

Glossary

231 Organizational Model

231 Organizational Model takes is named after Legislative Decree no. 231, 2001. This decree imposes a Company liability in case of specific crimes committed by managers, employees or partners in the interest or advantage of the company itself (e.g. public managers' bribery, company frauds, crimes against private person, market abuse). The model is a set of guidelines, procedures, training commitment and control mechanisms that aim at preventing the risk of committing such crimes. 231 Organizational Model thus represents an integrated system to avoid specific risks; when defined according to law provisions, this system ("231 Organizational Model") can also avoid sanctions to the company - or reduce their extent - in case the crimes are actually committed.

Accident frequency index

This is calculated using the following formula: $N/H * 1,000,000$, where N is the number of accidents with at least one day's absence from work during the year, and H is the number of hours worked during the same period.

Accident seriousness index

This is calculated using the following formula: $G/H * 1,000$, where G is the number of effective days of unavailability during the year, and H is the number of hours worked during the same period.

AIT (Average Interruption Time)

Average duration of interruption of supply to the electrical system during the year.

ASA (Average System Availability)

Average real availability of all elements of the National Transmission Grid during the period.

Availability of a grid element

The condition in which a grid element may be used for transmission activities under the conditions provided under operational consistency as set forth in Attachment 1 of the Operator/Owner Standard Agreement.

Average number of outages per grid user (N)

The average number of outages per grid user directly connected to the NTG is defined by the following formula:

$$\frac{\sum_{i=1}^n U_i}{U_{tot}}$$

Where the sum includes all outages that occurred in the period and/or calendar year and area, and where:

- U_i is the number of users involved in the i th considered outage;
- U_{tot} is the total number of users directly connected to the NTG during the calendar year.

Balancing Services Market (BSM)

The market provided and regulated within the Dispatching Service Market (DSM) for the procurement of the resources necessary for balancing.

Bay

Group of power plants and accessory plants serving a power line or a transformer which connect the Grid elements to the bar system of a power station.

Bersani Decree

Legislative Decree no. 79 of March 16, 1999, which was issued to implement EC Directive no. 96/92/EC, regarding shared standards for the domestic electricity market and the liberalisation thereof.

Bilateral contract

An energy supply contract between two market operators.

Code of Ethics

It is often called a “business charter”, as it represents the foundation of the company’s culture and explicitly sets forth the rights and duties and areas of responsibility that the business undertakes to respect in dealing with its stakeholders. It is an official document, signed by the BoD, which requires the compliance of all personnel.

Congestion Resolution Market (CRM)

The market provided and regulated within the Dispatching Service Market (DSM) for the procurement of the resources necessary for resolving congestion.

Connection

The group of grid elements forming the transmission line, and the bays at the borders of the same, including the related circuitry isolating apparatus. Connections are classified by voltage level with reference to rated voltage. The length of the connection is generally the length of the line which forms the connection itself.

Connection line

Any power line that links the power distribution plant with the user’s plant, or the power distribution plant with the connection station.

Connection station

Power station which is part of the NTG, whose supply plant is connected to one or more power lines.

Control area

Electricity system able to regulate its own production by maintaining exchanges of power with other interconnected systems at planned levels, and to contribute to the regulation of the interconnection frequency.

Control Center

A group of plants used for the control and operation of the NTG or a User’s electricity system (different from a Production System).

Control System

A group of calculation systems, data transmission lines and apparatus which enables the secure and economic control of the entire electricity system.

Controlled electricity system

The group including the National Transmission Grid and directly connected users’ plants, including the associated devices for ancillary services

Corporate Governance

The form of governance of the company, meaning the system of relations between managers, directors, shareholders and other stakeholders of the company.

Corporate Social Responsibility (CSR)

It is the responsibility of the companies for their impact on the society. Compliance with the applicable legislation and the collective contracts by the social parties represents an essential requirement in order to meet this responsibility.

To fully meet their social responsibility, enterprises should have in place a process to integrate social, environmental, ethical questions, human rights and consumer concerns into their business operations and core strategy in close collaboration with the relative contacts, with the objective of doing everything possible to create a shared value between their owners/ shareholders and their other stakeholders and the company in general and to identify, prevent and mitigate their possible adverse effects.

