Operator, hydraulically fixed in a line where the production of electrical energy of each generating unit influences the production of electrical energy of the other units downstream.
<u>Attività di dispacciamento</u>	<u>Dispatching activities</u>	The activity aimed at issuing provisions for the coordinated use and operation of production plants, of the transmission grid and of ancillary services.

<u>Attività di trasmissione</u>	<u>Transmission activities</u>	<p>The activity of transporting and transforming electrical energy on the grid. Transmission activities include:</p> <ul style="list-style-type: none">• the unified management of the NTG and the parts of electrical stations not included in said grid, but connected and functional to transmission activities pursuant to Art. 3, comma 5, of Decree of the Minister of Industry, Commerce and Crafts dated 25 June 1999;• the planning and identification of development activities; and• annual authorisation of maintenance works.
<u>Attività di sviluppo o sviluppo</u>	<u>Development activities or Development</u>	<p>Works on the electricity grid which involve the adjustment or upgrading of the transport, transformation, connection and interconnection capacity, or an increase in operating flexibility of the grid, or the removal of grid elements.</p>
<u>Autoproduttore</u>	<u>Auto-producer</u>	<p>The individual or legal person who produces electrical energy and uses no less than 70% annually for its own use or for use by subsidiaries, parent companies, and subsidiaries of the same parent company, as well as for use by cooperative companies for the production and distribution of electrical energy as set forth in Article 4, number 8, of Law 6 December 1962, no. 1643, and by those companies belonging to consortiums or consortiums created for the production of electrical energy from renewable sources and for the supplies authorised in industrial sites prior to the date of application of Legislative Decree no. 79 dated 16/03/1999.</p>
<u>Autorità o anche ARERA (già AEEGSI)</u>	<u>Authority or ARERA [AEEGSI]</u>	<p>Regulatory Authority for Energy, Networks and Environment, established under the terms of Italian Law No. 481 of 14 November 1995.</p>
<u>Banda di riserva primaria o secondaria</u>	<u>Primary or secondary reserve band</u>	<p>The variation equal to double the corresponding half-band reserve.</p>
<u>Bassa tensione (BT)</u>	<u>Low voltage (LV)</u>	<p>Nominal voltage lower than or equal to 1 kV.</p>

<u>Bilanciamento</u>	<u>Balancing</u>	The service carried out by the Operator in real time, issuing dispatching orders, in order to maintain the system balance between injections and withdrawals, to manage congestions, and to maintain the adequate level of the total amount of secondary power reserve.
<u>Blackout</u>	<u>Blackout</u>	The total absence of voltage in plants or more or less extensive portions of the grid following extremely serious outages, and despite the automatic and manual interventions by the Operator to counteract the phenomenon.
<u>Black start up</u>	<u>Black start (Capability)</u>	Autonomous start of a power plant in the absence of voltage on the grid.
<u>BME</u>	<u>ECS</u>	Acronym for Emergency Control Station. Remote-controlled system for interrupting utilities loads.
<u>BMI</u>	<u>IUCS</u>	Acronym for Interruptible Utilities Control Station. Remote-controlled system for interrupting utilities loads which are subject to an interruption clause.
<u>Buco di tensione</u>	<u>Power sag</u>	Sudden drop in power feed for a user directly connected to the NTG, at an amount between 90% and 1% of the nominal voltage for a period of time greater than 10 milliseconds and less than or equal to 1 minute. The power sag can involve one or more phases and is denominated as unipolar, bipolar or tripolar if it involves, respectively, one, two or three phases.
<u>Cabina Primaria (C.P.)</u>	<u>Primary Distribution Stations (P.S.)</u>	Electrical station with equipment, control bodies and HV/MV transformation.
<u>Capacità di trasporto</u>	<u>Transport capacity</u>	The flow of active power that can be transported between two portions of the grid, compatible with the operational security of the electricity system.

Capacità totale trasmissibile (TTC – Total Transfer Capacity)

TTC – Total Transfer Capacity

The maximum exchange programme between two adjacent control areas compatible with the security standards used in each control area if the grid conditions, distribution of generation and loads are known.

Capacità netta trasmissibile (NTC - Net Transfer Capacity)

NTC - Net Transfer Capacity

Transport capacity is defined as:

$$NTC = TTC - TRM$$

The maximum exchange programme between two adjacent areas compatible with security standards applicable in both the control areas and the synchronous area and taking into account the technical uncertainties of future transmission grid conditions.

Capacità disponibile (ATC – Available Transfer Capacity)

ATC – Available Transfer Capacity

Transport capacity made available, jointly with the bordering foreign grid operator, for further trading besides the capacity already committed for any reason. This capacity is defined for each interconnected country and for each procedure and method of allocation.

Carichi essenziali di un impianto di generazione (carichi essenziali)

Essential loads for a power generation plant (essential loads)

Electrical loads directly associated to the process of generating electrical energy for each producer, and indispensable for the continuity of electrical energy generation.

Carichi privilegiati di un impianto di generazione (carichi privilegiati)

Privileged loads for a power generation plant (privileged loads)

Electrical loads present in the generation plant which are considered indispensable to the activity of industrial energy production.

Carichi propri di un impianto di produzione (carichi propri)

Proprietary loads of a production plant (proprietary loads)

All of the electrical loads of the producer.

Carichi zavorra

Ballast load

In the plans for restarting the electricity system, these are the utilities loads (diffused distribution) which are connected to the power restoration lines during the first phases of return to service. These allow thermoelectric units to supply power directly after the parallel, increase load and reach operating conditions which allow for the regulation of speed.

<u>Carico</u>	<u>Load</u>	The amount, at a given moment, of electrical power (active or apparent) supplied or absorbed at any point of the system, determined by an instantaneous measurement or based on the power integrated over a specified time period.
<u>Carico interrompibile</u>	<u>Interruptible load</u>	Load which can be interrupted by the Operator using the methods defined by the Operator himself.
<u>Ceiling</u>	<u>Ceiling</u>	Maximum percentage value of voltage supplied by the energising system (under nominal feed conditions) referring to the energising voltage under nominal operational conditions.
<u>Centrale</u>	<u>Power plant</u>	A plant including one or more generator groups, even if separate, owned and/or controlled by the same producer and/or auto-producer.
<u>Centrale ibrida</u>	<u>Hybrid power plant</u>	Plant that produces electricity using both non-renewable sources, and renewable sources, including co-firing plants, that is to say plants that produce electricity by the combustion of non-renewable sources and renewable sources.
<u>Cliente finale</u>	<u>Final customer</u>	The natural or legal person who purchases electrical energy exclusively for his own use.
<u>Cliente grossista</u>	<u>Wholesale customer</u>	The natural or legal person who purchases electrical energy in order to resell it inside or outside the system in which they are located.
<u>Codice di rintracciabilità</u>	<u>Traceability code</u>	Code communicated to the applicant on the occasion of the connection application, which makes it possible to unmistakably trace the connection file during the connection procedure, also through several related codes.
<u>Cogenerazione</u>	<u>Cogeneration</u>	The combined production of electrical energy and heat under the conditions defined by the Authority with resolution no. 42/02 as amended.

<u>Comitato di consultazione o Comitato</u>	<u>Consulting Committee</u>	The body defined in Chapter 13, section 13.1 of this Grid code.
<u>Compensazione delle perdite</u>	<u>Compensation for losses</u>	Numerical calculation technique which allows for the calculation of losses of electrical energy between two points in a circuit, taking into account interposed elements depending on the voltage levels and currents flowing along the circuit.
<u>Concessione</u>	<u>Concession</u>	License to the Gestore della Rete di Trasmissione Nazionale S.p.A. (Operator of the National Transmission Grid) for the activities of transmission and dispatching of electrical energy in Italian territory, granted by decree of the Minister of Productive Activities on 20 April 2005, and published in Official Gazette no. 98 on 29 April 2005 as was subsequently modified through the Decree of the Ministry for Economic Development of 15 December 2010 and published in the Official Gazette no. 4 of 7 January 2011.
<u>Condizione o stato di emergenza</u>	<u>Emergency condition or status</u>	Operation situation of the electricity system defined in paragraph 10.4.2.3 of the Grid code.
<u>Condizione o stato di ripristino</u>	<u>Recovery condition or status</u>	Operation situation of the electricity system defined in paragraph 10.4.2.5 of the Grid code.
<u>Condizione o stato di interruzione</u>	<u>Interruption condition or status</u>	Operation situation of the electricity system defined in paragraph 10.4.2.4 of the Grid code.
<u>Condizione o stato normale o normale sicuro</u>	<u>Normal or normal safe condition or status</u>	Operation situation of the electricity system defined in paragraph 10.4.2.1 of the Grid code.
<u>Condizione o stato di allarme o normale insicuro</u>	<u>Warning or normal unsafe insecure condition or status</u>	Operation situation of the electricity system defined in paragraph 10.4.2.2 of the Grid code.
<u>Congestione</u>	<u>Congestion</u>	Operational situation, also potential, of an electrical grid, characterised by deficit in the transport of electrical energy due to grid constraints.

