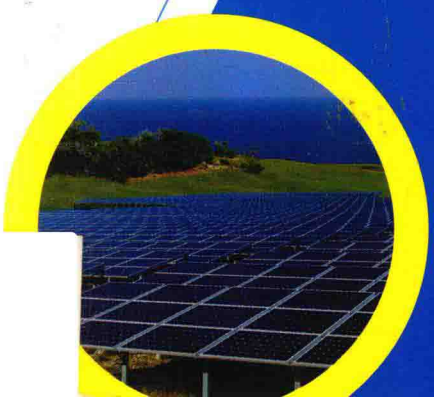
21世纪电力专门用途英语（ESP）系列
复旦大学出版社规划教材

总主编　赵玉闪

电力英语听力教程

English for Electric Power: A Listening Course

本册主编　余青兰



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English for Electric Power: A Listening Course

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复旦大学出版社

图书在版编目(CIP)数据

电力英语听力教程/余青兰本册主编. —上海：复旦大学出版社，2017.5
ISBN 978-7-309-12728-7

Ⅰ. 电… Ⅱ. 余… Ⅲ. 电力工业-英语-听说教学-教材 Ⅳ. TM

中国版本图书馆 CIP 数据核字(2016)第 302410 号

电力英语听力教程
余青兰 本册主编
责任编辑/郑梅侠

复旦大学出版社有限公司出版发行
上海市国权路 579 号 邮编：200433
网址：fupnet@ fudanpress. com http://www. fudanpress. com
门市零售：86-21-65642857 团体订购：86-21-65118853
外埠邮购：86-21-65109143 出版部电话：86-21-65642845
江苏省句容市排印厂

开本 787×1092 1/16 印张 11 字数 579 千
2017 年 5 月第 1 版第 1 次印刷

ISBN 978-7-309-12728-7/T·589
定价：30.00 元

Preface

序

2015年3月28日，国家发展改革委、外交部、商务部联合发布了《推动共建丝绸之路经济带和21世纪海上丝绸之路的愿景与行动》。2015年10月24日，国务院又印发了《统筹推进世界一流大学和一流学科建设总体方案》，请各省、自治区、直辖市人民政府以及国务院各部委、各直属机构认真贯彻落实。如果高等教育是为了满足国家对外语能力的需求，那么我国高校大学英语教学的定位就有了极大的改变。传统的大学英语教学的目的是帮助学生提高英语水平和文化素质修养，它在一个与国际交往不多的时代还是可行的。但是在一带一路和双一流建设的背景下，在我国实现走出去战略的背景下，我国大学英语必须转到满足国家需要，具体地说就是满足大学生的专业学习需求上来。

专门用途英语的理论之一就是满足特殊群体的需要。英语虽然是国际学术、科技和经济的通用语，但即使是用英语撰写的文献、报告和期刊论文，即使是用英语进行交流的各种学术和工程领域，英语表达方式也是因学科而异的。任何一门学科的理论和知识都是通过特有的语言方式构建和传播的。我们的学生如果不掌握其所在学科里特定的语言交流方式（如语篇结构、修辞手段和语言特征）是不可能进入该学科的话语社团的，这样也就不可能具备与他们该学科内的科学家和工程技术人员同行进行最基本的国际交流的能力，更不可能在他们学科领域内有国际话语权。这种学科领域里的交流能力就是专门用途英语能力。

很长时间以来，影响我国专门用途英语教学发展的观念是：学生只要英语基础扎实、英语水平高就可以胜任毕业后的涉外工作。事实证明这种观点是片面的。专门用途英语能力不是通过通用英语的不断学习而能够自然获得的，也不是通用英语高级阶段学习的必然结果，而是必须经过有针对性的学习和艰苦训练才能掌握的。正因为如此，专门用途英语具有强大的生命力，专门用途英语教材获得越来越多高校的青睐。

通用英语教材不能替代专门用途英语教材，因为后者在高等教育中发挥着重要作用，不可替代的除了有特殊领域的术语和表达方式、有相关的人文和宏观知识背景，更主要的是，后者训练学生在特殊领域里的语言技能，如特定工作场景（包括合同文本、施工说明、

