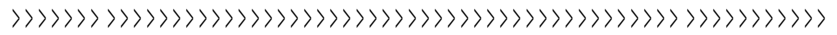


# A Transition Toward a Sustainable Energy System I



**Let's join the session!**



The followings are questions based on the contents of the session. Watch the session and answer each question.

[ 1 ] Explain the benefits and problems of renewable energy.

## Benefits

- Renewable energy may solve the problem of the mismatch in time constants.
- Renewable energy sources, such as solar power and wind power, mitigate global warming because they emit no CO<sub>2</sub>.

## Problems

- In Japan, the percentage shared by renewable energy out of the entire amount of electricity generated or power supply is very small.
- To stabilize the delivery of electricity, we should match the demand and supply of electricity at every moment. But we cannot control power generation by renewable energy such as solar power and wind power. After all, we have to rely on fossil fuel for adjustable electricity generation now.

[ 2 ] Give an example of renewable energy and explain how it works.

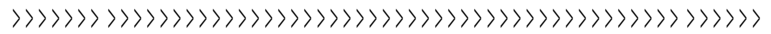
- Solar panels are a hopeful source of renewable energy. It is “on-site power generation,” which means to generate electricity very close to the place of energy consumption. Electricity is generated when the solar panel receives the sun's light.
- Wind power is a renewable energy source. The wind rotates the blades, the force is conveyed to the generator, and electricity is produced.

**[ 3 ] Do you have any ideas on how to increase the demand for renewable energy?**

- To create a city that uses only renewable energy.
- To make it difficult to import fossil fuels by placing high taxes on them.
- To give tax breaks for using renewable energy.
- To give subsidies for using renewable energy.
- To limit the supply of fossil fuels.
- To require large companies and public transportation to use renewable energy.
- To implement policies to reduce the price of renewable energy.
- To create a popular product that uses renewable energy.
- Widely and positively to recommend the use of renewable energy to people.
- To study renewable energy further to make it easier for people to use.
- To increase opportunities for people to learn about the need to address global warming.



**Wrap up the session!**



[ 1 ] The following is the summary passage of the session. Write down the appropriate words in the following blanks of the passage. You may use the same words for several blanks.

One of the main causes of global warming is the use of ( **fossil** ) ( **fuels** ). The use of fossil fuels ( **emits** ) a large amount of CO<sub>2</sub>. The use of fossil fuels started after the Industrial Revolution, and we have consumed large amounts of fossil fuels for about a hundred years. Fossil fuels, on the other hand, have been produced over billions of years, resulting in a huge ( **mismatch** ) in time constants for the production and the consumption of fossil fuels. In order to solve this problem of the ( **mismatch** ) in time constants and ( **mitigate** ) global warming, we need a ( **transition** ) of our energy sources from fossil fuels to renewable energy sources that emit no ( **CO<sub>2</sub>** ). Solar power and wind power are the main ( **renewable** ) energy sources, but they account for only ( **seven** ) percent of Japan's electricity generation or power supply. In addition, we cannot ( **control** ) power generation by either solar or wind power, and other adjustable power supplies are needed to ( **fill** ) the gap between the demand for electricity and renewable power generation. At present, we have to rely on ( **fossil** ) ( **fuels** ) for this after all, and so it is difficult to reduce CO<sub>2</sub> ( **emissions** ). For this reason, we need new ways to increase renewable energy generation, and solar panels and the use of ( **hydrogen** ) are good solutions.