(European Commission Communication 681/2011 “Renewed strategy of the EU for 2011-2014 regarding social responsibility of businesses”).

Customers

Businesses or distribution companies, wholesalers and the final buyers of electrical energy.

Data privacy

Data are considered confidential if, when transferred from one telecommunications and/or processing system, the data content is not to be read by unauthorised persons. This is a data and information treatment condition of direct commercial importance.

Day Ahead Energy Market (DAEM)

The trading of bids for the purchase and supply of electrical energy for each hour of the next operating day following that of trading. This market deals with the energy units which define the production and withdrawal plan for the following day (preliminary cumulative programmes).

Defence plans

The control activities - automatic and/or manual - set forth by Terna and carried out through single systems and/or plants designed to maintain or to 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.

Development

Works on the electricity grid which lead to 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.

Direct connection to the NTG

Connection of all plants with existing circuit continuity at least in one point, without the interposition of ancillary power plants, to the NTG.

Dispatching

The activity aimed at issuing provisions for the coordinated use and operation of production plants, the National Transmission Grid, the grids connected to the same, and ancillary services of the electricity system.

Dispatching Service Market (DSM)

The market for the negotiation of the procurement of several resources required for the dispatching service. In general, it is required to be composed of several markets: Congestion Resolution Market (CRM), Reserves Market (RM), Balancing Services Market (BM).

Distribution

The transport and transformation of electrical energy on high-, medium- and low-voltage distribution grids for supply to the final customers.

Dividend Yield

Calculated as the ratio of the last dividend distributed by a company and the current price of its shares. It indicates the immediate profitability of a share.

DPS (Dividend per Share)

Dividend per Share: calculated as the total amount of dividends distributed by a company divided by its total number of ordinary shares.

EBIT (Earnings Before Interest and Taxes)

One of the key profitability indicators for typical company management. It measures company profits before taxes, financial income/charges and extraordinary components; it is also called operating profit or operating income.

EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortisation)

Profit before taxes, financial income/charges, write-downs, amortisation and extraordinary components. It is similar to the term GOP (Gross Operating Profit), which measures operating profits gross of amortisation and allocations to provisions.

EBT (Earnings Before Taxes)

A company's profits (losses) before tax.

Electricity Grid

A group of plants, lines and stations for transferring electrical energy and supplying the necessary ancillary services.

Electricity Exchange

The system of wholesale selling of electricity, which determines which power generation systems or plants will be used to meet the demand at any moment and the price of energy at that specific moment.

Electricity markets

Intended as the combination of the Energy Market and the Dispatching Service Market (DSM).

Electrocution

Phenomenon known as an electric “shock”, caused by contact between a body and electrical current. This can have damaging and/or lethal effects on an organism depending on the intensity of the current and the duration of exposure.

Eligible customer

The natural person or legal entity who is free to stipulate supply contracts with any producer, distributor or wholesaler, both in Italy and abroad. Starting from May 1, 2003, eligible customers are defined as those consuming more than 100,000 kWh per year.

Emergency condition of an electricity system

Operational situation of an electrical grid which results in exceeding operating limits of grid elements and/or outages of load portions, due to faults or disturbances.

Emergency measures

Group of operations executed following anomalies or faults on plants, to ensure the recovery of efficiency of such plants as quickly as possible and/or enable, in emergency conditions, the local running of the plants.

Emergency Plan

Group of automatic and manual procedures implemented during critical operating periods, in order to avoid or limit outages of the electricity system itself or part of it.

Emergency Plan for the Security of the Electricity System (EPSES)

In case of critical events, EPSES sets forth the methods for selectively suspending the supply of electricity to domestic and industrial users, with different levels of severity.

Energy market

Intended as the combination of the Day Ahead Energy Market (DAEM) and the Real Time Energy Market (RTEM).