学术交流等)里要使用的听、说、读、写技能以及表达方式。这就是专门用途英语的真实性原则。

我们欣喜地看到,华北电力大学致力于这方面的研究,他们的大学英语教师应用专门用途英语理论开发了电力英语方面的系列教材,从内容到形式上都进行了大胆的尝试。我国大学生具有很大的创新潜能。我们相信,只要我们给他们插上专门用途英语的翅膀,他们一定能够冲向世界,在国际学术、科技和工程领域的上空自由翱翔。这是一项伟大的事业,是我们大学英语教师在高等教育中、在实现国家重大战略中能真正体现自我价值的地方。我们必须珍惜,必须为之而奋斗。是为序。

蔡基刚

中国专门用途英语教学研究会副会长

亚洲专门用途英语教学研究会副会长

中国学术英语教学研究会会长

复旦大学教授博导

2017 年 3 月 10 日

Foreword

前　言

为了全面贯彻党的教育方针，进一步深化大学英语教学改革，根据《国家中长期教育改革和发展规划纲要(2010—2020)》和教育部《关于全面提高高等教育质量的若干意见》等文件的精神，教育部高等学校大学外语教学指导委员会要求大学英语课程兼具工具性和人文性的双重性质。大学英语课程的工具性也体现在专门用途英语上，学生可以通过学习与专业或未来工作相关的学术英语或职业英语，获得在学术领域或职业领域顺利进行交流的能力。因此，专门用途英语(English for Specific Purpose)的教学与发展将成为未来相当长一段时间内我国大学英语教学改革深化的主要方向之一。

本书为电力英语系列教材的听力分册，内容涵盖面较广。听力活动以学术英语听力各环节和分项技能的训练为纲，帮助学生培养良好的学术英语听力习惯。听力任务的设置灵活多样，多方面训练学生对所听信息的获取、分析、整合、判断能力，对电力类相关对话、讲座、操作说明、主题文章等核心信息的抓取能力和综合理解能力，帮助学生基本听懂用英语讲授的电力类课程以及与电力相关的工作岗位、工作任务、产品性能等的口头介绍，从而实现英语听力能力与专业职业能力的同步提高。

本教材涵盖与电力话题直接相关的11个单元的内容，围绕电力生产、电力输送、电力分配、电力使用等各个环节中的基础知识开展听力训练，同时还针对电力市场、电力建设、电力行业的未来发展等相关话题设计听力训练。听力任务的内容选择体现了“基础性”、“真实性”与“实用性”相结合的原则，既适合所有已经完成了大学英语基础学习的学习者，又体现了典型的电力英语的特色。在听力活动的设计中，编者注重将电力学科基础知识与学生的英语听力水平提高相结合，帮助学生打破专业知识学习、理解和应用中的语言障碍，培养学生与电力类专业学习以及电力类职业相关的英语能力。本教材每个单元还有专门的听力策略板块，为学习者系统、全面地介绍听力策略的基本知识，从而从理论和实践两个层面帮助学习者提高听力水平。总而言之，本教材的使用目的是为了帮助学生提高英语听力水平，使他们能够听懂语速适中的与电力题材相关的英语对话、题材熟悉的讲座，掌握中心大意，抓住要点；能听懂与电力相关的工作与岗位的常用指令、简单产品介

绍、简单操作说明等，并能够运用基本的听力技巧和策略。

本教材由余青兰担任主编，赵玉闪担任副主编，王皎皎、岳剑英、段素萍参与了编写工作。其中，余青兰负责第1、5、6、8、11单元和相关教学参考的编写工作，王皎皎负责第2、3、4单元和相关教学参考的编写工作，岳剑英负责第7、9单元和相关教学参考的编写工作，段素萍负责第10单元和相关教学参考的编写工作。赵玉闪和余青兰对全书进行了策划、审阅和统稿，爱丁堡大学电力工程系的陈煜同学负责全书的前期资料收集、整理以及词汇表中音标的插入、整理和校对工作。

因本教材的编写从内容到形式上都有不少新的尝试，并且编者水平有限，书中难免有疏漏差错，敬请广大读者批评指正。

编　者

2016年12月

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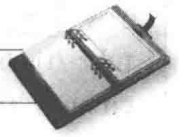
Lesson 1 Basic Concepts and Common Phenomenon About Electricity

