

How Battery Energy Storage Systems Work

Choose the correct answer.

1. According to the video, which type of energy storage system accounts for over 90% of all stored energy?

- A. Lithium-ion batteries
- B. Compressed air systems
- C. Pumped hydroelectric power plants
- D. Supercapacitors

2. Why have lithium-ion batteries seen the fastest growth in the past decade?

- A. They are the cheapest option available
- B. They have a very high energy density for their size
- C. They are the most environmentally friendly
- D. They last longer than other battery types

3. What happens in a pumped hydroelectric system when electricity is cheap?

- A. Water is allowed to flow down to generate electricity
- B. The system is shut down completely
- C. Water is pumped to a higher elevation
- D. Electricity is sold to other countries

4. What change occurred around 2010 regarding energy storage systems?

- A. Pumped hydroelectric systems became obsolete
- B. Other technologies began to become more economically viable
- C. The first lithium-ion battery was invented
- D. Governments banned traditional storage methods

5. Which devices are mentioned as examples that use lithium-ion batteries?

- A. Cars, trains and aeroplanes
- B. Refrigerators, washing machines and ovens
- C. Laptops, mobile phones and cameras
- D. Medical equipment and industrial machinery

6. What is described as the current trend for power generation?

- A. Using more coal and oil
- B. Focusing on nuclear energy
- C. Developing better storage systems only
- D. Focusing on renewable energy sources

Choose only the correct statements.

1. The speaker explains that energy storage systems can be mechanical, thermal, or chemical.
2. Pumped hydroelectric power plants store energy by raising water to a lower elevation.
3. Lithium-ion batteries are commonly used in small electronic devices due to their high energy density.
4. The speaker states that energy storage systems have been important for over 150 years.
5. The main focus of power generation is shifting towards renewable energy sources.
6. Compressed air energy storage is a type of thermal energy storage system.
7. The speaker believes that battery energy storage systems will become more common in the future.