

# UPGRADE to the Bundle

## Crash Course - CLIMATE AND ENERGY 12 Episode Series Bundle

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### Crash Course CLIMATE AND ENERGY #4: How Can We Store Renewable Energy?

Name: \_\_\_\_\_ Date: \_\_\_\_\_

You can access the video here → <https://youtu.be/D5aZ30sME2w>

1. Photovoltaic panels are used to generate electricity from \_\_\_\_\_ energy.
2. One major challenge with solar and wind power is the lack of \_\_\_\_\_ when the sun isn't shining or the wind isn't blowing.
3. Electricity is carried through conductive materials by the movement of \_\_\_\_\_.
4. The electric \_\_\_\_\_ connects homes and industries to their electricity supply.
5. When renewable energy produces more electricity than needed, utilities may use a process called \_\_\_\_\_.
6. The pattern of midday sag and steep evening demand is referred to as the \_\_\_\_\_ Curve.
7. Shifting energy use to times when electricity is more abundant is called \_\_\_\_\_.
8. Excess electricity can be stored chemically by creating \_\_\_\_\_ fuel.
9. A \_\_\_\_\_ fuel cell generates electricity by allowing protons to pass through a membrane while electrons take another path.
10. The process of splitting water into hydrogen and oxygen using electricity is called \_\_\_\_\_.
11. Mechanical energy storage often uses \_\_\_\_\_ to hold water until electricity is needed.
12. \_\_\_\_\_ energy storage involves using heat-retaining materials like molten salt.
13. All storage options tend to have a high \_\_\_\_\_ compared to fossil fuels.
14. Connecting electrical grids over large distances improves energy \_\_\_\_\_ and equity.
15. There is no single solution to decarbonizing electricity, but it will require global \_\_\_\_\_ and innovation.

### Crash Course CLIMATE AND ENERGY #4: How Can We Store Renewable Energy? KEY

1. Photovoltaic panels are used to generate electricity from **solar** energy.
2. One major challenge with solar and wind power is the lack of **reliability** when the sun isn't shining or the wind isn't blowing.
3. Electricity is carried through conductive materials by the movement of **electrons**.
4. The electric **grid** connects homes and industries to their electricity supply.
5. When renewable energy produces more electricity than needed, utilities may use a process called **curtailment**.
6. The pattern of midday sag and steep evening demand is referred to as the **Duck** Curve.
7. Shifting energy use to times when electricity is more abundant is called **load shifting**.
8. Excess electricity can be stored chemically by creating **hydrogen** fuel.
9. A **hydrogen** fuel cell generates electricity by allowing protons to pass through a membrane while electrons take another path.
10. The process of splitting water into hydrogen and oxygen using electricity is called **electrolysis**.
11. Mechanical energy storage often uses **reservoirs** to hold water until electricity is needed.
12. **Thermal** energy storage involves using heat-retaining materials like molten salt.
13. All storage options tend to have a high **Green Premium** compared to fossil fuels.
14. Connecting electrical grids over large distances improves energy **efficiency** and equity.
15. There is no single solution to decarbonizing electricity, but it will require global **collaboration** and innovation.

15 Questions

Answer Key Included

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