<u>Connessione</u>	<u>Connection</u>	The connection of an electrical plant to a grid with circuit continuity existing at least in one point, without the interposition of electric plants of third parties, to the same grid.
<u>Connessione diretta alla RTN</u>	<u>Direct connection to the NTG</u>	Connection of all plants with existing circuit continuity at least in one point, without the interposition of power plants of third parties, to the NTG.
<u>Connessione indiretta alla RTN</u>	<u>Indirect connection to the NTG</u>	Connection of all plants relevant in terms of the operations of transmission and dispatching, with existing circuit continuity at a minimum of one point, with the interposition of power plant of third parties, to the NTG.
<u>Contatore (di energia attiva o reattiva)</u>	<u>Meter (for active or reactive energy)</u>	Device designed for measuring energy (active or reactive) through the integration of power with respect to time.
<u>Contatore statico</u>	<u>Static meter</u>	Energy meter in which the current and voltage, when applied to an electronic measurement element, produce frequency pulses in proportion to the power.
<u>Conto energia a termine o C.E.T.</u>	<u>Forward Energy Account or C.E.T.</u>	Forward Energy Account registered by the Energy Market Operator in each market operator's name in order to register forward electricity purchases and sales and the execution of the resulting net purchases and net sales.
<u>Contratto bilaterale</u>	<u>Bilateral contract</u>	An energy sales contract between Market Operators, which is stipulated outside of the tender system.
<u>Contratto di servizio</u>	<u>Service contract</u>	A service contract for governing the relationships of management, operation, maintenance and development of parts of power stations not included in the national transmission grid but functional to the grid on the basis of a Contractual Agreement prepared by the Operator and approved by the Authority.

<u>Contratto per il servizio di dispacciamento</u>	<u>Contract for dispatching service</u>	Contract which regulates the relationship between the System Operator and the Users of dispatching, in terms of the provision of the dispatching service as governed by the resolutions of the Authority and signed in accordance with the draft contract annexed as an integral part of the present Code.
<u>Contratto per la connessione</u>	<u>Connection Contract</u>	The contract which regulates the relationship between the Operator and the Users with reference to connection to the NTG stipulated in compliance with the contractual agreement for the connection, attached as an integral part of this Code.
<u>Controllo degli scambi programmati</u>	<u>Planned exchange controls</u>	All control activities of the Operator, also in cooperation with foreign operators of electricity grids, for controlling the exchanges of electrical energy among electricity systems which are interconnected to the national electricity system.
<u>Controllo in tempo reale</u>	<u>Real time controls</u>	Exchange of remote metering, remote signals and alarms between the Operator and the User in times consisting of several minutes, aimed at controlling the national electricity system.
<u>Convenzione Tipo</u>	<u>Standard Agreement</u>	The agreement pursuant to Art. 3, paragraph 8 of Legislative Decree no.79/99 which governs the relationship between the Operator and other Owners of the NTG.
<u>Corto circuito</u>	<u>Short circuit</u>	Accidental contact, directly or through an impedance, between the power wires, or between the wires and the ground.
<u>Dati di misura preliminari</u>	<u>Preliminary metering data</u>	Metering data obtained from the primary metering equipment, and acquired from the Primary Acquisition System and not yet subjected to the procedures of validation and possible estimation.
<u>Dati di misura convalidati</u>	<u>Validated metering data</u>	Metering data obtained by the application of procedures of validation and possible estimation to the preliminary data.

<u>Delibera</u>	<u>Power diagram (Capability Curve)</u>	Communication by the Operator to the interested subject regarding the outcome of assessment of the unavailability request.
<u>Diagramma di potenza (Curva di Capability)</u>	<u>Power diagram (Capability Curve)</u>	Admissible operational limits for a synchronous generator in the Cartesian plan for Reactive Power/Active Power, defined on the basis of temperatures or overtemperatures, or, possibly, static stability.
<u>Direttive dell'Autorità</u>	<u>Authority Directives</u>	<i>"The Directives for the Gestore della Rete di Trasmissione Nazionale S.p.A. (Operator of the National Transmission Grid) for the adoption of the Transmission and Dispatching Code as set forth in Prime Ministerial Decree date 11 May 2004"</i> set forth in Attachment A in the resolution of the Italian Authority for Electrical Energy and Gas no. 250/04.
<u>Disalimentazione</u>	<u>Outage</u>	Long or short term interruption.
<u>Disciplina del Mercato Elettrico</u>	<u>Electricity Market Rules</u>	The regulations contained in the Consolidated Act for Electricity Market Rules approved by Prime Ministerial Decree of 19/12/2003.
<u>Dispacciamento</u>	<u>Dispatching</u>	See dispatching activities.
<u>Dispacciamento di merito economico</u>	<u>Economic dispatching</u>	The activity with the objective of issuing instructions for the coordinated use and operation of production plants, transmission grid and ancillary services, carried out on an economic basis in respect of merit order criterion, subject to grid and system constraints.
<u>Dispositivo di elaborazione</u>	<u>Calculation device</u>	A device which can perform simple calculations of the measurements of power supplied by a measurement station, for example, in order to compensate for losses created by grid elements.
<u>Dispositivo di interfaccia di telecomunicazione</u>	<u>Telecommunications interface device</u>	A device capable of acting as an interface between a measuring device and a telecommunications network, in order to allow for remote acquisition of the measurement data supplied by such devices.

<u>Disposizioni tecniche di funzionamento</u>	<u>Technical provisions for operation</u>	The operational and procedural norms of the Integrated Electricity Market Rules.
<u>Disservizio di rete</u>	<u>Grid outage</u>	The forced going off-line of one or more grid elements.
<u>Distorsione armonica totale (THD)</u>	<u>Total harmonic distortion (THD)</u>	Ratio of the effective value of harmonic residue and the effective value of alternating current.
<u>Distributore</u>	<u>Distributor</u>	Pursuant to Art. 9 of Legislative Decree no. 79/99, the legal person who carries out under concession, the service of distribution for the transport and transformation of electrical energy on distribution grids.
<u>Distribuzione</u>	<u>Distribution</u>	The transport and transformation of electrical energy on high, medium and low voltage distribution grids for delivery to the final customers.
<u>EDA</u>	<u>AID</u>	Acronym for Automatic Interruption Device. a system for controlling critical sections.
<u>Energia per usi finali</u>	<u>Energy for final use</u>	Electrical energy delivered to users and consumed for producing: thermal energy, lighting, mechanical work and electrochemical energy.
<u>Esercizio</u>	<u>Operation</u>	<p>The methodical use of power plants and accessories according to procedures coded in implementation of the decisions regarding Grid management.</p> <p>Operation includes:</p> <ul style="list-style-type: none"> • the running of the plants in order to carry out the Operator's orders and autonomous deliveries; • emergency assistance following faults or anomalies; • operations for going off-line and for the security of the plants; • monitoring of the status of plants; • plant inspections.

<u>ENTSO-E</u>	<u>ENTSO-E</u>	Acronym of the Association of European Network of Transmission System Operators for Electricity.
<u>Fasce orarie</u>	<u>Time slots</u>	Time and seasonal differentiation, defined for the purposes of tariff setting by the resolutions of the CIP and the Authority.
<u>Fase di programmazione (del mercato per il servizio di dispacciamento)</u>	<u>Planning phase (of the market for dispatching service)</u>	Activities performed by the Transmission System Operator in order to manage congestions, provide secondary and tertiary power reserve, selecting bids and offers on the MSD, in advance with respect to real time.
<u>Flicker</u>	<u>Flicker</u>	The subjective impression of the fluctuation of luminance from incandescent or fluorescent lights due to fluctuations in the power supply voltage.
<u>Fluttuazione di tensione</u>	<u>Voltage fluctuations</u>	A series of repetitive variations in the effective level of the voltage.
<u>Fonti energetiche assimilate alle rinnovabili</u>	<u>Energy sources assimilated with renewables</u>	Energy sources which, though not renewable, are assimilated with renewables when used in specific plants, for example: cogeneration plants, using heat recovery, exhaust smoke or other forms of recoverable process energy, plants using processing waste and fossil fuels produced from minor isolated beds.
GAUDI'	GAUDI'	<p>Application created by TERNA for the management of the Registry of Electric Energy Production Plants in accordance with Art. 9, paragraph 9.3, letter c) of the Resolution ARG/elt 205/08 and in accordance with Resolution ARG/elt 124/10.</p> <p>The Gaudi system manages the archive of significant production units, non-significant production units and virtual import and export units.</p>

