

An Interpretation for Electric Power and Science

# 电力科技英语

## 口译

杨海燕 杨大亮 编著



国防工业出版社

National Defense Industry Press



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·北京·

## 内 容 简 介

本书分电力篇和科技篇两大部分,包括中国电力发展、核能发电、水力发电、火力发电、中国科技发展、航空航天、生命科学和信息技术等8个单元。书中设计了大量形式多样、内容丰富的练习,除课堂练习外,每个单元都配备了课外练习。学生可在练习中积累和巩固已学的知识,掌握并提高电力科技英语口译能力。书后附有部分练习参考答案。全书涉猎广泛,题材多样,融知识性、实用性和灵活性为一体,具有较强的操作性。

本书可作为电力院校和其他理工科大专院校学生的教材,也可供从事电力科技工作的英语口译爱好者自学。

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# 前 言

在全面建设小康社会的今天,随着我国社会主义市场经济体制的逐步建立和健全,特别是我国加入世界贸易组织以来,在经济、文化等诸多领域各项政策措施的进一步建立和完善,对外交往和对外贸易日益频繁,我国对高素质口译人才的需求问题进一步凸显出来。

近十年来,在我国的工业门类中,电力工业发展最为迅速。各大电网已覆盖全国城市和大部分农村,我国的发电装机容量和发电量均居世界第二位。我国电力工业已进入以大机组、大电厂、大电网、超高压、自动化为主干的新时期。现有的发电装机容量和发电量已不能适应现代化建设的需要,整个行业现状急需得到有效的改进和上新的台阶,逐步与世界接轨。面对电力行业日益市场化和国际化的趋势,如何培养和造就一批高素质的电力科技口译人才,已成为电力行业、科技翻译界乃至全社会普遍关心的问题。

电力行业对专业技术人才的英语水平,特别是英语口语水平的要求明显提高,要求专业技术人员在合作与交流时,能用英语进行听、说、读、写、译全方位的活动,尤其是要能与外国同行用英语进行自由的交谈,探讨电厂建设、电力生产、传输、销售等各个方面的问题。

为此,我们精心编写了《电力科技英语口译》一书。本书着眼于帮助学生储备电力科技口译基本知识和培养学生的电力科技专业方面的基本口译技能,使学生既拥有一定量的电力科技口译知识,包括口译技巧、课外活动设计和扩展词汇等。学生可通过大量的口译练习掌握口译技能,全面提高电力科技专业学生的英语口语素质,从而在未来的工作岗位上能充分利用自己在外语方面的优势,在电力人才市场占有自己应有的一席之地。

全书内容丰富,涉猎广泛,题材多样,包括电力改革与发展、核电、水电、火电、科技发展、航空航天、生命科学和信息技术等各个方面的内容,具有很强的专业针对性。同时,本书融知识性、实用性和灵活性为一体,具有很强的操作性。书中设计了大量形式多样、内容丰富的练习,除了课堂练习外,每个单元都配备了课外练习,使学生在练习中巩固已学的知识,提高口译能力,充分体现了口译学科实践性强的特点。

全书分电力篇和科技篇,共8个单元。书后附有部分练习的参考答案。

书中各单元单词、词组与句子口译原文以附录形式给出,以便在教学和自学时使用。

本书的阅读对象为电力院校的大学生及从事电力工作的英语口语爱好者。广大读者通过阅读学习本教程,可以开阔视野,获取信息,增长知识。

在本书的编写过程中,我们参阅了国内外出版的电力科技方面的有关资料,主要参考文献附于书末。在此,谨表诚挚的谢意。

由于编者水平有限,疏漏或错误之处在所难免,恳请学界同仁和读者朋友批评指正。

编著者

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# Section One Issues in Electric Power

## 电力篇

### Unit 1 China's Development of Electric Power

#### 中国电力发展

#### 1.1 Warming-up Activity

##### Exercise One: Spot Dictation

*Directions: You will hear 2 passages and read the same passage with blanks in it. Fill in each of the blanks with a word or words you have heard. Remember you will hear the passage only once.*

(A)

Of all Chinese industries, (1) \_\_\_\_\_ industries have developed the most rapidly. In the 1990s, the installed capacity of generators increased from 100 million kW to 300 million kW, and to 315 million kW at the end of 2000. At the same time, the total generated electricity came to (2) \_\_\_\_\_. The average annual growth rate of the installed capacity of generators registered 7.5 percent, and that of generated electricity, 9.4 percent.

