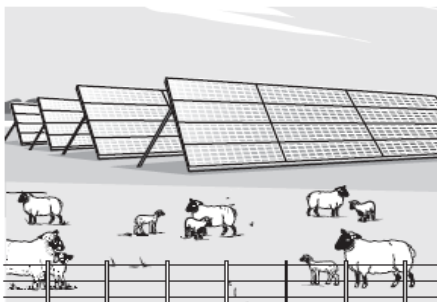


GCSE Physics B (Twenty First Century Science)
J259/02 Depth in physics (Foundation Tier)

Question Set 4

1

Solar farms are large power stations made up from many photovoltaic (PV) panels. Even though they are now very common, most of Britain's electricity is generated by burning gas.



A solar farm



A gas-burning power station

(a) Here are some data about these two types of power station.

Type of power station	Solar farm	Gas-burning
Power output (MW)	35	1400

(i) Calculate the number of solar farms that would be needed to give the output power of this gas-burning power station.

Number of solar farms = [2]

(ii) In the table, the 35 MW power of the solar farm is the **maximum** power it can produce.

Give **two** reasons why the output power is often less than 35 MW.

[2]

(b)*

Jane and Ben have different views about these power stations.



Jane

Solar farms look ugly and take up a lot of space. Their output power is really small. A gas-burning power station provides much more power. Making the PV panels is very polluting, so it's not as green as people say.

Ben

Gas is not renewable. It produces carbon dioxide when burnt which is damaging for the environment.



Describe the **advantages** and **disadvantages** of both power stations using Jane and Ben's views.

[6]

Total Marks for Question Set 4: 10

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