

ENERGY

Name: Abinash Shaw

Class: XI RollNo-23

School: Khanna High School

Problem Statement: 5

A solar panel was being installed in your school terrace. Make an interview question for interviewing the people who were installing the panel if possible or you can do a search on information on the internet and also speak with your school Managing committee members who were there at the time of installation. Then you ask your Head Sir/ Madam to provide you 2 electricity bills – before and after installation of the panel and calculate using a spreadsheet how much is being saved.

How do solar panels work?

A solar panel works by allowing particles of light (photons) to facilitate the free flow of electrons, thereby generating the flow of electricity. It consists of many photovoltaic cells which are basically a kind of sandwich-like structure made up of slices of semiconducting material, usually silicon. Silicon is mounted beneath non-reflective glass to produce PV panels that collect photons from the sun and convert them into DC (direct current) electric power. This DC power then flows into an inverter which transforms it into AC (alternating current) electric power.



TOP 10 WAYS TO CONSERVE ENERGY

- 1. Take advantage of a home energy audit**
- 2. Repair any electrical issues in the home.**
- 3. Invest in energy-efficient appliances for the home.**
- 4. Use power strips wherever possible**
- 5. Switch to LED light bulbs**
- 6. Set the water heater to the lowest comfortable setting.**
- 7. Do laundry efficiently.**
- 8. Turn off televisions, radios and computer monitors when not in use.**
- 9. Program the thermostat**
- 10. Check that the home is insulated properly.**

8 Solutions for Natural Resource Depletion

- 1. Make Electricity Use More Efficient.**
- 2. Use More Renewable Energy.**
- 3. Promote Sustainable Fishing Rules.**
- 4. Avoid Single-Use Plastics.**
- 5. Drive Less.**
- 6. Recycle More and Improve Recycling Systems.**
- 7. Use Sustainable Agriculture Practices.**
- 8. Reduce Food Waste.**

Advantages of Solar Panel

- 1.Reduce the cost of your energy bill.**
- 2.Renewable energy source.**
- 3.Increase your property value.**
- 4.Environmentally friendly.**
- 5.Wide range of solar products.**
- 6.Low maintenance costs.**
- 7.Homeowners can become energy independent.**
- 8Excess solar can be sold to the grid.**

Disadvantages of Solar Panel

- 1.It's Not 100% Reliable. This means that when the sun is not shining, there is no generation of energy.**
- 2.High Initial Capital Costs.**
- 3.Problem of Efficiency.**
- 4.Complications When Moving.**
- 5.Materials Used to Make Solar Panels Can Cause Pollution.**
- 6.Negative Energy Balance.**
- 7.Installation Area.**



**THANK
YOU!**

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