The construction of power grids has entered the fastest development stage in history. Main power grids now cover all the cities and most rural areas of the country. Power grids of 500 kV have begun to replace the old (3) \_\_\_\_\_ in undertaking cross-provincial and cross-regional transmission and exchange operations. An international advanced automatic control system with computers as the mainstay has been universally adopted, and has proved practical. The establishment of the six cross-provincial (or cross-autonomous regional) power grids, excluding those in northwestern China, and five independent provincial 500-kV main power grids, and the commissioning of a series of large power stations indicate that China's power industry has entered a new era featuring large (4) \_\_\_\_\_, large power plants, large power grids, ultra-high voltage and automation.

The technological level of the coal industry has constantly improved. Now, China has the ability to design, construct, equip and administer 10-million-ton open cut coal mines and large and medium-sized mining areas. China's (5) \_\_\_\_\_ and abilities have

constantly improved and coal liquefaction and underground gasification are being introduced. In 2001, China exported over 80 million tons of coal, becoming the second largest coal exporting country in the world.

(B)

In today's world, the paces of economic globalization and regional specialization have been speeded up while international competitions are (6) \_\_\_\_\_. Accompanied with the adjustments to the structure of industries, the economic development of the Asia-Pacific area is full of vitality, and economic and technological cooperation sees a great potential and extensive prospects.

Faced with challenges and opportunities, it is necessary to further cultivate and intensify the exchanges and cooperation among the countries. To reinforce the interdependence and regional cooperation is not only good for mutual complementation of advantages and (7) \_\_\_\_\_, expanding international trade and effective investment, strengthening the resistance against risks and overall competitive competence, but also good for peace and development in the Asia-Pacific area and even all over the world.

Recently, the electric power system is one of the crucial issues to be confronted with in the Middle East area. The statistics of the World Energy Organization show that the needs of electric power in the Gulf Area will grow up at an annual growth rate of 5%, which has surpassed the world's average standards. During the period from 2001 to 2004, the World Energy Organization will invest US\$ 43 billion on (8) \_\_\_\_\_.

Shanghai is a metropolis full of vigor. Over the past decade, Shanghai's rapid development has attracted the attention of the world. Shanghai is becoming an industrial, economic, financial, technological, information and transportation center in China. Up to now, over 90 countries and areas around the world have invested more than US\$ 30 billion on Shanghai such a hot land with a total of (9) \_\_\_\_\_ approximately. Among the world's top 500 multinational corporations, more than half of them have settled down in Shanghai. Shanghai has successfully held many major international conventions including the East Asian Games and APEC conference, etc. Its international airlines are connected with 96 countries and areas. Shanghai is presenting its image as an international metropolis. In order to keep a rapid economic growth, infrastructure facilities should be absolutely guaranteed. Especially some of the State's major construction projects have successively come into completion, such as "West-to-East (10) \_\_\_\_\_" and "West-to-East Gas Transmission Project", etc. In addition, the State will launch some pilot construction projects for the electric power market in the four provinces and one city of the East China. All these will exert a great impact upon the economic development of the East China area.

Electricity is (11) \_\_\_\_\_ while exhibitions are a kind of connecting link for our cooperation. Electricity makes the people's life full of brilliance and let us to have common development under the globalization. Intensifying the cooperation among enterprises is the only road for the enterprises of this age to seek for development.

Competitions are inherent, but cooperation is indispensable. Mutual benefits and win or win results are more important. *2004 China (Shanghai) International Electric Power & Electrical Engineering Exhibition* is scheduled to take place at Shanghai Mart in March 2004, which will (12) \_\_\_\_\_ for mutual communications and cooperation among enterprises. On the behalf of the Chinese electric power industry, the Organizing Committee will invite cordially all the enterprises and professionals of the industry to gather together at the Oriental Pearl—Shanghai, P. R. China. By comparing the present with the past and looking into the future, we are full of pride. Let's go on with our efforts to realize the coordinated development of the electric power industry with the national economy and to meet a new century with more brilliance.

