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33.The Magic of Energy（能的魔力）1.We talk about energy all the time-"Zilch,the energy food," "energy crisis," and so on.If asked to define it,however,wed probably respond with something like

"Well,its-uh-well,you know-electricity." 1、我们时时刻刻讨论着能：“能量食物”，“能源危机”，等等。如果要我们去给能下个定义，答案很可能是一些模棱两可的话：“哦，能量是，嗯，你知道，电。” 2.True.electricity is one kind of

energy.However,energy comes in many forms.You cannot see or smell or taste energy,but its always there,and one of the most fascinating things about it is its ability to change from one form to another-like magic.This principle of change is what keeps

everything-and everyone-going in this world of ours. 2、确实，电是能量中的一种。但是，能量可以来自多种形式。你看不见、闻不到、也品尝不了能，但是，它始终存在着，关于能量，最吸引人的就是，它具有从一种形式转换成另外一种形式的能，简直如同魔术。这些转化的原理是维持我们这个世界每一样事物、每一个人的运动。 Heat Energy 热能 3.When a

fuel unites with oxygen,we say the fuel burns. what is really happening is that chemical energy(fuel and oxygen) is changing to heat energy.When the fuel(food) we eat unites with the oxygen we breathe,we then have heat energy to run our bodies. 3、当燃料与氧气结合，我们就说燃料开始燃烧了，实际发生的是化学能（

燃料与氧气)转化成热能。当燃料(我们吃的食物)与我们呼吸的氧气结合,我们获得我们身体运动所需的热能。

4. When you pop a frozen waffle into the toaster, electrical energy turns into heat energy. 4、当你取出一块冷冻饼放进烤面包器时,电能转化成了热能。

5. In the internal-combustion engine of a car, an electric spark explodes gasses in the cylinder. the heat energy moves the pistons, becoming mechanical energy to move the car. 5、在汽车的内燃机引擎里,电火花引爆气缸里的燃料气体,然后热能推动活塞,成为机械能推动汽车行驶。

6. In a steam engine, the chemical energy of fuel is changed to heat energy. the heated water, now steam, forces the pistons to move. In a steam turbine, the steam pushes against blades. In both cases, mechanical energy results. 6、在蒸汽机里,燃料里的化学能转化成热能,加热水,成为水蒸汽,推动活塞运动。在燃气轮机里,水蒸汽推动的是叶片。在这两种情况中,都是机械能起的作用。

7. This changing from one form of energy to another can continue almost indefinitely. If, for instance, the steam engine or turbine is connected to a generator, the mechanical energy can become electrical energy, which can become heat energy (for the electric stove), mechanical energy (for the washer), etc. 7、能量从一种形式转化为另一种形式的变化几乎能够平稳连续进行。比如说,如果蒸汽机或者蒸汽轮机和发电机联接起来,那么机械能就可以转化成电能,然后转化成热能(比如电炉)、机械能(如洗衣机)等等。

8. Thus, energy readily changes back and forth from one form to another. What starts out as one form of energy may be a totally different form when it reaches its final use. 8

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、因此，能量可以轻易地从一种形式到另一种形式来回转换。从最初的能量形式到最后的使用形式，能的形态可能已经完全改变了。 Radiant Energy 辐射能 9.Radiant energy is also called light energy.Our most important source of radiant energy is ,of course,the sun.Without it there would be no life,for plant life depends upon radiant energy-and we depend upon plant life. 9、辐射能也称作光能。当然，我们人类最重要的光能的来源就是太阳。没有太阳，就没有生命，植物的生命依赖辐射能，而我们依赖植物的生命。 10.Other forms of radiant energy familiar to us are radio waves,infrared rays,ultra-violet rays,X rays,and gamma rays. 10、我们熟悉的另外一些形式的辐射能是电磁波，红外线、紫外线、X射线和伽玛射线。 Mechanical Energy 机械能 11.In simplest terms,this is the energy of a moving object.Your heartbeat,the pushing of a lawn mower,a baseball speeding through the air,water falling onto a waterwheel,the prying up of a rock with a crowbar-all are mechanical energy,which,of course,was another form of energy earlier. 11、用最简单的术语来描述，机械能就是移动着的物体拥有的能量。你的心脏跳动、推进割草机、棒球在空中高速飞过、水落入水轮机、用撬杠撬开石头等等，所有这些都是机械能，当然，在转化之前它是另一种能量形式。 Electrical Energy 电能 12.Electrical energy usually has to be changed to another form before it actually does what we want it to do.In the toaster,it changes to heat.in a tiny wrist watch or a subway train or a 75,000 horse-power industrial motor,it changes to mechanical energy.In an industrial process called electrolysis,it changes to chemical energy. 12、通常情况下，电能必须先转化为另一种形

式的能，才能为我们所用。对烤面包机来说，电能转化成热能，在一个小小的手表里或者地铁列车里或者一台75000马力的工业电动机里，电能转化成机械能。在所谓的电解工业的过程中，它转化成化学能。 Chemical Energy 化学能 13. Various fuels such as coal, gas, oil and food are common examples of chemical energy. These fuels give off heat when they burn. The process is called combustion or oxidation, and the heat itself is a form of energy. Man uses the energy from some kind of fuel for everything from flying to the moon to thinking about it. 13、最常见的化学能包括煤、天然气、石油、和食物等各种各样的燃料。当这些燃料燃烧时释放出热能。这个过程我们称之为燃烧或者氧化反应，同时热本身也是能量的一种形式。人们从不同燃料中得到的能量，并用这些能量做任何事情，大到飞上月球，小到头脑的思考。

14. A special kind of chemical energy is nuclear energy, sometimes called atomic energy. These names come from the fact that the source of energy is the nucleus, or core, of the atom. Nuclear fuels such as plutonium and uranium give off heat energy when fission (the splitting of atoms in these fuels) occurs. Already we have seen tremendous advances in the use of nuclear energy for peaceful purposes, and many people see nuclear energy as the future answer to almost all of our energy need. 14、核能是一种特殊的化学能，有时候我们称之为原子能。这个名称来自于原子能来源于核、或者原子核这样的事实。当核燃料，例如钚(应该为钚)和铀，发生核裂变时释放出热能(这些燃料中原子发生分裂)。我们已经看到和平利用核能所带来的巨大好处，并且很多人认为核能可以看作解决未来人类

能源需求问题的答案。 15.Energy-the kind of magic we cant live without. 15、能，是与人类生存息息相关的一种魔力。 100Test 下载频道开通，各类考试题目直接下载。详细请访问 [www.100test.com](http://www.100test.com)