<u>Generatore o gruppo di generazione</u>	<u>Generator or generator group</u>	Set of the generation units connected with a single grid connection point, which include auxiliary services and connection devices. The classification of generation systems connected on the grid is differentiated on the basis of the characteristics of the primary source and the conversion parts for the interface to the grid.
<u>Gestione della rete</u>	<u>Grid management</u>	The activities and procedures which determine the operations and the operations forecast, under any conditions, of a power grid. Said activities and procedures include the management of electric power flows, interconnection devices and necessary ancillary services, as well as the decisions to perform maintenance and development works.
<u>Gestore di rete</u>	<u>Grid operator</u>	The concessionaire of the electricity transmission or distribution service.
<u>Gestione unificata della RTN</u>	<u>Unified management of the NTG</u>	Coordinated management of all portions of the NTG.
<u>Gestore del mercato</u>	<u>Energy market operator</u>	The subject pursuant to Art. 5 of Legislative Decree no. 79/99.
<u>Gestore di rete con obbligo di connessione di terzi</u>	<u>Grid operator with third-party connection obligations</u>	Subject that has an obligation to connect to its grid all users that so request, without compromising the continuity of the service and provided that the technical rules laid down for the purpose are observed.
<u>Gestore o Gestore della rete</u>	<u>Operator or Grid Operator or Transmission System Operator (TSO)</u>	The legal person who is assigned the management of the national electricity transmission grid upon termination of the process for the unification of management of said grid, pursuant to Art. 1 of Prime Ministerial Decree dated 11 May 2004 and pursuant to the Concession.
<u>Gestore del Sistema Informativo Integrato (Gestore del SII)</u>	<u>Integrated IT System Manager (SII Manager)</u>	The owner and manager of the Integrated IT System pursuant to Art. 1 bis of Law no. 129/2010.

<u>Giorni critici</u>	<u>Critical days</u>	Days of the year which are critical in terms of coverage of national demand, including the necessary power reserve margins.
<u>Grado di dissimmetria della tensione</u>	<u>Degree of voltage dissymmetry</u>	Ratio between the amplitudes of the negative sequence voltage component to the positive sequence voltage component in a three-phase voltage system.
<u>Guasto</u>	<u>Fault</u>	<p>The yielding of an electric component or a condition of danger to persons or things, which results in a grid element being immediately taken off line.</p> <p>The fault can be:</p> <ul style="list-style-type: none">• transient, when it is eliminated through the automatic sequences of immediate opening and reclosure of the circuit breakers;• permanent, in all other cases.
<u>Impianti di trasmissione</u>	<u>Transmission power plant</u>	Infrastructures dedicated to the transmission of electrical energy, belonging to the NTG, such as lines and switching stations and transforming stations.
<u>Impianto di produzione</u>	<u>Power production plant/production plant</u>	<p>Set of equipment for the conversion of energy provided by any primary source of energy in electrical energy. This includes the building or the buildings related to mentioned set of activities and the functionally interconnected set of:</p> <ul style="list-style-type: none">- works and equipment that allow for the production of electrical energy and- groups for the production of electrical energy, the ancillary services of the plant and the converters upstream from the grid connection points with third-party connection obligations. <p>Each plant can, in turn, be divided into two or more sections.</p>
<u>Impianto per la connessione</u>	<u>Connection plant</u>	Set of plants created starting from the input point on the existing grid, necessary for connecting a user plant to the grid. The connection plant is made up of the grid connection plant and the user connection plant.

<u>Impianto di rete per la connessione</u>	<u>Grid connection plant</u>	The portion of the connection plant pertaining to the Grid Operator, included between the input point of the pre-existing grid and the connection point.
<u>Impianto direttamente connesso alla RTN</u>	<u>Plant directly connected to the NTG</u>	A plant which, at least in one point, has circuit continuity with the national transmission grid, without the interposition of third-party power plants.
<u>Impianto indirettamente connesso</u>	<u>Indirectly connected plant</u>	A plant which does not meet the condition for direct connection.
<u>Impianto RTN per la connessione (impianto RTN)</u>	<u>NTG connection plant (NTG plant)</u>	A plant pertaining to the NTG, used for connecting the NTG to grids with third-party connection obligations, or other electrical grids, which, therefore, constitutes NTG grid development work.
<u>Impianto non RTN per la connessione (impianto non RTN)</u>	<u>Non-NTG connection plant (non-NTG plant)</u>	A plant managed by the operator requesting connection, used for connecting the NTG to grids with third-party connection obligations, or other electrical grids, which, therefore, constitutes non-NTG grid development work.
<u>Impianto (o sezione) di cogenerazione ad alto rendimento</u>	<u>High-performance co-generation plant (or section)</u>	For the sole purposes of the connection procedure, a plant (or a section) that qualifies as high performance cogeneration plant according to the criteria contained in the Ministerial Decree of 4 August 2011, even only for a fraction of the year, and for which the ECHP value, defined by the said Decree, is higher or equal to half of the total gross production of electricity of the plant (or section) itself in the calendar year or the fraction of the year in which the qualification is required according to Art. 5 of the Ministerial Decree of 5 September 2011.
<u>Impianto di utenza per la connessione (impianto di Utente)</u>	<u>User plant for connection (User plant)</u>	A portion of a connection plant whose creation, management, operation and maintenance shall be the responsibility of the Applicant Party.

<u>Impresa distributrice</u>	<u>Distribution company</u>	See distributor.
<u>Impresa distributrice di riferimento (DDR)</u>	<u>Reference distribution company (RDC) or reference distributor</u>	Distribution company with at least one HV point of interconnection with other grids.
<u>Impresa distributrice sottesa (DDS)</u>	<u>Subordinate distribution company (SD) or subordinate distributor</u>	Distribution company without HV points of interconnection. Such companies are considered to be subordinate to the RDC to which they are connected, and which has the most HV points of connection to other grids in that zone.
<u>Incidente rilevante</u>	<u>Significant incident</u>	An outage of energy not supplied greater than 250 MWh.
<u>Indice di disalimentazione</u>	<u>Outage ratio</u>	Ratio between the energy not supplied in a specified electricity grid due to accidental causes, and the power in the same grid during the time period under examination.
<u>Indice di severità del flicker a breve termine (P_{st})</u>	<u>Short term flicker severity ratio (P_{st})</u>	Flicker severity ratio calculated over a period of ten minutes. This represents a measurement of the visual severity of the flicker in relation to the threshold at which it becomes disturbing.
<u>Indice di severità del flicker a lungo termine (P_{lt})</u>	<u>Long term flicker severity ratio (P_{lt})</u>	Flicker severity ratio evaluated over a period of two hours, using the series of successive values of P _{st} encountered in that period, according to the following calculation algorithm: $P_{lt} = \sqrt[3]{\sum_{i=1}^{12} P_{sti}^3 / 12}$
<u>Indisponibilità</u>	<u>Unavailability</u>	Situation in which an element of the NTG is not usable by the Operator for transmission activities.
<u>Indisponibilità indifferibili</u>	<u>Non-postponable unavailability</u>	Unavailability requested following unforeseeable events which cannot be postponed longer than 7 days.

<u>Interoperabilità delle reti elettriche</u>	<u>Interoperability of electricity grids</u>	Operational mode for carrying out the management, operation, maintenance and development of two or more interconnected grids, in order to guarantee the simultaneous and coordinated operations of such grids.
<u>Interruzione</u>	<u>Interruption</u>	A condition in which the three-phase voltage is lower than 1% of the nominal voltage in the points of withdrawal or the points of energy input for a user directly connected to the national transmission grid.
<u>Interruzione breve</u>	<u>Short term interruption</u>	An interruption shorter than or equal to 3 minutes, and longer than 1 second.
<u>Interruzione lunga</u>	<u>Long term interruption</u>	An interruption longer than 3 minutes.
<u>Interruzione transitoria</u>	<u>Transient interruption</u>	An interruption shorter or equal to 1 second, recognised by the activation of immediate reclosure of the circuit breakers, and flagged only to the Users directly connected to the NTG.
<u>Interferenza</u>	<u>Interference</u>	Interference between a power line and a telecommunications line means the introduction of a sensitive level of voltage into a telecommunications line, upon the occurrence of a fault on the power line, as defined by Regulation CEI 103-6.
<u>Lettura locale</u>	<u>Local reading</u>	Recording of measurement data acquired from a measuring device, directly paired with a Portable Meter Reader, without the intermediation of telecommunications systems.
<u>Lettura visiva</u>	<u>Visual reading</u>	Recording of measurement data acquired from a measuring device, through the direct intervention of an operator.
<u>Limite di funzionamento transitorio</u>	<u>Transient operational limit</u>	Limits of frequency, current and voltage within which a component of the electricity system can operate for specified time periods that must not be exceeded, in order to avoid damage to system components or a possible system collapse.