What's more, this event will be oriented towards globalization, standardization and dedicated to showcasing the state-of-the-art products, technology and equipment of the industry to business visitors with novel stances, quality services, large-scale buyers and abundant academic exchanges. This event will demonstrate the latest information and development trends of the electric power & electrical engineering industry and provide the best opportunities for the exhibitors to seek for cooperation and (13) \_\_\_\_\_.

## 1.2 Preparatory Reading

### 1.2.1 Passage A

#### 1.2.1.1 Work on the Chinese words and phrases below and write the translated version after them.

- (1) 中国国家电力公司
- (2) 经营跨区送电
- (3) 统一管理国家电网的企业法人
- (4) 优化资源配置和产业结构
- (5) 对电力项目进行投资
- (6) 全资子公司
- (7) 跨区送电的大型电厂
- (8) 对国家电网
- (9) 统一规划、统一建设、统一调度、统一管理
- (10) 安全、稳定、经济、优质运行
- (11) 不断提高供电质量和服务水平
- (12) 火电、水电、核电工程

#### 1.2.1.2 Listen to the article and start interpreting at the end of each segment.

中国国家电力公司

中国国家电力公司是经中国国务院批准于1997年1月16日正式成立的。公司由国务院出资设立,采取国有独资形式,是其所属全资子公司及控股、参股公司的国有资产



及其他国务院界定的国有资产的出资者，是国务院授权的投资主体与资产经营主体，是经营跨区送电的经济实体和统一管理国家电网的企业法人。

公司注册资本1600亿元人民币。公司按企业集团模式进行经营管理，下设东北公司、华中公司、华东公司、西北公司、南方公司、电网建设分公司6个分公司，山东等26个省（市、自治区）级电力公司，华北集团公司，华能集团公司，葛洲坝集团公司，以及原电力工业部所属的其他公司按其产权结构分别为国家电力公司的全资子公司或控股、参股公司。

公司实行总经理负责制，总经理是公司的法定代表人。

到2000年底，国家电力公司总资产达12407亿元人民币，净资产达4139亿元人民币。2000年，公司发电量完成6770亿千瓦时，比上年增长8.5%；售电量8780亿千瓦时，比上年增长10%；实现销售收入3450亿元人民币，比上年增长15.6%；实现净利润73.82亿元人民币，比上年增长29.3%。2001年，国家电力公司在美国《财富》杂志评选出的世界500强中，列第77位。

国家电力公司的主要职责是：

- (1) 经营国务院界定范围内的国有资产，承担保值增值责任；盘活存量资产，优化资源配置和产业结构；运用国家资本金开展经批准的公司融资业务，对电力项目进行投资并负责偿还本息。
- (2) 享有产权收益，决定全资子公司的经营方针、重大产权变更、分配方式及其他重大经营决策等事项；任免全资子公司的主要经营者及监事会成员；对控股、参股子公司派出董事会成员。研究决定所属事业单位的工作方针、发展规划等重大事项，任免其领导成员。
- (3) 研究制定公司发展战略、中长期发展规划和年度计划、投融资计划并组织实施。负责全国电力联网建设，经营管理联接区域电网的主干网络和跨区送电的大型电厂及必要的调峰、调频骨干电厂。
- (4) 对国家电网实施统一规划、统一建设、统一调度、统一管理；依法对与国家电网联接的发电厂和电网实施统一调度；监督全国电网安全、稳定、经济、优质运行，不断提高供电质量和服务水平。
- (5) 指导公司系统精神文明建设和思想政治工作。
- (6) 承担国务院和有关部门委托的其他工作。

国家电力公司共拥有138万职工，具有强大的科研、设计、施工和经营管理能力及丰富的实践经验，能够从事火电、水电、核电工程及其配套的送变电工程的规划、勘测、设计、施工和建设监理工作，以及发电、输电、供电企业的生产经营管理工作。此外，国家电力公司还涉足机械、电子、建筑、通信、贸易、金融、房地产、信息等多个领域。