Background Information



1. **Electr-**: an affix originating from the Greek word stem "elektor", which means "the shining sun". There are many words in English with the affix "electr-", such as *electricity*, *electron*, *electronic*, etc. 希腊语词缀，意思为"发光的太阳"。
2. **Benjamin Franklin**: one of the founding fathers of the United States. Franklin was a leading author, political theorist, politician, scientist, and great inventor. As a scientist, he was a major figure in the American Enlightenment and the history of physics for his discoveries and theories regarding electricity. 本杰明·富兰克林
3. **Alessandro Volta**: an Italian physicist and chemist, best known as the inventor of the electric battery and the discoverer of methane. The unit of electric potential is therefore named in his honor as the volt. 亚历桑德罗·伏特
4. **Michael Faraday**: an English scientist who contributed to the fields of electromagnetism and electrochemistry. His main discoveries include those of electromagnetic induction, diamagnetism and electrolysis. 迈克尔·法拉第
5. **Thomas Edison**: an American inventor and businessman who developed many devices that greatly influenced people's life around the world, including the phonograph and the long-lasting, practical electric light bulb 托马斯·爱迪生
6. **Nikola Tesla**: a Serbian American inventor, electrical engineer, mechanical engineer, physicist, and futurist, best known for his contributions to alternating current (AC) and the design of modern electricity supply system 尼古拉·特斯拉

Word Bank

electron /ɪˈlektrɒn/ *n*. 电子
conductor /kənˈdʌktə/ *n*. 导体
current /ˈkʌrənt/ *n*. 电流
generator /ˈdʒenəreɪtə/ *n*. 发电机
vacuum /ˈvækjʊəm/ *n*. 真空
semiconductor /ˌsemɪkənˈdʌktə/ *n*. 半导体
tube /tjuːb/ *n*. 电子管
circuit /ˈsɜːkɪt/ *n*. 电路
electromagnetic /ɪˌlektrəʊmægˈnetɪk/ *adj*. 电磁的
experimentation /ɪkˌsperɪmenˈteɪʃən/ *n*. 实验
electromotive /ɪˌlektrəˈməʊtɪv/ *adj*. 电测的
positive electrode 阳电极；正极
negative electrode 阴电极；负极
resistance /rɪˈzɪstəns/ *n*. 电阻
voltage /ˈvəʊltɪdʒ/ *n*. 电压
particle /ˈpɑːtɪkl/ *n*. 微粒，颗粒
insulation /ˌɪnsjʊˈleɪʃən/ *n*. 绝缘
switch /swɪtʃ/ *n*. 开关；转换器
valve /vælv/ *n*. 阀；真空管
ceramic /səˈræmɪk/ *adj*. 陶器的，与陶器有关的
insulator /ˈɪnsjʊleɪtə/ *n*. 绝缘体
friction /ˈfrɪkʃən/ *n*. 摩擦
copper /ˈkɒpə/ *n*. 铜
resistor /rɪˈzɪstə/ *n*. 电阻器
capacitor /kəˈpæsɪtə/ *n*. 电容器
inductor /ɪnˈdʌktə/ *n*. 感应器
derivative /dɪˈrɪvətɪv/ *adj*. 导出的，衍生的
capacitance /kəˈpæsɪtəns/ *n*. 电容
thunderstorm /ˈθʌndəstɔːm/ *n*. （雷电交加的）暴风雨
thundercloud /ˈθʌndəklaʊd/ *n*. 雷雨云
upward draft 上升气流
chain reaction 连锁反应
crystal /ˈkrɪstəl/ *n*. 晶体
hailstone /ˈheɪlstəʊn/ *n*. 雹块
downdraft /ˈdaʊndrɑːft/ *n*. 向下气流
moist /mɔɪst/ *adj*. 潮湿的；微湿的
static electricity 静电
voltaic pile 伏打电堆
rotary motion 转动，旋转运动
viable /ˈvaɪəbl/ *adj*. 切实可行的
alternator /ˈɔːltəneɪtə/ *n*. 交流发电机
steam-powered /ˈstiːmˌpaʊəd/ *adj*. 蒸汽驱动的
resistive /rɪˈzɪstɪv/ *adj*. 电阻的
cable /ˈkeɪbl/ *n*. 电缆
insulation thickness 绝缘厚度
mitigate /ˈmɪtɪgeɪt/ *vt*. 使缓和，使减轻；使平息
adjacent /əˈdʒeɪsənt/ *adj*. 邻近的，毗邻的
asynchronous /əˈsɪŋkrənəs/ *adj*. 异步的
the bulk of 大部分，主要部分

Task 1 Listen to the passage carefully and complete the sentences below. Write ONE WORD OR A NUMBER for each answer.