<u>Limite di funzionamento permanente</u>	<u>Permanent operational limit</u>	Limits of frequency, current and voltage within which a component of the electricity system can operate for an unlimited time period.
<u>Limite operativo</u>	<u>Operational limit</u>	Limits of frequency, current and voltage of components of an electricity system, which are due to the operational system itself (i.e. stability, electromagnetic fields).
<u>Limite di progetto</u>	<u>Design limit</u>	Limits of frequency, current and voltage of components of an electricity system considered acceptable in evaluating the risk of faults during the design phase, and conforming to technical regulations.
<u>Limite di stabilità statica</u> (di un sistema elettrico)	<u>Static stability limit</u> (of an electricity system)	The maximum power that can be transmitted through a system node whose entire system, or part of the system that the stability limit refers to, retains static stability (see Static Stability).
<u>Limite di stabilità transitoria</u> (di un sistema elettrico)	<u>Transient stability limit</u> (of an electricity system)	The maximum power that can be transmitted through a system node whose entire system, or part of the system that the stability limit refers to, retains transient stability (see Transient stability).
<u>Linea/area critica</u>	<u>Critical Line/Area</u>	Line/Area identified by Terna according to the methodology approved by the National Authority for Electric Energy and Gas under the Deliberation ARG/let 173/10.
<u>Load rejection (LR) o Rifiuto del carico</u>	<u>Load rejection (LR)</u>	A sequence of automatic operations regarding thermoelectric groups, activated upon the opening of the group circuit breaker following faults external to the unit. The logic of LR has the objective of regulating the speed of the group at amounts near to nominal amounts, and reducing or eliminating the adduction of fuel to adjust the power produced to that of the ancillary services of the plant, to thus enable quick re-entry of the unit into production.

<u>Manovra</u>	<u>Control</u>	Action or group of actions that cause a modification in the grid diagram.
<u>Manutenzione</u>	<u>Maintenance</u>	Operations and works for the maintenance or recovery of efficiency, and smooth operation of the electric plants, taking into account any decrease in performance.
<u>Margine operativo di trasmissione (TRM – Trasmission Reliability Margin)</u>	<u>TRM –Transmission Reliability Margin</u>	<p>Security margins for guaranteeing against uncertainties deriving from the calculation of the Total Transmission Capacity, due to:</p> <ul style="list-style-type: none"> • un-intentional deviations of the physical flow provoked by the secondary frequency-power regulations systems; • emergency reserves between System Operators for guaranteeing against sudden load unbalancing in real time; • imprecisions, i.e. in gathering data and measurements.
<u>Media tensione (MT)</u>	<u>Medium voltage (MV)</u>	Nominal voltage greater than 1 kV and lower than or equal to 35 kV.
<u>Mercati dell'energia</u>	<u>Energy markets</u>	The Day Ahead Energy Market and the Intra-Day Market.
<u>Mercato del giorno prima (MGP)</u>	<u>Day Ahead Energy Market (MGP)</u>	The trading of bids for the purchase and supply of electrical energy for each significant period regarding the next operating day following that of trading.
<u>Mercato di bilanciamento (MB)</u>	<u>Balancing Market (MB)</u>	Activity performed by the Transmission System Operator to maintain system balance between injections and withdrawals and in order to manage congestions and adequate levels of secondary and tertiary reserve, selecting bids and offers on the MSD the same day to which bids and offers refer.
<u>Mercato infragiornaliero (MI)</u>	<u>Intra-day Market (MI)</u>	The trading of bids and offers for the purchase and supply of electrical energy for adjusting injection and withdrawal programmes set on the Day Ahead Energy Market.

<u>Mercato elettrico</u>	<u>Electricity markets</u>	The group including the Day Ahead Energy Market, the Intra- day Market, and the Market for dispatching services.
<u>Mercato per il servizio di dispacciamento (MSD)</u>	<u>Dispatching Services Market or Market for dispatching service (MSD)</u>	The site of trading of resources for dispatching services.
<u>Merchant lines</u>	<u>Merchant Lines</u>	Electricity lines for foreign interconnection as defined by Art. 1- <i>quinquies</i> , paragraph 6 of Law Decree 29 August 2003 no. 239, as taken up by Law 27 October 2003 no. 290 that may be subject to requests for exemption under the terms of Minister of Productive Activities Decree 21 October 2005 or Regulation (EC) no. 714/2009.
<u>MAP</u>	<u>MPA</u>	Acronym for the Ministry of Production Activities.
<u>Misuratore</u>	<u>Measurement gauge</u>	Device for measuring electrical data.
<u>Monitoraggio</u>	<u>Monitoring</u>	All the actions through which the current operational status of an electricity system is ascertained.
<u>MISE</u>	<u>MSE</u>	Acronym for the Ministry of Economic Development.
<u>Neutro francamente a terra</u>	<u>Neutral wire secured to earth</u>	A neutral wire of a power plant secured to earth by a connection with null or insignificant impedance.
<u>Nodo (elettrico) di alimentazione (nodo)</u>	<u>(Electric) Supply Node (node)</u>	A section of bars, inside a power station, which connects to three or more HV or EHV bays.
<u>Numero di ore della sottofase</u>	<u>Number of hours for the sub-phase</u>	Number of hours which pass from the first hour of the sub-phase of the planning phase in question, to the last hour of the reference day.

<u>Offerte riservate</u>	<u>Reserved bids and offers</u>	Valid bids and offers on the MSD representing (totally or partially) the reserve provided in the prior MSD sessions and which could be accepted in the following sessions in case of use of said reserve.
<u>Offerte valide</u>	<u>Valid bids and offers</u>	Bids and offers presented on the MSD, as verified and if needed modified by the Transmission System Operator, in order to comply with the constraints pursuant to the dispatching rules.
<u>Ordine di dispacciamento</u>	<u>Dispatching order</u>	Real time notification from the Operator to an enabled unit with dispatching resources, concerning orders to vary the energy input or withdrawal of the unit with respect to own binding power programme.
<u>Oscillografoturbografo</u>	<u>Energy disturbance curve oscillograph</u>	Device for recording analogue electrical data in order to analyse outages and related behaviour of protections.
<u>Periodo di avviamento</u>	<u>Commissioning Period</u>	Period of time in which a thermoelectric production unit of a type other than open-cycle gas turbines performs its start-up ramping. A commissioning period is said to be ordered by the Operator if at least in one of the time periods belonging to it quantities for sale or purchase have been accepted.
<u>Periodo di spegnimento</u>	<u>Shut-down Period</u>	Period of time in which a production unit enabled to declare a deramping time performs its shut-down deramping.
<u>Periodo di transizione</u>	<u>Transition Period</u>	Period of time in which a thermoelectric production unit authorised to present an Arrangement Change offer performs the transition between contiguous operation bands.

<u>Periodo rilevante</u>	<u>Significant period</u>	Period of time in which a user of dispatching acquires the right and obligation to input or withdraw electrical energy in the grids with third-party connection obligations, and with respect to which unbalancing is calculated.
<u>PESSE</u>	<u>PESSE</u>	Acronym for Piano di Emergenza per la Sicurezza del Sistema Elettrico (Emergency Plan for the Security of the Electricity System). It consists of a plan of load interruption by rotation, adopted pursuant to CIPE Resolution dated 06/11/1979.
<u>Piano annuale</u>	<u>Annual plan</u>	Plan collecting all unavailabilities deliberated in the yearly programming.
<u>Piano annuale provvisorio</u>	<u>Temporary annual plan</u>	Plan collecting all unavailabilities temporarily deliberated in the yearly programming.
<u>Piano aggiornato</u>	<u>Updated plan</u>	<p>Plan collecting all unavailabilities deliberated until the end of the current year, that is, the unavailabilities deliberated:</p> <ul style="list-style-type: none"> • in the yearly programming • in the “on-demand” programming • in the two-weeks programming • as non-postponable or fault <p>The updated plan is published on the Operator’s website every week.</p>
<u>Piano di difesa (PdD)</u>	<u>Defence Plan (DP)</u>	All control activities – automatic and/or manual – set forth by the Operator and carried out through single systems and/or equipment designed to maintain or return an electricity system to a normal condition, also passing through a reinstatement stage, once such a stage has already begun, or emergency conditions are already present.
<u>Piano di riaccensione (PdR)</u>	<u>Power restoration plan (PRP)</u>	Group of automatic and manual procedures which enable reinstatement of the electricity system to normal operational conditions, following a generalized outage.