根据国务院批准的电力体制改革方案，“十五”期间，电力体制改革的主要任务是，实施厂网分开，重组发电和电网资产；实行竞价上网，建立电力市场运行规则和政府监管体系，初步建立竞争、开放的区域电力市场，实行新的电价机制。“厂网分开”，指将国家电力公司管理的资产按照发电和电网两类业务划分，并分别进行资产重组。厂网分开后，除华能集团公司直接改组为独立发电企业外，其余发电资产重组为规模大致相当的3至4个全国性的独立发电企业，由国务院分别授权经营。在电网方面，成立国家电

网公司和南方电网公司。国家电网公司作为原国家电力公司管理的电网资产出资人代表，按国有独资形式设置，在国家计划中实行单列。由国家电网公司负责组建华北（含山东）、东北（含内蒙古东部）、西北、华东和华中（含重庆、四川）五个区域电网有限责任公司或股份有限公司。西藏电力企业由国家电网公司代管。南方电网公司由广东、海南和原国家电力公司在云南、贵州、广西的电网资产组成，按各自拥有的电网净资产比例，由控股方负责组建南方电网公司。

### 经营状况

国家电力公司自成立以来，整体经济实力不断提升，营业规模持续增长，财务状况和经营情况良好。到 2000 年底，国家电力公司总资产达 12650 亿元人民币，其中，固定资产约为 7970 亿元人民币，占 63%。总负债为 7652 亿元人民币，资产负债率为 60.5%；净资产达 4998 亿元人民币，同比增长 9.3%。到 2000 年底，公司发电量完成 6770 亿千瓦时，比上年增长 8.5%；售电量 8780 亿千瓦时，比上年度增长 10%；实现销售收入 3450 亿元人民币，比上年度增长 15.6%；实现利润 92 亿元人民币。

几年来，公司投资规模逐年上升。四年间累计固定资产投资 5413 亿元人民币，年平均增长速度超过 10%，发输配电能力不断提高，为今后较长时间内的持续稳定发展奠定了基础。

近几年，国家电力公司一直保持着较好的资产负债率，资信度很高。1996 年至 1999 年 4 年间平均资产负债率为 55%。国家电力公司系统的长期负债以中国国家开发银行和中国建设银行长期贷款为主，其次是中国农业银行借款和国外借款。国家电力公司系统能够按照签订的借款合同到期偿还贷款。尤其是 1999 年，当年应还贷款 364 亿元，实际还款 599 亿元，超额偿还 235 亿元。由于国家电力公司系统能及时足额偿还贷款，因此世界银行及国家开发银行对国家电力公司系统的评价很高，这为国家电力公司系统继续利用外资贷款和国内商业银行贷款奠定了良好的基础。

国家电力公司充分利用资本市场，吸纳社会资金，促进资产证券化。到 2000 年底，国家电力公司系统控股、参股的上市公司总数已达到 20 家，上市股票 24 支，募集资金 300 多亿元。同时还通过发行公司债券进行融资，公司发行的 97 国电债还在上海证交所挂牌交易。此外，优化资本投向，择优投资有较高获利水平的金融、证券业，获得了较高的回报。重视并加强了国际合作，积极、合理、有效地利用了外资，贷款签约完成 5 亿美元。

今后，国家电力公司将以市场为导向，以经济效益为中心，不断提高市场竞争力；调整存量资产结构，合理配置公司增量资源；在增量方面，投资建设经营好电网，搞好城乡电网建设与改造，保证电网安全经济运行和适应市场竞争需要；因地制宜投资建设必要的调峰调频电厂、技术先进电厂和大型骨干电站；利用自身优势，主要在国内外与电力行业关联度较大的领域，选择效益好的项目进行投资，寻找新的利润增长点。

电力项目的投资重点也将从电源转向电网，加大电网投资力度，增强电网经营能力，促进电力市场的形成和发展。投资的主要领域包括：全国联网工程，加强骨干电网工程，城乡电网的改造和建设工程。在加大电网投资和经营力度的基础上，国家电力公司将参与一些大型水电项目的建设，投资必要的水电、调峰、调频电站的建设，以及核电国产化驱动项目和新能源、新技术示范发电项目的建设。

