

and secure electricity supplies. A smart grid employs innovative products and services together with intelligent monitoring, control, communication and self-healing technologies in order to:

- Better facilitate the connection and operation of generators of all sizes and technologies;
- Allow electricity consumers to play a part in optimizing the operation of the system;
- Provide consumers with greater information and options for choice of supply;
- Significantly reduce the environmental impact of the whole electricity supply system;
- Maintain or even improve the existing high levels of system reliability, quality and security of supply;
- Maintain and improve the existing services efficiently; and
- Foster market integration towards a European integrated market. [1, 5, 6]

For references, see end of Unit.

► Choose A, B, C, or D:

1. Climate scientists _____ that human-made GHGs are harmful.
a. disagree b. agree c. have doubts d. are in two minds
2. In the future, the British electrical power system will probably rely on _____ generation.
a. two types of b. one type of c. various types of d. fossil-fuelled
3. According to the 3rd paragraph of the Introduction, the terms 'smart meters' and 'smart grids' _____
a. are synonymous b. are opposites
c. refer to two different things d. refer to projects financed by different organizations
4. The word 'actor' (underlined) in the 4th paragraph of the Introduction means:
a. a cinema protagonist b. an interested party c. the public in general d. the scientific community
5. According to the paper, the smart grid will _____ ICT in the future.
a. rely heavily on b. be completely autonomous from c. control d. facilitate
6. One of the contributions of the smart grid that is NOT mentioned in the text is that it _____.
a. makes generation more environment friendly b. reduces generation costs
c. causes fewer accidents d. enhances the system's reliability



Integrating skills

Reading, watching, listening & writing

a. Collecting information from all the contents of the Unit and one of the following videos, make a class poster in groups of three.

- <https://blogs.scientificamerican.com/observations/what-is-the-smart-grid-anyway-video/>
- <https://www.youtube.com/watch?v=N8jqbKd8hVg>
- https://www.youtube.com/watch?v=tkdz1Kf4p_M

b. Read the following article and write notes choosing one of the note-taking types presented in Unit 1. *China power cuts: What is causing the country's blackouts?* at <https://www.bbc.com/news/business-5873319>. Identify the electric power problems, the causes, and solutions.

c. The **smart meter** is used to keep track of people's energy consumption. However, it is reported that it may cause some health issues. Find three reliable sources (e.g., from a textbook, or a scientific article) and take notes (see again Unit 2). Then, write an argumentative essay (see Unit 8) presenting arguments for and against the extensive use of smart meters.

d. Research the disadvantages of the smart grid. Do you think they outweigh the advantages? Write a list of each.

Pronunciation Corner

In paradigm the underlined part is pronounced as in time, but in paradigmatic it is pronounced as in migma.

In woe the underlined part is pronounced as in show (and not as in shoe)!