<u>Piano di risanamento</u>	<u>Recovery Plan</u>	The Plan set forth in Art. 9 of Law no. 36 dated 22 February 2001 <i>regarding the protection against exposure to electrical, magnetic and electromagnetic fields.</i>
<u>Piano di sviluppo (PdS)</u>	<u>Development plan</u>	<p>The tool used for planning the development of the national electricity transmission grid, prepared annually by the Operator, on the basis of:</p> <ul style="list-style-type: none">• the trend in energy requirements and the predicted demand for electrical energy, which will have to be met;• the need for increasing the power in the grid;• the applications for connecting new power generation plants to the grid.
<u>Piano di taratura</u>	<u>Calibration plan</u>	A group of instructions required for the coordinated operation of protections and automatic functions of the Grid connected to the operations of the Grid.
<u>Piano operativo</u>	<u>Operational plan</u>	Part of the updated plan which includes the unavailabilities deliberated for the following two weeks (N+1 and N+2). The operational plan is communicated to each User, Grid operator with third-party connection obligations, and User of Dispatching for the respective unavailabilities.
<u>Piccola rete isolata</u>	<u>Small isolated grid</u>	A Grid with consumption lower than 2,500 GWh in 1996, of which less than 5 percent is obtained from interconnections with other grids.
<u>Polo di produzione limitato</u>	<u>Limited production hub</u>	A group of production units connected to the national transmission grid, which operate under grid constrictions regarding the maximum power that can be produced.

Potenza apparente

Apparent power

In the voltages and currents of a three-phase, symmetric, sinusoidal system, the apparent power is equal to $\sqrt{3}$ times the product of the effective values of grid and current voltage.

$$S = \sqrt{3}VI$$

Alternatively, this value can be calculated with the formula:

$$S = \sqrt{P^2 + Q^2}$$

Potenza attiva

Active power

In a system with periodic data, active power is defined mathematically, as the average calculated value of instantaneous power in the period T:

$$P = \frac{1}{T} \int_{-T/2}^{T/2} p(t) dt$$

In the voltages and currents of a three-phase, symmetric, sinusoidal system, the active power is equal to $\sqrt{3}$ times the product of the effective values of the grid and current voltage times the cosine of the phase angle:

$$P = \sqrt{3}VI \cos \varphi$$

**Potenza di corto circuito
(in un punto di
connessione alla RTN)**

**Short circuit power
(in a point of
connection to the
NTG)**

This is given by the formula:

$$P_{cc} = \sqrt{3}V_n I_{cc}$$

where V_n is the nominal voltage of the grid and I_{cc} is the three-phase short circuit current at the point of connection.

**Potenza di
connessione/disponibile
in immissione/prelievo**

**Connection
power/available in
input/withdrawal**

Power level in injection/withdrawal indicated in the connection contract.

**Potenza ai fini della
connessione**

**Power for the
purposes of the
connection**

Power equal to the highest value between zero and the difference between the requested injection power and the power already available for the connection, as defined in the so-called TICA

**Potenza in immissione
richiesta**

**Requested injection
power**

The amount of injected power available altogether, after the interventions that need to be carried out without the user being disconnected.

Potenza efficiente (Pe)

Efficient power (EP)

The maximum active power of a production plant that can be supplied continuously (i.e. for a thermoelectric plant) or for a specific number of hours (i.e. for a hydroelectric plant).

Potenza nominale

Nominal power

Maximum apparent power at which an electrical generator or a transformer can operate with continuity in specified conditions (kVA).

For traditional and wind generators, the active power of the generation unit at nominal $\cos\varphi$ (turbine, converter, etc.) can be indicated as nominal power (kW).

In the case of photovoltaic generators, the maximum active power deliverable is limited by the nominal power of the inverter, if this is less than the sum of the STC powers of the photovoltaic modules.

Potenza reattiva

Reactive power

In the voltages and currents of a three-phase, symmetric, sinusoidal system, the reactive power is equal to $\sqrt{3}$ times the product of the effective values of the grid and current voltage times the sine of the phase angle:

$$Q = \sqrt{3}VI\sin\varphi$$

<u>Produttore</u>	<u>Producer</u>	Individual or legal person that produces electrical energy independently of being the owner of the power generation plant.
<u>Profilo quartorario normalizzato di rampa</u>	<u>Normalized quarter-hourly power ramping profile</u>	List of values that define the portion of energy relative to the minimum power for consideration during unit start-up operations.
<u>Profilo quartorario normalizzato di rampa in funzionamento collegato</u>	<u>Connected-operation normalized quarter-hourly power ramping profile</u>	List of values that define the portion of energy relative to the minimum power for consideration during unit start-up operations of a connected PU, valid solely under connected operating conditions.
<u>Programma di riferimento</u>	<u>Reference programme</u>	The programme indicated by the User of the Dispatching Services to which offers for Other Services are associated, both for selling and purchasing, for the MSD planning phase.
<u>Programma preliminare cumulato di immissione o prelievo</u>	<u>Preliminary cumulative programme for energy injection or withdrawal</u>	<p>For each dispatch point, the sum of energy injection or withdrawal programmes referring to the dispatch point, resulting at the closure of the Day Ahead Energy Market, in execution of the trading contracts recorded, hourly defined.</p> <p>The amount of preliminary cumulative programmes for energy injection/withdrawal is composed of:</p> <ul style="list-style-type: none"> • post-MGP injection/withdrawal programmes, corresponding to offers/bids accepted on the MGP; • post-MGP Forward Energy Account injection/withdrawal programmes, executing forward net sales/purchases corresponding to accepted MGP bids.
<u>Programma vincolante in potenza</u>	<u>Binding power programme</u>	For each production unit, the average power corresponding to the binding programme, in energy, in each significant period.

Programma vincolante in potenza tecnicamente congruo

Binding programme with technically appropriate power level

This is the binding power programme for each enabled production unit, with power referred to the technical data of the production units declared in the Production Unit Register, and updated in real time as necessary, for each significant period.

Programma vincolante modificato

Modified binding programme

For each enabled unit, the amount of power corresponding to the binding power programme as modified by the dispatching orders sent to the unit, and referring to the centre band (L=50%) of the level of the frequency/power regulator.

Programma vincolante modificato e corretto

Modified and corrected binding programme

For each enabled production unit, the amount of power corresponding to the modified binding programme which is corrected in proportion to the secondary-reserve half band and the level signal transmitted by the frequency/power regulator associated with the production unit.

Programmi aggiornati cumulati o Programmi post-MI (di immissione/prelievo)

Updated cumulate programmes or post-MI (injection/withdrawal) programmes

For each dispatching point, sum of the injection/withdrawal programmes resulting at the closing of each Intra-day market session, defined by significant period.

Programmi C.E.T.

C.E.T. programmes

Injection (withdrawal) programme executing forward net sales (net purchases) of electrical energy registered on the Forward Energy Accounts.

CET injection (withdrawal) programmes conventionally have plus (minus) sign.

Programmi finali cumulati o Programmi post-MSD-ex-ante (di immissione/prelievo)

Final cumulate programmes or post-MSD ex-ante (injection/withdrawal) programmes

Sum by enabled production unit, or by dispatch point, of the injection/withdrawal programmes resulting at the end of each sub-phase of the MSD planning phase, defined hourly, limited to the hour-long periods which do not belong to subsequent sub-phases of the planning-phase.

<u>Programmi MSD preliminari cumulati (di immissione/prelievo)</u>	<u>Initial cumulative MSD programmes (injection/withdrawal)</u>	Sum by enabled production unit, or by dispatch point, of the injection/withdrawal programmes at the end of each sub-phase of the Dispatching Services Market planning phase, defined hourly, limited to the hour-long periods which belong to sub-phases subsequent to the planning sub-phase in question.
<u>Programmi vincolanti</u>	<u>Binding programmes</u>	For each enabled production unit, the electric energy to inject/withdraw following each sub-phase of the MSD planning phase, by significant period, limited to the significant periods which do not belong to subsequent sub-phases of the planning phase.
<u>Programmi vincolanti preliminari</u>	<u>Preliminary binding programmes</u>	For each enabled production unit, the electric energy to inject/withdraw following each sub-phase of the MSD planning phase, by significant period, limited to the significant periods which belong to sub-phases subsequent to the planning sub-phase in question.
<u>Protezione</u>	<u>Protection</u>	Equipment for detecting abnormal operating conditions in an electric component and initiating fault clearance or actuating signals or indications.
<u>Protezione di riserva</u>	<u>Back-up Protection</u>	Protection equipment or system which operates when a fault is not cleared in due time because of failure or inability of the Main protection to operate, or the failed opening of a switch.
<u>Protezione della rete</u>	<u>Grid protection</u>	The group of automatic systems for isolating a grid fault.
<u>PSN</u>	<u>NSP</u>	Acronym for the National Statistics Programme.
<u>Punto di connessione o punto di consegna</u>	<u>Connection point or delivery point</u>	The physical limit between the transmission grid and the users plant for connection, through which physical exchanges of electrical energy occur.

Punto di controllo fisico **Physical control point**

For an enabled production unit, this is the room used for directly controlling the production unit (for example, the control room of a thermoelectric unit) or for remote control (for example, the remote control station of a turbogas unit or a hydroelectric unit).