Energy Not Supplied (ENS)

Energy Not Supplied due to outages, defined by the following formula:

$$\sum_{i=1}^n \sum_{j=1}^m (P_{i,j} * T_{i,j})$$

where the sum includes all outages that occurred in the period and/or calendar year and area and, for each of these, all direct and indirect users affected by the same outage, where:

- n is the number of outages in the period under observation;
- m is the number of users affected by the ith outage;
- $T_{i,j}$ is the duration (in hours) of the outage and interrupted power (MW) for the jth user affected during the ith outage;
- $P_{i,j}$ is the average constant value of the 15 minutes preceding the outage if the duration of the interruption is less than or equal to 15 minutes; if the length exceeds 15 minutes, this is estimated based on the forecast and/or historic capacity power diagram.

EPS (Earnings Per Share)

Calculated as the ratio of net profit to the number of a company’s outstanding ordinary shares.

Equity

Term used to indicate the shareholders’ equity of a company; in the context of asset management, it is used to refer to the stock segment.

Ethical Auditing

Consists in verifying the application of and compliance with the Code of Ethics. The company management assigned this task must ascertain and promote continuous improvement in ethics with the company through analysis and evaluation of the ethical risk control processes.

Extra high voltage (EHV)

Rated voltage with a value higher than 220 kV.

Extraordinary maintenance

Performed for the recovery and extension of the useful life of a plant, without modifying the functional consistency or technical characteristics, as specified in Attachments 1, 2a and 2b of the Operator-Owner Standard Agreement.

Fault

The yielding of an electric component or a condition of danger to persons or things, which results in a grid element being immediately taken offline. The fault can be:

- transient, when it is eliminated through the automatic sequences of immediate opening and reclosure of the circuit breakers;
- permanent, in all other cases.

Final customer

The natural person or legal entity who purchases electrical energy exclusively for their own use.

Free market

Market where producers and wholesalers of electrical energy, both Italian and foreign, compete freely to provide electrical energy to eligible customers.

Frequency

The number of oscillations per second, in which the value of the alternating current, such as voltage, varies from positive polarity to negative polarity. It is measured in Hertz (Hz).

Fringe Benefit

Compensation in kind, meaning benefits which do not consist in the payment of money, but the use of a service or an object; such as the company canteen, lunch vouchers, company car or mobile telephone.

FTSE4Good

Financial Times index which groups the best companies meeting specific sustainability requirements. These companies are identified by the EIRIS, through specific questionnaires.

Gestore Mercato Elettrico (Energy Market Operator - GME)

Joint stock company created in 2000 by GRTN, which is in charge of the economic management of the electricity market in compliance with criteria of transparency and objectivity, in order to promote competition between producers, ensuring the availability of a suitable level of power reserves.

Gigawatt (GW)

Unit of measurement equal to one billion Watts (1,000 Megawatts).

GRI (Global Reporting Initiative)

An independent international association responsible for developing and distributing the Sustainability Reporting Framework, in order to support companies which voluntarily decide to publish data regarding their economic, social and environmental performance.

Grid Code (Code for transmission, dispatching, development and security of the grid)

The document that governs the procedures regarding the activities of connection, management, planning, development and maintenance of the National Transmission Grid, as well as dispatching and measurement of electricity. More specifically, the Grid Code sets forth transparent, non-discriminatory regulations for:

- access to the Grid and its technical regulation;
- development, management, and maintenance of the Grid;
- the performance of dispatching services;
- the supply of services of measurement and the aggregation of measurements;
- the settlement of financial charges connected to the various services;
- security of the national electricity system.

Grid diagram

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.

Grid management

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.

Grid operator

The natural person or legal entity who manages a power grid, also without owning said grid.

Grid user

The natural person or legal entity who supplies or is supplied by a transmission or distribution grid.

High voltage (HV)

Rated voltage greater than 35 kV and lower than or equal to 220 kV.

Indirect connection to the NTG

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 ancillary power plant, to the NTG.

Interconnection line

High-voltage power line in alternating current (AC) or direct current (DC) which links two different electrical transmission or distribution grids or even two generation plants.

Interconnection of electricity grids

Connection between electricity grids required for the transfer of electricity.

