

## Worksheet 1.3.4 Getting the electricity we need

### 1 A different type of crop



Farmer Giles has a piece of land he's never been able to grow much on. It's in a very exposed location and crops never seem to thrive there. The land dries out quickly and the soil isn't great. Then his daughter Daisy suggests he gives up on crops for that patch and puts in photovoltaic panels instead. 'It's a great idea Dad!' she says, 'Never mind carrots, we'll harvest current instead!'

1. Why might this be a good idea?

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2. Would the exposed location and poor soil be a problem?

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3. Daisy tells her dad they can use the electricity to power the milking parlour and sell the power they don't use to the National Grid. Suggest two ways in which this will help the farm's budget.

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### 2 Electricity from coal



One of the ways of generating electricity is to make steam drive a turbine. This diagram shows the main parts of the system.

4. What is the purpose of burning coal?

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5. What could be burned instead of coal?

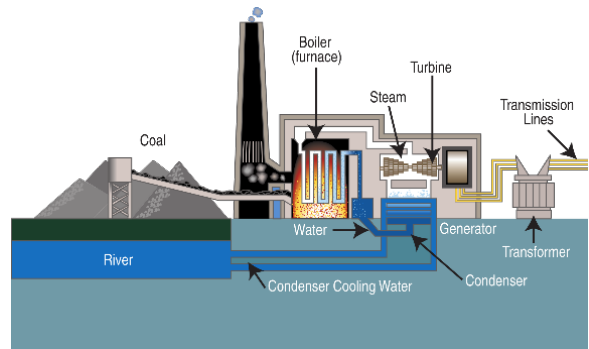
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6. What problems are caused by burning large quantities of coal?

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7. After the steam has driven the turbine round it is then condensed. Why is it a good idea to locate the power station near a river?

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### 3 Getting the mix right



8. Planners from the electricity network decide to make use of both fossil-fuelled station and photovoltaic cells rather than rely on one or the other. Suggest why this might be a good idea.

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