電力工業	Electricity Industry
2.1 發電廠	2.1 Electricity Generating Plant
2.1.1 化石燃料發電廠 將含有化學能量之固體，液體與氣體等化石燃料轉化為電能之電廠。	2.1.1 Fossil-fuel(l)ed power station A power station in which the chemical energy contained in solid, liquid and gaseous fuels of fossil origin is converted into electrical energy.
2.1.2 核能電廠 將核燃料轉化為電能之電廠（見 4.11）	2.1.2 Nuclear power station A power station in which the energy released by nuclear fuels is converted into electrical energy. See also 4.1.1.
2.1.3 水力電廠 將水之重力能變為電能之電廠。	2.1.3 Hydro-electric power station A plant designed to convert the gravitational energy of waters into electrical energy.
2.1.4 基載電廠 以供應基本負載為主的電廠。	2.1.4 Base-load power station A power station serving mainly to meet the base load.
2.1.5 尖載電廠 以供應尖峰負載為主的電廠。	2.1.5 Peak-load power station A power station serving mainly to meet the peak load.
2.1.6 貫流式冷却 冷却系統用水取自一可用水源，例如河、海、湖、運河等，水通過電廠冷凝器吸熱後流回原水源。	2.1.6 Once through water-cooling A cooling system in which water is drawn from an available source, e.g. river, sea, lake, canal, passed once through the power station condensers and returned in its heated condition directly to the source.
2.1.7 濕式冷却塔冷却 冷却系統中，水通過電廠冷凝器後，所吸取之熱，在塔內（主要）蒸發作用散至大氣中，水再循環使用。	2.1.7 Cooling with wet cooling towers A cooling system in which water passing through the power station condensers takes up heat, releases this heat subsequently to atmosphere in a wet cooling tower mainly by evaporation and is then recycled.
2.1.8 乾式冷却塔冷却 冷却系統中，從電廠冷凝器吸取之熱，在塔中靠對流作用將熱散至大氣中。	2.1.8 Cooling with dry cooling towers A cooling system in which heat from the condensers of a power station is dissipated to the atmosphere in a cooling tower solely by convection.

2.1.9 廠用電 電廠及其附屬設備用電，含不發電期間之用電及發電機變壓器內之變電損失。	2.1.9 Power station internal consumption; station service consumption The electricity consumed by a power station or power station set in its auxiliary plant, including electricity consumed when out of service, together with the losses in its generator transformers.
2.1.10 耗熱率 在已知期間內，燃料所含之能量與其產生之電能之比。電能可為發電量（總數）或供電量（淨值）。耗熱率之倒數以百分比表示為電廠的熱效率。耗熱率需註明單位。計算熱效率時，燃料所含之能量與其產生之電能應以同一單位表示之。	2.1.10 Heat rate The ratio of the energy content of the fuel used to the electrical energy produced over a given period; it can be referred to the electricity generated (gross) or the electricity supplied (net). The reciprocal of the heat rate expressed as a percentage is the thermal efficiency of the power station. In the case of the “heat rate” the units should be stated; in the case of the “thermal efficiency” the energy content of the fuel and the electrical energy produced must be expressed in the same unit.
2.2 電力輸配	2.2 Electricity Transmission and Distribution
2.2.1 電力設施 構成發電、換流、變電、輸電、配電、電能貯存或利用電能之總體設施，包括土木結構物、建築物、機器、儀表、線路及相關之設備等。	2.2.1 Electrical installation Civil engineering works, buildings, machines, apparatus, lines and associated equipment together forming an integrated unit for the generation, conversion, transformation, transmission, distribution, storage or utili-sation of electrical energy.
2.2.2 電線；線路；電力線 用於輸送、分配電能，附有絕緣及配件之導體組件的總稱。	2.2.2 Electric line A generic term for a set of conductors, with insulation and accessories, used for the transmission or distribution of electrical energy.