**Punto di
dispacciamento per
unità di consumo (o
punto di
dispacciamento in
prelievo)**

**Dispatch point per
consumption unit (or
dispatch point for
withdrawal)**

A group of one or more points of withdrawal:

- regarding consumption units of the same type;
- sited in the same zone;
- included in contracts for transport services concluded, also with different distribution companies, by the same user of dispatching, who is also the user of the transport.

**Punto di
dispacciamento per
unità di produzione (o
punto di
dispacciamento in
immissione)**

**Dispatch point per
production unit (or
dispatch point for
energy injection)**

A group of one or more input points:

- regarding production units of the same type;
- sited in the same zone;
- included in contracts for transport services concluded, also with different distribution companies, by the same user of dispatching, who is also the user of the transport.

Punto di immissione

Point of injection

The physical point in a grid with third-party connection obligations, where the electrical energy is injected by a user of the grid.

Punto di inserimento

Point of injection

The point of the grid in the arrangement prior to the connection, in which the grid connection plant is inserted.

**Punto di
interconnessione**

Interconnection point

The physical limit between two electrical grids, through which physical exchanges of electrical energy occur.

Punto di prelievo

Point of withdrawal

The physical point in a grid with third-party connection obligations, where electrical energy is withdrawn by a user of the grid.

<u>Razionalizzazione</u>	<u>Rationalisation</u>	Works on the Grid, motivated by the Owner's requirements, which brings about a change in the operational consistency or functional features of part of the Grid, which maintain the overall functional features of the Grid unchanged but can change the configuration of the Grid, improving its operational efficiency, for example, by reducing operational costs of the plants.
<u>Regime degradato</u>	<u>Degraded operations</u>	Operational status of the National Electricity System under one of the following operating conditions: <ul style="list-style-type: none"> • warning; • emergency; • interruption; • re-instatement.
<u>Registratore di misura</u>	<u>Measurement recorder</u>	The device which saves, in a suitable format, the data supplied by the measurement units and by calculation devices.
<u>Registro delle unità di consumo (RUC)</u>	<u>Consumption Unit Register (RUC)</u>	The register kept by the Operator containing dispatch point per consumption unit (CU) data.
<u>Registro delle unità di produzione (RUP)</u>	<u>Production Unit Register (RUP)</u>	The register kept by the Operator, managed in Gaudì, containing the data, technical parameters and authorisation for participation in the various markets, for each significant production unit, non-significant production unit, and virtual import and export units.
<u>Regolamento di Esercizio</u>	<u>Operating Regulations</u>	Regulation Regulations signed by Operator and User of the connection in order to define the respective responsibilities in the context of the operation, control and conduction of the portions of plant functional to the NTG.
<u>Regolazione</u>	<u>Regulation</u>	Operation with the scope of modifying the current value of a variable, in order to keep it at the planned value.
<u>Regolazione primaria della frequenza</u>	<u>Primary frequency control</u>	Automatic frequency control function of a generator aimed to regulate its production, following a frequency variation.

<u>Regolazione primaria della tensione</u>	<u>Primary voltage control</u>	Automatic voltage control function of a generator, aimed to regulate the reactive energy production, following a voltage variation, in order to maintain the voltage at its reference value at the generator terminals or in the EHV junction point of the power station.
<u>Regolazione secondaria della frequenza o Regolazione frequenza/potenza</u>	<u>Secondary regulation of frequency or frequency/power regulation</u>	Automatic, centralised load and frequency control aimed to regulate the production of generators within a Control block, in order to maintain the scheduled power programmes at the interconnection and to maintain the system frequency at its reference value.
<u>Regolazione secondaria della tensione</u>	<u>Secondary voltage control</u>	Automatic, centralised voltage control function aimed to regulate reactive power production at a local level from all devices available (i.e. reactive energy production by generators, connection to condensers or reactors, control of converters charged by transformers), in order to maintain the voltage at reference junction points of the local high voltage grid (Pilot Junction Point) at their reference values.
<u>Rete di distribuzione</u>	<u>Distribution grid</u>	Electricity grids managed by distribution companies in order to perform and provide the public distribution service under the terms of Article 9 of Italian Legislative Decree No. 79/99.
<u>Rete di trasmissione nazionale (RTN)</u>	<u>National transmission grid (NTG)</u>	Electricity grid for national transmission as set forth by the Minister of Industry Decree dated 25 June 1999 and subsequent amendments and additions.
<u>Rete (elettrica)</u>	<u>(Electricity) grid</u>	A set of plants, lines and stations for transferring electrical energy and supplying the necessary ancillary services.
<u>Rete interna d'utenza</u>	<u>Internal user grid</u>	Electrical grids as described in Article 33, Italian Law No. 99 of 23 July 2009 included in the list contained in Table A of Resolution ARG/elt 52/10 as amended and supplemented.

Rete rilevante

Significant grid

The NTG, including the grid for interconnection to foreign countries, and the high voltage distribution grids directly connected to the NTG in at least one interconnection point.

Reti con obbligo di connessione di terzi

Grids with third-party connection obligations

Electricity grids managed by a grid operator that has an obligation to connect to its grid all users that so request, without compromising the continuity of the service and provided that the technical rules laid down for the purpose are observed.

Riaccensione

Power restoration

The activities coordinated by the Operator in order to recognize the condition of black out and the condition of service recovery.

Richiesta di connessione

Connection Application

An application for a new connection or a request for adjustment of an existing connection, consequent to the realization of new plants or to modification of elements related to existing plants. It can consist of:

1. an application for a new connection: request regarding the realization of a new point of connection to the electricity grid;
2. a request for a change or adjustment of an existing connection: adjustment of an existing connection for the purpose of changing the power already available in input or withdrawal or other electrical parameters related to the connection point.

Ridondanza n-1

N-1 Redundancy

Feature of the main protection chain which contains suitable duplications of the elements of the chain itself, such that, in case of the malfunction of any element of the chain, this will ensure the operation of fault clearance with pre-established degrees of selectivity and speed.

Rifiuto di carico

Load rejection

See Load rejection

<u>Riserva primaria di potenza</u>	<u>Primary power reserve</u>	Production capacity made available to the Transmission System Operator, representing the provided amount of production that can be regulated subject to the primary frequency control.
<u>Riserva secondaria di potenza</u>	<u>Secondary power reserve</u>	Production capacity made available to the Transmission System Operator, representing the provided amount of production that can be regulated subject to the secondary load-frequency control.
<u>Riserva terziaria di potenza</u>	<u>Tertiary power reserve</u>	Production capacity made available to the Transmission System Operator, representing the provided amount of production that can be activated as increasing production (upward tertiary power reserve) or decreasing production (downward tertiary power reserve) for the purpose of balancing, in line with the conditions defined by the Operator in Chapter 4 of this Grid code.
<u>Schema di rete</u>	<u>Grid Diagram</u>	Circuit infrastructure of the grid, represented in a single line diagram at a sufficient level of detail to illustrate the elements of the Grid, as well as the components making up such elements.
<u>Semibanda di riserva primaria o secondaria</u>	<u>Primary frequency control half-band or Secondary load-frequency control half-band</u>	The maximum variation in power which can be requested in increase or decrease, with respect to the modified binding programme of a PU, for primary frequency control or secondary load-frequency control.
<u>Servizio di connessione</u>	<u>Connection service</u>	Service provided in order to guarantee access to the infrastructures of the national transmission grid fulfilling the obligation provided for in Article 3, paragraph 1, of Italian Legislative Decree 79/99.

**Servizio di
interrompibilità del
carico**

**Interruptible Load
service**

The service provided by the consumption units, which are equipped at each single point of withdrawal, with load interrupting devices conforming to technical specifications set forth by the Operator and available for load interruption using methods defined by the same Operator.

Settimana

Week

Time frame defined as from 00:00 on Monday to 24:00 on the following Sunday.

Sezione

Section

Coordinated system for conversion of a primary energy source into electricity, self-sufficient and capable of producing electricity autonomously from the other sections that compose the plant. The subdivision of a plant into one or more sections is defined in Gaudi, based on rules depending on the type of plant:

- thermoelectric and geothermal plants: a section is understood as a coordinated system for conversion of thermal energy from combustibles into electric energy. It is composed of steam generators, primary thermoelectric motors, one or more groups of primary generators and transformers, a regeneration cycle and other circuits and auxiliary services. The section corresponds to a single generator group for all technology sub-types, except for “Combined-Cycle” and “Repowered”, for which each section is composed of two or more interdependent generator groups.
- hydroelectric plants: each section corresponds to a generator group, i.e. with a single electric energy generation turbine/alternator pair.
- Wind plants: each section corresponds to a set of wind turbines with the same characteristics in terms of:
 - a. average turbine height;
 - b. rotor diameter;
 - c. active power of single turbine;
 - d. manufacturer;connected to the grid via a single access point, and fitted with autonomous equipment for measuring the electric energy produced by the section.
- Photovoltaic plants: each section corresponds to a set of solar panels with the same technology and build characteristics, connected to one or more inverters, fitted with

autonomous equipment for measuring the electric energy produced by the section.

