

Here comes the sun



These two devices are being considered as ways of producing electricity for an isolated location.

Image 1a is a small portable petrol powered generator and image 1b is a solar panel.

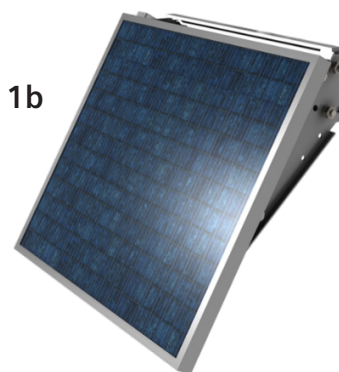
A small community in an isolated settlement is considering these devices. They are discussing the merits of each one. These are some of their comments:

- "The petrol generator is great because we can start it up whenever we need it, day or night."
- "The solar panel would be good if it was connected to a battery. That way it could charge the battery and we would have electricity whenever we needed it."
- "The solar panel is a great idea – it means we don't have to transport fuel here, or pay for it!"

1a



1b



1

Consider each of these points in turn and develop a response.

2

Produce a list of criteria you think the community members should apply. One of these might be: Minimise pollution.

3

Set up a table with three columns:

Criterion	Petrol generator	Solar panel

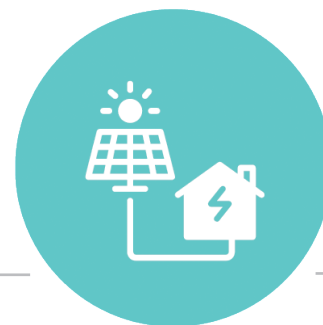


4

We have considered these solutions in the context of an isolated location with no mains power supply. However they may have some merit in a situation where mains power is available. Consider each device in turn and suggest whether it might have some use in a situation where mains power is available.

5

Only two possibilities are considered here and there are, of course, more ways of producing energy for the home. Suggest what else might be used in the isolated setting.



Why this technology is important:

Solar power is an important part of our transition away from fossil fuels and nuclear power. It also represents a move from large centralised power generation facilities and towards a much larger number of stakeholders having the capacity to produce at least some of the power they need themselves. It also means that power can be produced in isolated locations.

However solar cells are dependent upon direct sunlight and even though they still function when the skies are overcast their output is reduced and the obviously don't function at nighttime. Therefore they either need to be used in conjunction with storage batteries and/or other methods of power generation.

