OCR 21st Century Science (2012 spec)

**Unit P3b Statements**

Generating electricity

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | electricity is convenient because it is easily transmitted over |  | The steam produced drives a turbine which is coupled to an electrical generator |  |
| **2** | generators produce a voltage across a coil |  | cells increases eventually leading to cancer or cell death |  |
| **3** | in many power stations a primary energy source is used to heat water; |  | distances and can be used in many ways |  |
| **4** | nuclear power stations produce |  | of wire by spinning a magnet near it |  |
| **5** | with increased exposure to ionising radiation, damage to living |  | radioactive waste |  |
| **6** | many renewable sources of energy drive the |  | turbine directly e.g. hydroelectric, wave and wind |  |
| **7** | the mains supply voltage to our homes |  | Cheap fuel costs; reliable; short start up time; nuclear produces little pollution |  |
| **8** | electricity is distributed through the National Grid at high |  | Costs a lot of money to decommission; fuel will run out; pollution leads to global warming |  |
| **9** | Advantages for non-renewable energy sources are |  | Unreliable; expensive to build; can destroy habitats |  |
| **10** | Disadvantages for non-renewable energy sources are |  | Zero fuel cost; don’t produce pollution; hydroelectric is good for sudden demand; solar is good for remote locations |  |
| **11** | Advantages for renewable energy sources are |  | is 230 volts |  |
| **12** | Disadvantages for renewable energy sources are |  | voltages to reduce energy losses. |  |

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| **1** | electricity is convenient because it is easily transmitted over |  | The steam produced drives a turbine which is coupled to an electrical generator | 3 |
| **2** | generators produce a voltage across a coil |  | cells increases eventually leading to cancer or cell death | 5 |
| **3** | in many power stations a primary energy source is used to heat water; |  | distances and can be used in many ways | 1 |
| **4** | nuclear power stations produce |  | of wire by spinning a magnet near it | 2 |
| **5** | with increased exposure to ionising radiation, damage to living |  | radioactive waste | 4 |
| **6** | many renewable sources of energy drive the |  | turbine directly e.g. hydroelectric, wave and wind | 6 |
| **7** | the mains supply voltage to our homes |  | Cheap fuel costs; reliable; short start up time; nuclear produces little pollution | 9 |
| **8** | electricity is distributed through the National Grid at high |  | Costs a lot of money to decommission; fuel will run out; pollution leads to global warming | 10 |
| **9** | Advantages for non-renewable energy sources are |  | Unreliable; expensive to build; can destroy habitats | 12 |
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| **11** | Advantages for renewable energy sources are |  | is 230 volts | 7 |
| **12** | Disadvantages for renewable energy sources are |  | voltages to reduce energy losses. | 8 |