2.2.3 架空線路／電纜 位於地面上通常為以絕緣碍子或適當之支持物支撐之電線，包括與此種電線有關之機件及配件。	2.2.3 Overhead line/cable An electric line situated above ground usually with the conductors supported on insulators and appropriate supports. The term would include works and fittings associated with the line.
2.2.4 地下（海底）電線電纜 位於地下或海底之電線，包括與此種電線有關之機件及配件。	2.2.4 Underground/submarine line/cable An electric line situated in the ground/under water. The term would include works and fittings associated with the line.
2.2.5 單回線 僅有一回線之電線路。	2.2.5 Single circuit line A line having only one circuit.
2.2.6 多回線 含有數回線之電路。	2.2.6 Multiple circuit line A line comprising several circuits.
2.2.7 電路 藉著物體或中間介質之安排可供電流流通之通路。	2.2.7 Electric circuit An arrangement of bodies or media through which a current can flow.
2.2.8 回線長度 一回線之導線實際長度之平均值（計及線路施設高度變化及電線下垂之因素）。	2.2.8 Circuit length The average of the actual lengths of the lines of a circuit (taking account of variations in elevation and catenary dip).
2.2.9（輸、配電）路徑／路權 架空電線或地下電線通過所需之土地。	2.2.9 (Transmission or distribution) route/right of way The terrain required for running an overhead line or an underground line.
2.2.10（輸、配電）線路長度 沿路徑軸測量而得之架空線或地下線兩端之水平距離。	2.2.10 (Transmission or distribution) route length The distance between the end points of an overhead line or underground line, horizontally projected and measured along the route axis.
2.2.11 開關場 藉開關設備有選擇性地將系統／網路之線路及用戶設備加以連接或解聯之電力設施。	2.2.11 Switching station An electrical installation for the selective connection and disconnection of the lines of a system/network and of consumer installations by means of switchgear.

2.2.12 變電所 備有變壓器及開關場以便轉換運轉電壓並連接各級系統。	2.2.12 Transforming station A substation which includes transformers for transferring electricity between systems operating at different voltage levels.
2.2.13 配電所；高壓、低壓變電所 在高、低電壓系統（網路）間之變電所。	2.2.13 Distribution substation; HV/LV transforming station A transforming station between high and low voltage systems/networks.
2.2.14 換流站 將電流由一種型式轉換為另一種型式或改變頻率之設施。	2.2.14 Converter station An installation for converting current of one form into another or for converting one frequency into another.
2.2.15 整流站 將單相或多相交流電流轉換為直流電流之設施。	2.2.15 Rectifier station An installation for converting single or multi-phase alternating current into direct current.
2.2.16 變流站 將直流電流轉換為單相或多相交流電流之設施。	2.2.16 Inverter station An installation for converting direct current into single or multi-phase alternating current.
2.2.17 網路；系統 一組線路與其他電氣設備相連，可將電力由發電廠傳輸至最終之用戶端。	2.2.17 Network; system A grouping of lines and of other electrical equipment connected for the purpose of conveying electricity from generating stations to the ultimate consumer.
2.2.18 互連或互連網路／系統 此種網路在一國內或國際間互連，具互通有無之整體經營之功能，使電力需求與發電之間在經濟性及可靠性上達到最佳之配合。	2.2.18 Interconnected or interconnecting network/system A network that can be so regulated in its overall performance, both nationally and/or internationally that it enables electricity demand to be met with electricity generation optimally, both as regards economics and reliability.

2.2.19 輸電網路／系統 輸電系統具有超越區域之輸電能力而將電力傳送至地方系統。	2.2.19 Transmission network/system A system of transmission lines serving for the super-regional transport of electricity and feeding to subsidiary systems.
2.2.20 配電網路／系統 供應區域及地方電能之配電線系統。	2.2.20 Distribution network/system A system of distribution lines serving for the regional and local distribution of electrical energy.
2.2.21 輻射系統 系統或部份系統全部或主要由輻射狀線路組成，而各受電點僅可由單一方向之單路回線饋送。	2.2.21 Radial system A system or part of a system which is wholly or mainly composed of radial circuits and hence points to be supplied do not have a supply available to them in more than one direction.
2.2.22 環狀網路／系統 網路或部份網路全部或主要由環狀線路組成，而線路之起點與終點均為同一電源。	2.2.22 Ringed network /system A network or part of a network which is wholly or mainly composed of ring circuits, all or most of which individually emanate from and terminate at the same source of supply.
2.2.23 網狀網路／系統 一系統或部份系統全部或主要由環狀線路組成，線路之起點與終點為不同之電源，或具有多重電源之多重環狀線路之更複雜系統。	2.2.23 Meshed network/system A network or part of a network which is wholly or mainly composed of ring circuits all or most of which emanate from and terminate at different sources of supply, or any more complex system of multiple ring circuits with multiple supply sources.
2.2.24 高電壓 相等或較高於一特定之電壓，此特定電壓各國內可自行立法制定之（大多數歐洲國家訂定此特定電壓為 1,000 伏特以上）。	2.2.24 High voltage A voltage equal to or higher than a specified voltage that may vary legally from one country to another (e.g. in most European countries it now applies to voltages above 1000 V between conductors).