Internal Dealing

Governs transparency obligations in relation to the market, for operations in financial instruments of a company or its subsidiaries, performed by persons having significant company decision-making powers, and access to price-sensitive information.

Interruption

Condition in which the voltage of the terminals delivering electrical energy for a user is lower than 1% of the rated voltage.

Interruption with notice

Interruption generally due to the execution of planned intervention and manoeuvres on the grid, preceded by notice to users involved of the duration of the interruption, using suitable means and with advance notice of no less than one day.

Interruption without notice

All cases of interruption where users are not notified in advance through suitable means and with advance notice of no less than one day. An interruption without notice may be classified as:

- long-term interruption, if it has a duration of more than three minutes;
- short-term interruption, if it has a duration of more than one second but no more than three minutes;
- transient interruption if it has a duration of no more than one second.

IPO (Initial Public Offering)

Indicates an initial offer of shares of a company being listed. It is a synonym of “Public Offer for Sale”, “Public subscription of shares” and “New listing”.

Italian Authority for Electricity and Gas (AEEG)

Independent authority created by Law no. 481 of November 14, 1995, which is charged with regulating and controlling the electrical energy and gas sectors.

Kilowatthour (kWh)

Unit of measurement that expresses the quantity of electricity equal to 1,000 Watts provided or requested in one hour.

kV

(kilovolt=1,000 Volts) unit of measurement of voltage.

kW

(kilowatt) unit of measurement of power (1 kW=1,000 J/sec), which expresses the amount of energy per unit of time.

kWh

(kilowatthour) and its multiples MWh (Megawatthour, 1,000 kWhs), GWh (Gigawatthour, 1,000,000 kWhs) and TWh (Terawatthour, 1,000,000,000 kWhs) measure electrical energy. They are equal to a power of 1 kW (and multiples) over one hour.

Load curve

Diagram which shows the power demand on an electricity grid over time.

Maintenance

Operations and works for the maintenance or recovery of efficiency, and smooth operation of the electricity plants, taking into account any decrease in performance.

Medium voltage

Rated voltage greater than 1 kV and lower than or equal to 35 kV.

Megawatt (MW)

Unit of measurement equal to one million watts (1,000 kilowatts).

Monitoring

All the actions through which the current operational status of an electricity system is ascertained.

National electricity system

The national electricity system comprises the total of production plants, transmission and distribution grids, auxiliary services and interconnection and dispatching devices located in the Italian territory.

National Transmission Grid (NTG)

Electricity grid for national transmission as set forth by the Minister of Industry Decree dated June 25, 1999 and subsequent amendments and additions.

Normal alarm condition of an electricity system

Situation in which the total load demand is satisfied, in stable regime there are no violations of operating limits of system components, but the required security criteria are not met.

Normal condition of an electricity system

Situation in which the total load demand is satisfied, in stable regime there are no violations of operating limits of system components, and the required security criteria are met (criterion n-1).

Operation

The methodical use of power plants and accessories according to procedures codified in the implementation of the decisions regarding the operation of the Grid. Operation includes:

- the running of the plants in order to carry out Terna's orders and autonomous deliveries;
- emergency assistance following fault or anomalies;
- operations for going offline and for the security of the plants;
- the monitoring of the status of the plants;
- plant inspections.

Operations planning

Preparation of plans and schedules for the operation of the electricity system.

Outage

Interruption.

Partial availability of a grid element

State in which a grid element may be temporarily used under conditions different to those provided under operational consistency as set forth in Attachment 1 of the Operator/Owner Standard Agreement.

Permanent disturbance

Disturbance in which, following the automatic opening of the circuit breakers as a result of operation of the protection systems, irrespective of execution of the automatic rapid reclosure or slow reclosure (automatic or manual) of the circuit breakers, repair works are required on grid elements or plant components.

Planned maintenance

Maintenance, not of an urgent nature, which lasts more than or equal to 5 total days, scheduled in the annual unavailability plan, or subsequently agreed.

Planning

Definition of the usage plans, for a specific period of time, for the available means of production and transmission, in order to satisfy the energy requirements with respect to quality and continuity of service.

Power recovery

The activities coordinated by Terna in order to restore an electricity system after a black-out.