1. The term electricity usually includes the electric power supplied by generators and

the distribution systems which is _____ to homes, offices, and factories.

2. Electronics deals with the behavior of free electrons in vacuum _____ like those used to transmit radio waves.
3. Electricity and electrons are really _____; each one forms part of the other.

Task 2 You will hear a conversation followed by five questions. Listen carefully and choose the best answer from the four possible choices.

1. Where would the conversation most probably happen?
   A) At the office. B) On the campus.
   C) In the classroom. D) At the conference.
2. What does the man major in?
   A) Arts. B) Science. C) Engineering. D) Drama.
3. According to the conversation, the word "current" means "flow of free electrons through a _____".
   A) gate B) conductor C) circuit board D) river
4. According to the conversation, electricity flows _____.
   A) from the negative electrode to positive electrode in the circuit
   B) from the full place to the empty place
   C) from the positive electrode to negative electrode in the circuit
   D) from one electron to another electron
5. According to the conversation, the man thinks his study subject is _____.
   A) interesting and demanding B) boring and demanding
   C) practical but boring D) boring and complex

Task 3 You will hear a conversation followed by five questions. Listen carefully and choose the best answer from the four possible choices.

1. According to the conversation, the moving electricity could be called _____.
   A) electricity in motion B) stored-up energy
   C) electric circuit D) electric conductor
2. According to the conversation, the electric wire works like _____.
   A) hollow center of pipes B) pipe
   C) valve D) water
3. According to the conversation, which of the following could be a good insulator?
   A) Copper. B) Ceramic. C) Valve. D) Water.
4. According to the conversation, which of the following could be a good conductor?
   A) Copper. B) Ceramic. C) Valve. D) Pipe.
5. According to this conversation, the basic device of a circuit could be the following things EXCEPT _____.

A) a capacitor　　B) a resistor　　C) a speeder　　D) an inductor

Task 4　Listen to the passage and decide whether the following statements are true or false. Write "T" if the statement agrees with the passage and write "F" if the statement contradicts the passage.

(　　) 1. Thundercloud looks like huge heavy mountains or towers.

(　　) 2. It is the downward draft that rises at hundred miles per hour and joins ice crystals and finally forms rain or hail.

(　　) 3. It could be very dangerous for a plane if it gets stuck between violent upward winds and downward winds.

(　　) 4. The static charges from the rubbing of very warm air and very cold air produce lightning and thunder.

Task 5　Listen to the passage carefully and complete the table below. Write ONE WORD OR A NUMBER for each answer.

The History of Electricity		
Benjamin Franklin	/	flied a (1) _____ during a thunderstorm.
Alessandra Volta	(2) _____	developed the voltaic pile.
Michael Faraday	1831	generated electricity from a rotary (3) _____.
/	(4) _____	The world's first electricity supply was built.
Thomas Edison	1882	built the world's first (5) _____ electricity generation station.
Nikola Tesla	/	devised an (6) _____ system using alternating current.

Lesson 2　Electricity and Home

Background Information

Niagara Falls: the collective name for three waterfalls that straddle the international

border between Canada and the United States, more specifically, between the province of Ontario and the state of New York. They are the Horseshoe Falls, the American Falls and the Bridal Veil Falls. 尼亚加拉大瀑布

Word Bank

socket /ˈsɒkɪt/ *n*. 插座;灯座
conduit /ˈkɒndjʊɪt/ *n*. [电]导管
rewire /ˌriːˈwaɪə/ *vt*.
再接电线,再打电报
fuse /fjuːz/ *vi*. 熔化;融合
unscrew /ʌnˈskruː/ *vt*.& *vi*.
从…旋出螺丝,旋开
cellar /ˈselə/ *n*. 地下室,地窖
immersion heater 浸入式加热器
volt /vəʊlt/ *n*. 伏
three-phase /θˈriːfeɪz/ *adj*. 三相的
neutral /ˈnjuːtrəl/ *adj*.
中立的;不带电的

Task 1 Listen to the passage carefully and complete the sentences below. Write ONE WORD OR A NUMBER for each answer.

1. The electricity to _____ a machine usually comes out of sockets on the wall.
2. The green and yellow conductor is usually called the _____ earth conductor.
3. If there are only black and red wiring, it is best to _____ a house.
4. When in danger, a circuit breaker or a fuse would usually switch off the _____.