2.2.25 低電壓 相等或較低於一特定之電壓，此特定電壓各國可自行立法制定之（大多數國家訂定此特定電壓為 1,000 伏特以下）。	2.2.25 Low voltage A voltage equal to lower than a specified voltage that may vary legally from one country to another (e.g. in most countries it applied to voltages of 1000 V a.c. or below between conductors)
2.2.26 額定電壓 用來標示機器、電廠、網路或儀器之電壓，藉此可計算機器使用之測試情況及電壓限制。	2.2.26 Rated voltage The voltage used in the specification of a machine, plant, network or apparatus and from which the test conditions and the voltage limits for the use of the machine etc. are calculated.
2.2.27 運轉電壓 任何時刻，跨越運轉中機器或儀器之兩線間之電壓。	2.2.27 Operating voltage The voltage at any moment across two line wires of machines or apparatus in operation.
2.2.28 輸電容量／能力 在許可之散熱、穩定度及電壓降之範圍內，輸電設備所能允許之最高連續負荷。	2.2.28 Transmission capacity/capability The highest permissible continuous loading of the transmission equipment with respect to heating, stability and voltage drop.
2.2.29 互連 兩系統或更多系統或其部分系統間以一回線路或數回線路相連接及用以作此連接之設備。	2.2.29 Interconnection The connection, by one or more lines, between two or more systems or parts of systems, and the equipment for such connection.
2.2.30 責任分界點；供電端；送電端 系統或網路上之購電者或消費者依合約接受電能之點。	2.2.30 Supply terminals; delivery/terminal point The point in a system/network at which a purchaser/consumer contractually receives electrical energy.
2.2.31 網路（系統）內耗電 在網路（系統）運轉時附屬設備所需消耗之電能。	2.2.31 Network/system internal consumption Such consumption of electrical energy by ancillary equipment as is required for the operation of the network/system.
2.2.32 網路（系統）損失、輸配電損失 特定網路（系統）中輸電及配電所發生之電能損失。	2.2.32 Network/system losses; transmission and distribution losses The energy losses occurring in transmission and distribution in a specific network/system.

2.3 容量與發電	2.3 Capacity and Generation
2.3.1 裝置容量；毛裝置容量 電廠內各機組出力端所測定之容量，包含廠內負載。	2.3.1 Installed capacity; gross installed capacity The capacity measured at the output terminals of all sets in the station; it includes power taken for the station's internal load.
2.3.2 最大出力容量；淨出力容量 輸入網路前測定之容量。	2.3.2 Maximum output capacity; net output capacity; output capacity The capacity measured at the point of outlet to the network.
2.3.3 廠內用電；廠內負載 電廠廠內設備運轉所需之電容量，含發電機變壓器內之變電損失。	2.3.3 Power station internal load; station service load; auxiliaries load The electrical capacity of a power station or power station set, that is required for its auxiliary plant, together with the capacity represented by the losses in its generator transformers.
2.3.4 最大容量；最大電力容量 火力機組或電廠燃用正常品質燃料連續運轉下，所能產生之最大電力。水力電廠在最佳之進水量及水頭下，可在一段期間內連續運轉產生之最大電力。	2.3.4 Maximum capacity; maximum electric capacity In the case of a thermal unit or station, the maximum power that could be produced under continuous operation with all plant running and with adequate fuel stocks of normal quality. In the case of a hydro-electric installation, the maximum power that could be produced throughout a given period of operation with all plant running and with flow and head at their optimum values.
2.3.5 可用容量；可用電力 在一般條件之下，如不受輸電系統之限制，在任何時刻，電廠或機組可在一段時間內連續運轉產生之最大電力。	2.3.5 Available capacity; available power At any given moment, the maximum power at which the station or unit can be operated for a given period under the prevailing conditions assuming unlimited transmission facilities.