Sicurezza deterministica **Deterministic security**
("Sicurezza N-1") **("N-1 Security ")**

Security considered in the event that a sudden accidental outage of any component of the electricity system (lines, transformers, generator groups) does not cause the other functioning components to exceed their operational limits.

Sicurezza N **N Security**

An electricity system is in this state of security when all of its N components are operating correctly. Generally, this is no longer true in the event of an outage.

Sicurezza N-1 correttiva **N-1 Corrective**
 Security

An electricity system is in this state when, following a fault in any of its components, it is able to take generally automatic measures on control variables, so as to return the said system to a normal operating state, before its operation degenerates into instability with a generalised outage.

Sicurezza N-1 preventiva **N-1 Preventative**
 Security

A system in this condition continues to operate securely even following a disturbance. Therefore, no control measures are taken in the event of the disturbance, unless it is desirable to return the system to preventative security status.

Sistema con neutro **System with neutral**
efficacemente a terra **wire effectively**
 grounded to earth

System in which, in case of a ground fault, the voltage to earth in the healthy phases at grid frequencies does not exceed 80% of the nominal chained voltage at any point of the grid (phase-phase voltage).

Sistema di Acquisizione **Primary Acquisition**
Principale **System**

The system consisting of a set of hardware/software devices used for acquisition, memorisation and validation (and any corrections and/or estimates) of measurement data, in order to make such data available to other systems and to Users involved and authorised to read such data.

<u>Sistema di Acquisizione Secondario</u>	<u>Secondary Acquisition System</u>	The system consisting of a group of hardware/software devices able to archive measurement data, directly acquiring such data from the measurement devices, in order to make such data available for acquisition by the Primary Acquisition System.
<u>Sistema di Controllo</u>	<u>Control System</u>	A group of calculation systems, data transmission lines and devices which enables the secure and economic control of the national electricity system.
<u>Sistema di telecomunicazione</u>	<u>Telecommunications system</u>	Infrastructure composed of a physical means and hardware/software devices required by the Primary Acquisition System in order to acquire the measurement data from the measurement devices.
<u>Sistema di telecontrollo e di telemisura</u>	<u>Remote control and telemetry system</u>	Group of remote data transmission devices which allows for the management of plants and the control and measurement of the supply to the client.
<u>Sistema Efficiente di Utenza (SEU)</u>	<u>Efficient User System (SEU)</u>	System in which one or more electricity production plants, with total power of not more than 20 MWe and all installed on the same site, powered by renewable sources or in a high-performance co-generation arrangement, operated by the same producer, possibly different from the final customer, are directly connected, through a private connection with no third-party connection obligations, to the consumption unit of a single final customer (natural or legal person) and are created in an area, without a break, excluding roads, railways, watercourses and lakes, owned by or fully available to the said customer and by the latter, in part, made available to the producer or to the owners of the related production plants.
<u>Sistema elettrico controllato(SEC)</u>	<u>Controlled electricity system (CES)</u>	The group including the national transmission grid and directly connected Users' plants, including the associated devices for ancillary services.

Sistema elettrico nazionale (SEN)

National electricity system (NES)

Production plants, transmission and distribution grids, as well as ancillary services and interconnection devices located in the national territory.

Sistema Semplice di Produzione e Consumo (SSPC)

Simple Production and Consumption System (SSPC)

Set of electrical systems, connected directly or indirectly to the public grid, within which the transport of electricity for delivery to the consumption units that constitute them is not considered a transmission and/or distribution activity, but as an energy self-procurement activity.

Sistemi di controllo dei flussi di potenza e tensione (FACTS)

Flexible AC Transmission Systems (FACTS)

Devices which regulate the power flow at suitable values on transmission lines.

Sistemi Esistenti Equivalenti ai Sistemi Efficienti di Utenza (SESEU)

Existing Systems Equivalent to Efficient User Systems (SESEU)

Plants which meet all the requirements pursuant to points i and ii and at least one of the requirements pursuant to points iii, iv and v: i. are plants for which the authorization procedure, related to the construction of all the main elements (consumption and production units, related private connections and connections to the public grid) which characterize them, was launched on a date prior to 4 July 2008;

ii. are systems existing at the date of entry into force of Resolution 578/2013/R/eel of the Authority, or are systems for which, as of the above date, the construction work has begun or all the authorizations provided for in the current legislation have been obtained;

iii. are systems which observe the requirements of Efficient User Systems (SEUs);

iv. are systems which connect, through a private connection with no third-party connection obligations, exclusively electricity production and consumption units operated by the same legal person which, therefore, plays the role of producer and sole final customer within this system. The uniqueness of the

legal person must be verified at the date on which Resolution 578/2013/R/eel of the Authority comes into force or, if later, on the date when the said system comes into operation;

are Simple Production and Consumption Systems (SSPCs) already in operation at the date on which Resolution 578/2013/R/eel of the Authority comes into force, characterised, at the same date, by one or more consumption units all managed, as the final customer, by the same legal person or by different legal persons provided that they all belong to the same corporate group.

Sito di connessione

Connection site

An area containing electrical plants which create the circuit connection between the grid with third-party connection obligations and plants of grid users.

**Soggetto richiedente la
connessione o Soggetto
richiedente**

**Party applying for
connection or
Applicant Party**

The subject holding application for connection to grid infrastructures with third-party connection obligations with the scope of connecting power plants.

**Soluzione per la
connessione**

Connection solution

Connection solution, developed by the Grid Operator following a connection application, necessary and sufficient to fulfil the said application, taking into account the specific features of the territory affected by the connection and compatibly with the size requirements according to standard intervals of the components adopted by the Grid Operator to which the connection refers.

<u>Soluzione tecnica minima di dettaglio (STMD)</u>	<u>Detailed minimum Technical Solution (STMD)</u>	Connection solution developed by the Operator following obtainment of the authorizations for the connection and which is the reference document for the executive planning and construction of the plants.
<u>Soluzione tecnica minima generale per la connessione (STMG)</u>	<u>General minimum technical solution for the connection (STMD)</u>	Connection solution developed by the Operator following a connection application, included in the connection estimate.
<u>Stabilità (di un sistema elettrico)</u>	<u>Stability (of an electricity system)</u>	An electricity system is stable against a specific perturbation occurring, starting from a pre-set initial permanent operating regime if, after the termination of the transient regime, it returns completely to equilibrium. That is, if the synchronous machinery resumes its speed of synchronisation, there is no separation from the grid, the voltages resume their previous values from before the perturbation (if the perturbation is transient) or values approximating the nominal voltage (if the perturbation is permanent).
<u>Stabilità dinamica</u>	<u>Dynamic stability</u>	Tendency of an electricity system not to be a site of persistent oscillations following a perturbation.
<u>Stabilità statica</u>	<u>Static stability</u>	Tendency of an electricity system to remain stable following small perturbations and slow variations in load or generation.
<u>Stabilità transitoria</u>	<u>Transient stability</u>	Tendency of an electricity system to maintain stable operations following a specific, rapid perturbation of large size, which is imposed on an assigned initial stable condition.
<u>Stallo</u>	<u>Bay</u>	Group of power plants and accessory plants serving a power line or a transformer which connect the line or transformer to the bus-bar system of a power station.
<u>Standard di sicurezza</u>	<u>Standard security</u>	The electricity system is in standard security conditions if it respects the criteria of N-1 Security and has sufficient reserve margins to guarantee the adequacy of the electricity system.

<u>Stazione di consegna</u>	<u>Delivery station</u>	Electrical substation which connects the user's plant to the grid. It generally constitutes part of the grid connection plant in which the delivery point is identified.
<u>Stazione di smistamento</u>	<u>Switching station</u>	Part of a grid composed of the group of apparatus used for switching electrical energy among the lines of a grid at the same level of voltage.
<u>Stazione di trasformazione</u>	<u>Transforming station</u>	Part of a grid composed of a group of apparatus used for transferring electrical energy between grids with different levels of voltage.
<u>Stazione elettrica</u>	<u>Power station</u>	The part of a grid which is concentrated and closed in a specified site, and used for switching electrical energy among the lines of a grid, for transferring the electrical energy between grids with different levels of voltage, and for transforming the electrical energy to the lowest voltage usable by the User.
<u>Telelettura (o lettura remota)</u>	<u>Remote reading</u>	Collection of measurement data acquired from a measuring device, through the use of the device itself and a telecommunications device for interfacing with the central acquisition system, with the interposition of telecommunications systems.
<u>Tempo di avviamento</u>	<u>Start-up time</u>	Time taken to reach minimum power of the production unit for the set-up in question, starting from the moment the production unit receives start-up communication (minus reply time), supposing that all groups of the production unit are originally out of service.
<u>Tempo di avviamento collegato</u>	<u>Connected start-up time</u>	Time required, exclusively in the case of connected operation, to reach minimum power of a connected PU, starting from the moment the PU receives start-up communication (minus reply time), supposing that all groups of the production unit are originally out of service.