Task 2 You will hear a conversation followed by five questions. Listen carefully and choose the best answer from the four possible choices.

1. According to the conversation, what do Smith most probably do?
   A) A shop assistant. B) An insurance sales representative.
   C) An electricity sales representative. D) An electrician.
2. How many sockets are there in most rooms of Mr. Johnson's newly bought house?
   A) Only one. B) Several. C) Two. D) Three.
3. According to the conversation, what is the most serious problem?
   A) The missing home wire. B) The missing earth wire.
   C) The missing circuit breaker. D) The missing fuse box.
4. What happened to some people living in houses without protective earth conductor?
   A) They got electric shock and injured.
   B) They got their houses broken into at night.
   C) They got their houses on fire.

D) They got their house under best protection.

5. What is the electrician's suggestion?

A) Changing the house wiring completely.

B) Replacing the old gas cooker with the new electric cooker.

C) Buying a new fuse box.

D) Doing a lot of work in the kitchen.

Task 3 Listen to the conversation and decide if the following statements are true or false. Write T if the statement agrees with the conversation and write F if the statement contradicts the conversation.

( ) 1. Mr. Smith is coming to help with the garage maintenance.

( ) 2. The extension cable from the first floor could make people get an electric shock if they touch it in the rain.

( ) 3. Mr. Benjamin recommends an immersion water heater without a water tank.

( ) 4. Mr. Benjamin need buy three consumer units with circuit breaker and RCD.

( ) 5. On Mr. Benjamin's plan, a refrigerator is expected to be installed in the garage.

Task 4 You will hear a passage followed by five questions. Listen carefully and choose the best answers from the four possible choices.

1. According to the passage, for most people house wiring could be _____.

A) complicated and dangerous B) easy but dangerous

C) difficult and complicated D) difficult and dangerous

2. According to the passage, the type of power that most U.S. households actually receive is called _____.

A) static power B) three phased power

C) single phased power D) direct current

3. According to the passage, heavy duty home appliances using both hot wires and the neutral include the following EXCEPT _____.

A) micro wave oven B) hot water tank

C) dryer D) roasters

4. What does the author intend to convey by saying "a healthy respect"?

A) To indicate the importance of taking precautions when working around electricity.

B) To indicate the importance of showing respect to electricity.

C) To indicate the electrical wiring work is healthy.

D) To indicate the bad consequence of electrical wiring work on people's health.

5. This passage is _____.

A) a comprehensive book chapter about house wiring

B) a short article about basic knowledge of house wiring
C) a doctoral dissertation on house wiring
D) an oral report on house wiring

Lesson 3 Electrical Company

Background Information

1. **State Grid Corporation of China**: usually shortened as SGCC, the largest state-owned electric utility company in the world. It transmits and distributes power in China. It's located in Xicheng District, Beijing and manages distribution from subsidiaries in Northern China, Northeastern China, Eastern China, Middle China and Northwestern China. 中国国家电网公司(中国特大型国有重点企业)
2. **American Electric Power**: usually shortened as AEP, a major investor-owned electric utility in the United States, delivering electricity to more than 5 million customers in 11 states 美国电力公司

Word Bank

corridor /ˈkɒrɪdɔːr/ *n*. 走廊,通道
electrical installation
电器装置,电气安装
maintenance /ˈmeɪntənəns/ *n*.
维护;维修
van /væn/ *n*. 厢式货车
on the spot 立刻;当场
ware /weə/ *n*. 商品;制品
panel /ˈpænəl/ *n*.
(门、墙等上面的)控制板
assemble /əˈsembl/ *vt*. 装配,组合
programmable logic controller
可编程逻辑控制器
ventilation /ˌventɪˈleɪʃən/ *n*. 通风设备
periodically /ˌpɪərɪˈɒdɪklɪ/ *adv*. 定期地
troubleshoot /ˈtrʌblʃuːt/ *vt*. 寻找故障
malfunction /mælˈfʌŋkʃən/ *vi*.
发生故障
grid connection 栅极接线
infrastructure /ˈɪnfrəˌstrʌktʃə/ *n*.
基础设施
split up (使)分成若干小部分
monopoly /məˈnɒpəlɪ/ *n*. 垄断
territory /ˈterɪtərɪ/ *n*. 领地
bureau /ˈbjʊərəʊ/ *n*.
局;(提供某方面信息的)办事处