Power restart plan

Group of automatic and manual procedures which enable reinstatement of the electricity system to normal operational conditions, following the going offline of the electricity system itself or part of it.

Power station

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.

Power supply quality

Continuity and regularity over time of the voltage and frequency values of the electrical energy supplied.

Production

Generation of electrical energy, in any way.

PPE (Personal Protective Equipment)

Any equipment designed to be worn or held by the worker, for the purpose of protecting him/her against one or more risks likely to threaten his/her safety or health in the workplace, as well as any complement or accessory designed for such purpose. IPDs must comply with Directive EEC 686/89 and subsequent modifications, with the EN 345 regulations, as well as Legislative Decree no. 475 of December 4, 1992.

Rated voltage of the system

Value of the voltage used to designate or identify the system.

Rating

Letter symbol which expresses the level of risk of securities representing a specific debt. This is one of the most significant § tools for forecasting and controlling the risk of insolvency in modern securities markets. Ratings are published by .1 specialized rating agencies. The most well-known, on the global level, are Moody's and Standard & Poor's. Ratings are w announced at the time of issuing the security, but may be subsequently modified (uprating or downrating), thus positively or negatively influencing the image of the company and a significant part of trading. The highest rating is indicated by the symbol "AAA", "AA+", reaching down the worst rating, indicated by "D".

Real Time Energy Market (RTM)

The site of trading of bids for the purchase and supply of electrical energy in order to adjust the programmes of energy input and withdrawal defined on the Day Ahead Energy Market (DAEM).

Reinstatement condition of an electricity system

Situation in which, following total or partial load disconnection, the actions required to return the system to normal conditions are carried out.

Reliability

The fulfilment of two conditions:

- availability: capability to respond, statically and in every moment, to the customers' global demand for power and electrical energy at the connection points, taking into account planned and forced going offline of the components of the electricity system;
- security: capability to respond to sudden disturbances such as short-circuits or forced loss of components of the electricity system. Thus, this aspect specifically considers transition effects which are not covered by the first criterion.

Remote control and telemetry system

Group of remote data transmission devices which allows for the management of plants and the control and measurement of the supply to the client.

Remote control equipment (with reference to the registration of the interruptions in the distribution of electrical energy)

The system used to remotely manage and supervise the high- and medium-voltage distribution grid. This system also registers, automatically and continuously, the events of opening and closure of circuit breakers and other command devices (caused both by remote commands and interventions of protection or by automatic equipment), and events of black-out in the interconnection points with the National Transmission Grid or with other operators.

Requirement

Demand for electricity to be satisfied by the national electricity system. It shows a variable trend throughout days, months and years.

Reserves Market (RM)

The market provided and regulated within the Dispatching Service Market (DSM) for the procurement of the secondary and tertiary reserves.

ROACE (Returns on Average Capital Employed)

Index of return on invested capital; it is calculated as the ratio of the EBIT and net average capital employed by a company.

Routine maintenance

Activity carried out on plants or parts of plants for maintenance or recovery of efficiency and correct functioning, in relation to a fall in performance, without any modification of the number or function of the plants involved. Routine maintenance is defined as:

- periodic or cyclical if the activity regards regularly scheduled interventions independent of external causes;
- conditional or predictive if the activity follows the verification or monitoring of plant functionality;
- occasional if the activity follows upon the existence of anomalies.

Occasional routine maintenance is divided into:

- deferrable maintenance, if the execution of the activity may be delayed by at least one week from the moment that Terna's notified of the anomaly;
- non-deferrable if the execution of the activity, based on the owner's evaluation must be performed immediately and no more than one week from the notification of the anomaly to Terna, in order to avoid danger to persons or things, or the existence of a fault;
- on the fault, if the activity follows upon the existence of anomalies.

Secondary power reserve

Share of power in the generation pool which must cover the imbalance between production and load, due to random variations in requirements, errors in the forecast of requirements, unexpected unavailability of generation (for example, due to breakdowns) and unexpected variations in the programmes of exchange with foreign countries. Generally, based on the operational status of the groups which can make the reserve available, it can be classified into two categories: rotating reserves and cold reserves.