1999 年, 国家电力公司首次入选美国《财富》杂志评选的全球企业 500 强, 居第 83 位。在中国大陆入选的 9 家企业中名列第二位, 在入选的全球电力公司中仅次于日本东京电力公司名列第二位, 成为全球电力企业的重要成员。

#### 发展策略

国家电力公司致力于将自身建设成控股型、经营型、现代化、集团化管理的国际一流企业。

公司的作用定位是: 在国民经济中具有控制力、发挥主导作用的国有企业。

公司的实力定位是: 中国 520 家重点企业和世界 500 强一员。这一定位目前已经全部实现。

公司的市场定位是: 以电网经营为核心业务的企业。根据公司应发挥主导作用的定位, 培育公司核心业务的着力点集中体现在能够充分发挥控制力、影响力和带动力的领域或环节上, 其他领域或环节则可以按照市场化改革取向逐步放开, 实行竞争。

公司的形象定位则是: 具有良好的企业信誉和公众形象, 实现两个文明的企业。

国家电力公司近期改革与发展的目标是: 开放省内市场, 发展区域市场, 培育国家市场。改革的基本思路是: 推进全国联网, 建立全国统一、公平竞争、规范有序的电力市场。国家电力公司的改革取向是经营全国电网的公司制企业, 主要职能是管理和运营电网, 负责在全国范围内优化资源配置。

(摘自国家电力公司网站)

#### 1.2.1.3 Look at the following sentences or short passages. They are taken directly from or modeled on the passage above. Work in pairs to see if you can interpret them into English.

- (1) 经营国务院界定范围内的国有资产, 承担保值增值责任; 盘活存量资产, 优化资源配置和产业结构; 运用国家资本金开展经批准的公司融资业务, 对电力项目进行投资并负责偿还本息。

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- (2) 享有产权收益, 决定全资子公司的经营方针、重大产权变更、分配方式及其他重大经营决策等事项; 任免全资子公司的主要经营者及监事会成员; 对控股、参股子公司派出董事会成员。研究决定所属事业单位的工作方针、发展规划等重大事项, 任免其领导成员。

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- (3) 研究制定公司发展战略、中长期发展规划和年度计划、投融资计划并组织实施。负责全国电力联网建设, 经营管理联接区域电网的主干网络和跨区送电的大型电厂及必要的调峰、调频骨干电厂。

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- (4) 对国家电网实施统一规划、统一建设、统一调度、统一管理；依法对与国家电网联接的发电厂和电网实施统一调度；监督全国电网安全、稳定、经济、优质运行，不断提高供电质量和服务水平。
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- (5) 国家电力公司具有强大的科研、设计、施工和经营管理能力和丰富的实践经验，能够从事火电、水电、核电工程及其配套的送变电工程的规划、勘测、设计、施工和建设监理工作。
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- (6) 国家电力公司自成立以来，整体经济实力不断提升，营业规模持续增长，财务状况和经营情况良好。到 2000 年底，国家电力公司总资产达 12650 亿元人民币，其中，固定资产约为 7970 亿元人民币，占 63%。
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- (7) 近几年，国家电力公司一直保持着较好的资产负债率，资信度很高。1996 年至 1999 年 4 年间平均资产负债率为 55%。国家电力公司系统的长期负债以中国国家开发银行和中国建设银行长期贷款为主，其次是中国农业银行借款和国外借款。国家电力公司系统能够按照签订的借款合同到期偿还贷款。
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## 1.2.2 Passage B

### 1.2.2.1 Work on the English words and phrases below and write the translated version after them.

- (1) to guarantee and promote the development of the electric power industry

- (2) to safeguard the legal rights and interests of investors, operators and users of electric power
- (3) to maintain the safe operation of electric power
- (4) the construction, production, supply and utilization of electric power
- (5) to develop power sources
- (6) electric power construction enterprises
- (7) electric power production enterprises
- (8) electric power network
- (9) to develop the electric power industries
- (10) power construction projects
- (11) electric power production and power network management
- (12) supply and utilization of electric power
- (13) Power supply enterprises
- (14) to supply power to the users
- (15) electricity service areas
- (16) the structure of power networks and the rationality of power supply
- (17) the Power Supply Business Permits

### **1.2.2.2 Listen to the article and start interpreting at the end of each segment.**

## **Electricity Law of the People's Republic of China**

(Dec. 28, 1995)

### **Chapter I General Provisions**

#### **Article 1**

This law is formulated to guarantee and promote the development of the electric power industry, to safeguard the legal rights and interests of investors, operators and users of electric power, and to maintain the safe operation of electric power.