2.3.6 運轉容量；實際出力 實際運轉之容量基本上為某特定時間測出之瞬間值；一般可從某段時間之發電量計算出來（發電量與運轉時間之比）。發電量可為淨發電量或毛發電量。	2.3.6 Power produced, utilized capacity; operating capacity The actual capacity operated. In principle it is measured as an instantaneous value and must be referred to a time; however, by convention it may be derived from the energy produced during a certain period which for statistics it is necessary to define (the ratio of the electricity produced to the operating period). The power produced may be gross or net.
2.3.7 備轉容量 冷機備轉容量（特殊情況）、熱機備轉容量和（水力）備轉容量等用來應付預期容量需求與實際容量需求之差異。	2.3.7 Reserve capacity Cold stand-by (in exceptional cases), hot stand-by and spinning reserve capacities that serve to meet any difference between the anticipated capacity demand and the capacity demand actually occurring.
2.3.8 最低穩定發電量（容量） 電廠在技術無困難下所能運轉之最低發電量（容量）。	2.3.8 Minimum stable generation/capacity The lowest capacity at which a station can be operated without technical difficulty.
2.3.9 最佳容量 一電廠或一系統在最高效率情況下運轉之容量。	2.3.9 Optimum capacity The capacity at which a system or a station has its highest efficiency.
2.3.10 最大發電量 在某一特定時間內所能保持之最大出力或負載。	2.3.10 Maximum power produced The maximum value of output or load which can be maintained for a specified period.
2.3.11 最小容量 在一特定時間內運轉之最低容量。	2.3.11 Minimum capacity The lowest capacity in a given period.
2.3.12 可靠電力（容量） 為一特定之可用容量，其供電可靠率為預先訂定。	2.3.12 Firm capacity The capacity which can be made available, whose reliability for the supply system is specified and determined in advance.
2.3.13 發電量 於發電機端之發電量。	2.3.13 Electricity generated The electricity produced at the generator terminals.

2.3.14 供電量 輸入電力系統之有用電力。	2.3.14 Electricity supplied The useful electricity supplied to the network.
2.3.15 電力系統受電量 系統內之發電機及其他電源供給此系統之電力總和。	2.3.15 Input to network The sum of the electricity supplied by the electricity generators of the network and supplied from other sources.
2.4 電力系統操作	2.4 Operation of the Electricity System
2.4.1 控制室 裝設控制盤之房間。	2.4.1 Control room A room in which control boards are installed.
2.4.2 系統控制中心 用來指揮或直接執行網路式系統線路操作之場所。	2.4.2 System control centre (center) The appropriate centre (center) for switching or directing the switching of the lines of a network/system.
2.4.3 電力調度中心 直接指揮發電廠操作及負載調整之場所，通常電力調度中心和系統控制中心合而為一。在中央控制系統／網路之情況亦同。	2.4.3 Load dispatching centre (center) The appropriate centre (center) for switching or directing the switching of power stations on line and for load changing. In general the load dispatching centre (center) and the system control centre (center) are one and the same in the case of centrally controlled systems/networks.
2.4.4 脈波控制 用戶送電與斷電之一種負載管理控制方法，其執行藉配電網路或系統搖控之。	2.4.4 Ripple control A method of load management control which involves connecting and disconnecting consumer groups, the necessary remote control being effected via the distribution network/system.
2.4.5 需量曲線；負載曲線 出力或負載值隨時間變化之曲線。	2.4.5 Demand curve; load curve A curve representing the changing values of output or load as a function of time.