Service quality of electricity supply

Quality of the technical/commercial services provided to users, and the quality of the electric parameters of the energy supplied.

Single Buyer

A stock company established in 2000 by the National Transmission Grid Operator (GRTN) to guarantee Captive Customers the supply of electrical energy under conditions of continuity, security and efficiency of the service. The Single Buyer guarantees the application of a single national tariff to these customers.

SRI (Socially Responsible Investment)

Investments which take into account not only economic performance, but also social, environmental and ethical criteria. The choice of shares is guided by negative criteria (exclusion) or positive criteria (inclusion): the first type excludes specific types of companies (e.g. tobacco producers, arms manufacturers etc.) or countries which do not respect human rights or workers' rights, while the second type socially responsible companies are chosen for investment (i.e. those with CSR policies).

Stakeholder

Everyone (individuals, groups, organizations, institutions) interested in the company, especially if directly affected by company's activities in economic terms - such as shareholders, employees, customers and suppliers - but also when only indirectly affected, such as the general public bearing an interest in the protection of the environment.

Static power meter

Energy meter in which the current and voltage, when applied to an electronic measurement element, produce frequency pulses in proportion to the power.

Supervisory Control and Data Acquisition System (SCADA)

Computerized system for controlling production and transmission, with data acquisition functions and man-machine interface, for presenting data to operators in the control centers.

Telecommunications system

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.

Transformer

Electrical device used for the connection and transfer of energy between grids at different voltage levels.

Transforming station

Part of a grid composed of a group of apparatus used for transferring electrical energy between grids with different levels of voltage.

Transmission

Electricity transport and transformation activities along the interconnected high- and extra-high-voltage grid for the purposes of delivery to customers, distributors, and recipients of self-produced energy.

Transmission activities

The activity of transferring and transforming electricity on the grid. Transmission activities include:

- the unified management of the Grid and the parts of power stations not included in said grid, but connected and functional to transmission activities pursuant to art. 3, paragraph 5, of the Decree of the Minister of Industry, Commerce and Crafts dated June 25, 1999;
- the planning and identification of development activities;
- annual authorization of maintenance works.

Transmission line

High- and extra-high-voltage power line, overhead or cable, used for the transfer of electricity from the production plants to the distribution grids or to users.

Transmission plants

Infrastructures dedicated to the transmission of electricity, belonging to the NTG, such as lines and switching stations and transforming stations.

Triad

Group of three conductors (or groups of conductors), each prepared for the transfer of one of the phases of the three 5 phase electric field used on the grid in alternating current.

TSR (Total Shareholder Return)

This is the most complete measurement of value created by a company for its shareholders. It is calculated using the following formula: $(\text{Share price at end of period} - \text{Share price at beginning of period} + \text{Dividends}) / \text{Share price at beginning of period}$. The calculation of TSR provides the annual rate of return for an investor who purchased a security on a certain date and sold it on another date. This calculation considers all paid dividends reinvested in the security at the coupon payment date.

Unavailability of a grid element

Situation in which an element of the Grid cannot be used by the operator for transmission activities. Unavailability may be:

- planned, if it is included in the annual unavailability plan or in the quarterly unavailability plan, and has a duration of less than five days;
- occasional, if not included in the annual plan, but included in the quarterly unavailability plan and has a duration greater than or equal to five days; or it is not included in the quarterly plan but in the monthly plan.

Occasional unavailability may be:

- deferrable, if it involves occasional maintenance which can be deferred;
- non-deferrable, if it involves occasional maintenance which cannot be deferred;
- due to fault, if the result of the existence of a fault;
- due to external causes, if the result of the needs of third parties or events which cannot be attributed to the owner, such as: works or tests requested by operators/owners of bordering grids or other operators, natural disaster, or requirements of public authorities.

Unified Grid management

Coordinated management of all portions of the NTG.

Volt

Unit of measurement of voltage.

Watt

Unit of measurement of electric power.

Wholesale customer

The natural or legal person which purchases electrical energy without carrying out production, transmission, or distribution activities in the countries of the European Union.