<u>Tensione nominale del sistema (tensione nominale)</u>	<u>Nominal voltage of the system (nominal voltage)</u>	Value of the voltage used to designate or identify the system.
<u>Terminale Portatile di Lettura</u>	<u>Portable Meter Reader</u>	A device able to acquire measurement data if used directly with a measuring device, without the interposition of telecommunications systems.
<u>TIC - Testo Integrato delle condizioni economiche per l'erogazione del servizio di connessione</u>	<u>TIC - Integrated Text on economic conditions for connection service provision</u>	Appendix C to Resolution 654/2015/R/eel of the Authority, as subsequently amended and added to.
<u>TICA – Testo Integrato delle Connessioni Attive</u>	<u>Integrated text for active connections</u>	Annex A to Resolution ARG/elt 99/08 of the Authority as subsequently amended and added to.
<u>TIS- Testo integrato per la regolazione delle partite fisiche ed economiche del servizio di dispacciamento</u>	<u>TIS- Integrated Text for regulation of the physical and economic items of the dispatching service</u>	Appendix A to Resolution ARG/elt 107/09 of the Authority as subsequently amended and added to.
<u>TISSPC - Testo Integrato per la regolazione dei Sistemi Semplici di Produzione e Consumo</u>	<u>TISSPC -Integrated Text for regulation of the Simple Production and Consumption Systems</u>	Appendix A to Resolution 578/2013/R/eel of the Authority, as subsequently amended and added to.
<u>Titolare dell'iniziativa</u>	<u>Application holder</u>	The subject who is the holder of an application for access to infrastructures of the grid with third-party connection obligations.
<u>Titolare di porzione di RTN o Titolare di RTN (Titolare)</u>	<u>Holder of a portion of the NTG or NTG Holder (Holder)</u>	The subject who holds a portion of the NTG, being its regular owner.
<u>Trasformatore di corrente (TA)</u>	<u>Current transformer (CT)</u>	A measurement transformer in which the secondary current is substantially proportional to the primary current under normal usage conditions, and which in phase differs from the primary current by an angle close to zero in the appropriate direction of connection.

<u>Trasformatore di misura</u>	<u>Measurement transformer</u>	A transformer designed to feed measurement instruments, relays and other similar devices.
<u>Trasformatore di tensione (TV)</u>	<u>Voltage transformer (VT)</u>	A measurement transformer in which the secondary voltage is substantially proportional to the primary voltage under normal usage conditions, and which in phase differs from the primary voltage by an angle close to zero in the appropriate direction of connection.
<u>UCTE</u>	<u>UCTE</u>	Acronym for the Union pour la Coordination du Transport de l'Électricité (Union for Coordination and Transport of Electricity), merged into ENTSO-E.
<u>Unità abilitata</u>	<u>Enabled unit</u>	A production unit (EPU) which meets the requirements set forth in the dispatching rules for participation in the market for dispatching services, for at least one of the services negotiated therein.
<u>Unità collegante</u>	<u>Connecting unit</u>	A production unit belonging to a group of connected-operation PUs, the presence of which allows quicker start-up of one or more PUs belonging to the same group.
<u>Unità collegata</u>	<u>Connected unit</u>	A production unit belonging to a group of connected-operation PUs that is capable of quicker start-up due to the presence of another connecting unit belonging to the same group.
<u>Unità non abilitata</u>	<u>Non-enabled unit</u>	A production or consumption unit which does not meet the requirements established in the dispatching rules for participation in the dispatching services market.
<u>Unità di consumo (UC)</u>	<u>Consumption unit (CU)</u>	A group of electrical plants for the consumption of electricity connected to grids with third-party connection obligations, also through other electricity grids, such that withdrawals of electricity regarding the group can be measured autonomously.

<u>Unità di produzione (UP)</u>	<u>Production unit (PU)</u>	One or more generators available to a User of Dispatching, regrouped according to the methods defined in Chapter 4 of this Grid code and approved by the Operator, and such that the injections or withdrawals of electrical energy regarding such group can be measured autonomously.
<u>Unità di produzione alimentata da fonti rinnovabili non programmabili</u>	<u>Production unit fed by unplannable renewable sources</u>	A production unit which uses solar energy, wind, wave motion, tidal power, geothermic or hydraulic energy, limited in the latter case to plants with flowing water.
<u>Unità di produzione alimentata da fonti rinnovabili programmabili</u>	<u>Production unit fed by plannable renewable sources</u>	A production unit which uses energy deriving from the transformation of organic and inorganic waste or vegetable products, as well as hydraulic energy, excluding, in the latter case, plants with flowing water.
<u>Unità di produzione CIP6/92 (o UP CIP6/92)</u>	<u>Production Unit CIP6/92 (or PU CIP6/92)</u>	A production unit which transfers electrical energy to Gestore dei Servizi Energetici - GSE S.p.A. pursuant to Article 3, paragraph 12, of Legislative Decree no. 79/99.
<u>Unità essenziale (per la sicurezza del sistema elettrico)</u>	<u>Essential unit (for the security of the electricity system) or Must-run</u>	A production unit belonging to a power plant or group of power plants which are essential for the functioning of the electricity system, in compliance with the provision of Authority Resolution no. 111/06.
<u>UP In funzionamento collegato</u>	<u>Connected-operation PU</u>	One or more enabled thermoelectric units, of a type other than open-cycle gas turbines, belonging to the same production plant available to a User of Dispatching and individually managed, grouped according to the methods defined in Chapter 4 of this Grid Code and approved by the Operator, and such that start-up of a single PU belonging to the same group allows heating during the start-up phase of the other PUs belonging to the same group.

Utente o Utente della rete

User or Grid User

These are owners of:

- (a) production units connected to the national transmission grid directly, or indirectly through grids with third-party connection obligations different to the national transmission grid, or connected to electricity grids as set forth in letter f);
- (b) consumption units connected to the national transmission grid directly or indirectly through grids with third-party connection obligations different to the national transmission grid, or connected to electricity grids as set forth in letter f);
- (c) grids with third-party connection obligations different to the national transmission grid connected to the same directly or indirectly through grids with third-party connection obligations different to the national transmission grid, excluding electricity grids with third-party connection obligations managed by grid operators other than the Grid Operator and other than the distribution companies;
- (d) internal utilities grids connected to the national transmission grid directly or indirectly through grids with third-party connection obligations different to the national transmission grid, or connected to grids as set forth in letter f);
- (e) direct lines connected to the national transmission grid directly or indirectly through grids with third-party connection obligations different to the national transmission grid, or connected to grids as set forth in letter f);
- (f) grids with third-party connection obligations which are not interconnected to the national transmission grid either indirectly through distribution grids or through connections in direct current;
- (g) Merchant lines.

<u>Utente della connessione</u>	<u>Connection User</u>	The grid user whose power plants are directly connected to the national transmission grid or who applies for connection to said grid.
<u>Utenti del Dispacciamento (UdD)</u>	<u>User of Dispatching (UoD)</u>	The grid user involved in the dispatching activity as indicated in Chapter 4, paragraph 4.3.1.1 of this Grid code.
<u>Utenza</u>	<u>Utilities</u>	Any electrical plant directly connected to the national transmission grid.
<u>Valutazione dell'indisponibilità</u>	<u>Assessment of unavailability</u>	Activities performed by the Operator to verify compatibility with the safe management of the national electricity system of each request of unavailability of a grid element or power generation plant.
<u>Verso convenzionale dell'energia</u>	<u>Conventional direction of the energy</u>	This is assumed as the positive direction (or entry) of the energy entering the NTG.
<u>Vincolo di rete</u>	<u>Grid restrictions</u>	Any limitation to the operations of the national electricity system due to the technical characteristics of grid elements.
<u>Zona</u>	<u>Zone</u>	A portion in which the Operator divides the grid in order to assign transmission rights for the energy market. Zones are divided into geographic zones, foreign virtual zones, and national virtual zones.
<u>Zona di regolazione</u>	<u>Regulation zone</u>	A portion of the ENTSO-E Interconnected System "Continental Europe" (ex UCTE), generally coinciding with the territory of a country or of a geographical area, physically delimited by the location of measurement points for the exchange of energy and power with the remaining part of the interconnected grid.
<u>Zona geografica</u>	<u>Geographic zone</u>	A zone which is not virtual.
<u>Zona virtuale estera</u>	<u>Foreign virtual zone</u>	The group of interconnection lines of the NTG with each country whose grids are directly connected to the national grid.

Zona virtuale nazionale

National virtual zone

Limited production hub.