2.4.6 控制負載型用戶 此類用戶的用電受控制，俾對電力供應網路或系統之負載曲線有所改善。「可停電用戶」是控制負載型用戶之一種。	2.4.6 Load-controlled consumer A consumer of electricity whose demand may be regulated in such a way that it contributes to flattening the load curve of the electricity supply network/system; an interruptible consumer is a particular case of a load-controlled consumer.
2.4.7 計費需量 被列入電費計算之需量。	2.4.7 Chargeable demand The demand taken into account for calculating the charges to be billed.
2.5 增訂名詞	2.5 Additional Terms
2.5.1 燃料電池 將化學能直接轉換成電能的一種裝置，其中不經熱機循環之過程，而直接控制燃料之反應以產生電力，燃料通常為氫、甲醇或碳氫化合物。 （註）燃料電池可應用於偏遠地區之小電力源以及做為電動車之電源。	2.5.1 Fuel cell A device that enables chemical energy to be converted directly into electrical energy without the intervention of the heat engine cycle, in which electrical power is produced in a controlled reaction involving a fuel, generally hydrogen, methanol or a hydrocarbon. Note Fuel cells can have applications as small power sources in locations and possibly as sources of power for electric vehicles.
2.5.2 超導體 電導體其電阻值極微小。 （註）以目前之技術，超導體可以在特殊情況下達成，亦即利用金屬之電阻值隨溫度之降低而減少之現象，在低溫時其電阻值變小。部份導體具有臨界溫度，低於此溫度其電阻值降為零，而成為超導體。在電力工程上，應用冷凍技術使導體達到超導體之情況，電力設備之體積可因之大量地減少。	2.5.2 Superconductor An electrical conductor offering negligible resistance. Note With present technology superconductivity can be achieved as the extreme case of the phenomenon that when metals are cooled from room temperature their resistivity decreases and at low temperatures they attain low values; some conductors have a critical temperature below which their electrical resistance falls to zero, i.e. they become superconducting. In electrical engineering the application of cryogenic technology to the creation of conditions favoring superconductivity, enables the dimensions of equipment to be substantially reduced.

2.5.3 功率因數 計量交流電氣設備用電時，瓦特和伏安的比值或是實功率和視在功率的比值稱之，以小數表示，意即附實功率外，尚考慮虛功率之一種度量方法。 （註）功率因數顯示用電容量之效率以及用電契約中有關功率因數基準之計費項目。系統或裝置可用以改善功率因數。	2.5.3 Power factor In the metered consumption of alternating current electrical equipment, the ratio of watts to voltamperes or of active power to apparent power. Expressed as a decimal fraction, it provides a measure of the extent to which reactive power is being taken in addition to the active power. Note Power factor indicates the efficiency with which electrical capacity is utilized and tariff/rate contracts can incorporate terms relating charges to power factor levels. System and devices may be applied to correct power factor.
2.5.4 實功率 交流回路中之平均電功率，以正弦電流而言等於電壓或電動勢乘上實電流。 （註 1）實電流為交流電流中與電壓或電動勢同相之成份。 （註 2）實功率為可轉換成機械能、熱能、化學能、光能或聲能之功率。	2.5.4 Active power The mean power in an alternating current circuit. With, sinusoidal currents it is equal to the product of the voltage or electromotive force and the active power. Note l Active current is the component of the alternating current which is in phase with the voltage or electromotive force. Note 2 It is the power available for conversion to mechanical, thermal, chemical, light or sound energy.
2.5.5 虛功率 電壓或電動勢與感應電流之乘積。 （註 1）感應電流為與電壓或電動勢相位相差 90°之電流成分，不實際做功但增加系統之電力損失。 （註 2）通常用以激發磁場（電動機及變壓器）或電場（電容器）。	2.5.5 Reactive power The product of voltage or electromotive force and reactive current. Note 1 Reactive current is the component of a current in quadrature (at 90°) with the voltage or electromotive force, which contributes no power but increases the power losses of the system. Note 2 It is used for exciting magnetic fields (in motors and transformers) or electric fields (in condensers).

2.5.6 視在功率 均方根（有效）值電流與均方根（有效）值電動勢或電壓之乘積，與電壓電流之相位無關。 （註）在設計電氣設備時，這是一個重要因素。	2.5.6 Apparent power The product of the R.M.S. (effective) current and the R.M.S (effective) electromotive force or voltage, irrespective of the phase relationship between the voltage and current. Note It is a significant factor in the design of electrical equipment.