#### **Article 2**

This law is applicable to activities concerning the construction, production, supply and utilization of electric power within the boundaries of the People's Republic of China.

#### **Article 3**

The electric power industry shall fit the needs of national economy and social development and develop in advance appropriately. The State encourages and guides legal investment in the development of power sources and the establishment of power production enterprises by domestic and overseas economic organizations or individuals. Investment in the power industry shall implement the principle of "whoever invests, benefits".

#### **Article 4**

Electric power facilities shall be under the protection of the State. It is forbidden for any unit or individual to endanger the safety of electric power facilities or to illegally occupy or utilize electric energy.

#### Article 5

The construction, production, supply and utilization of electric power shall protect the environment according to law, adopt new technologies, minimize discharge of poisonous waste, and prevent pollution and other public hazards. The State encourages and supports electricity generation by using renewable and clean energy resources.

#### Article 6

The administrative department of electric power under the State Council shall be responsible for the supervision and control of the electric power industry throughout the country. The departments concerned under the State Council shall, within the scope of their respective authorities, be responsible for the supervision and control of electric power industry. The comprehensive administrative departments of economy under the local people's governments at and above the county level, acting as the administrative departments of electric power in their own administrative divisions, shall be responsible for the supervision and control of the electric power industry. The departments concerned under the local people's governments at and above the county level shall, within the scope of their respective authorities, be responsible for the supervision and control of electric power industry.

#### Article 7

Electric power construction enterprises, production enterprises and network operation enterprises shall operate autonomously, be responsible for their own profits and losses, and be subject to the supervision of the administrative departments of electric power, according to law.

#### Article 8

The State assists and supports minority nationality areas, frontier and remote areas, and poverty-stricken areas to develop their electric power industries.

#### Article 9

The State encourages the adoption of advanced science and technology as well as managerial methods in the construction, production, supply and utilization of electric power, and gives awards to those units and individuals that achieve remarkable successes with regard to research, development, and adoption of advanced science and technology as well as managerial methods.

### Chapter II Construction of Electric Power

#### Article 10

The planning for electric power development shall be drawn up on the basis of the requirements of national economy and social development and shall be put into the plan of national economy and social development. The planning for electric power development shall reflect the principles of rational utilization of energy, coordinated development of the power sources and power networks, increasing economic benefits, and being conducive to environmental protection.

#### Article 11

The construction and retrofit planning of urban power networks shall be put into the overall urban planning. The urban people's governments shall arrange to provide land for substation facilities, transmission line corridors, and cable channels in accordance with the planning. No unit or individual may illegally occupy or utilize the land designated to substation facilities, transmission line corridors, and cable channels.

#### Article 12

The State formulates relevant policies to support and promote electric power construction. The local people's governments shall adopt diversified measures in line with local conditions to develop power sources and promote power construction on the basis of the electric power development planning.

#### Article 13

Investors in electric power shall enjoy legal rights and interests over the electricity generated from their investment. Where electricity thus generated feeds into the power network, the investor shall have the priority in utilization; where a captive power plant is not in parallel operation with the power network, the investor shall have the authority in deciding the utilization on its own.

#### Article 14

Power construction projects shall conform to the electric power development planning as well as the State's industrial policies on the power industry. No power equipment and technology declared obsolete by formal decree of the State shall be used for power construction projects.

#### Article 15

Projects for power networks such as transmission, substation, power dispatching telecommunication and automation projects, and environmental protection projects, shall be designed, constructed, inspected for acceptance and put into operation simultaneously with electricity generation projects.

#### Article 16

Land used for power construction projects shall be handled in accordance with relevant laws and administrative regulations; and in the case where the land is legally requisitioned, the land compensation fee and relocation compensation fee shall be paid therefore according to law, and the relocation of residents shall be handled properly. Power construction shall carry out the principles of giving practical protection to cultivated land and economizing on land utilization. The local people's governments shall support and assist the legal utilization of land and the relocation of residents for the sake of power construction.

#### Article 17

The local people's governments shall support power enterprises in exploring water resources, tapping and using water according to law for the construction of electricity generation projects. The power enterprises shall economize on water.

### Chapter III Electric Power Production and Power Network Management

#### Article 18

Electric power production and power network operation shall be in line with the principles of safety, high quality and economy. The operation of power networks shall be maintained in a continuous and stable way and the reliability of power supply shall be guaranteed.

#### Article 19

Electric power enterprises shall strengthen the management on safe production, adhere to the principle of safety first and prevention prevailing, and set up and improve the responsibility system of safe production. Electric power enterprises shall carry out regular check, inspection and maintenance on power facilities in order to guarantee their normal operation.

#### Article 20

Enterprises engaged in the supply and transportation of fuel for electricity generation and electric power production enterprises shall supply, transport, and unload and take delivery of such fuel in accordance with the relevant regulations of the State Council or contractual agreements.

#### Article 21

Unified dispatch and hierarchical management shall be implemented in the operation of power networks. No unit or individual may illegally intervene in the dispatch of power networks.

#### Article 22

The State advocates parallel operation between power production enterprises and power networks or among networks. Requests by power production enterprises with the qualifications of an independent legal entity to feed its electricity generated into a power network shall be accepted by the network operation enterprises. Parallel operation must be consist with the standards of the State or the power industry. The two parties in parallel operation shall sign the parallel operation agreements and stipulate the rights and obligations of each in accordance with the principles of unified dispatch, hierarchical management, equality and mutual benefits, and reaching unanimity through consultation; in the case where the two parties fail to reach a parallel operation agreement, the administrative department of electric power at and above the provincial level shall coordinate and make a decision.

#### Article 23

The regulations for power network dispatch and management shall be worked out by the State Council subject to the provisions in this law.

### Chapter IV Supply and Utilization of Electric Power

#### Article 24

The State adopts the principles of safe, economical and planned supply and utilization of electric power. The regulations of supply and utilization of electric power shall be worked out



by the State Council on the basis of the provisions in this law.

#### Article 25

Power supply enterprises shall supply power to the users within their franchised service areas. The division of electricity service areas shall take into account such factors as the structure of power networks and the rationality of power supply. Only one power supply enterprise shall be established in each electricity service area. The establishment or alteration of electricity service areas within the territories of provinces, autonomous regions or municipalities directly under the Central Government shall be applied by power supply enterprises, such application shall be examined by the administrative departments of electric power under the people's governments at the level of provinces, autonomous regions, or municipalities directly under the Central Government in conjunction with relevant departments at the same level, if approved, the said administrative departments of electric power shall issue the Power Supply Business Permits. The establishment or alteration of trans-regional electricity service areas shall be examined by the administrative department of electric power under the State Council, which, if approved, shall issue the Power Supply Business Permit. Power supply enterprises shall not begin operation until they apply for and obtain the business licenses from the industrial and commercial administrations by showing the Power Supply Business Permit.

#### Article 26

Power supply enterprises in any electricity service area shall be obligated to supply power as the State stipulated to the users within their service areas. Power supply enterprises shall not be permitted to violate the State's regulations by refusing to supply power to any unit or individual applying for electricity within their service areas. Applications for new electricity utilization, temporary electricity utilization, increases in capacity of electricity utilization, as well as alteration and termination of electricity utilization shall accomplish the procedure as stipulated. Power supply enterprises shall, at their business places, publicize the procedures, rules and the charge standard on electricity utilization, and shall provide any other relevant information the users must know.

#### Article 27

The power supply party and utilization party shall, on the basis of the principles of equality, voluntary participation and reaching unanimity through consultation, sign the power supply and utilization contract to stipulate the rights and obligations of both parties in line with the regulation of power supply and utilization drawn up by the State Council.

#### Article 28

Power supply enterprises shall guarantee that the quality of the electricity they supply to the users is in conformity to the standards of the State. Problems of electricity quality caused by utility power supply facilities shall be solved without delay. In case that a user has special requirement on electricity quality power, supply enterprises shall supply corresponding electric power according to its necessity and the possibility of the power network.