Solar power of Aomori

<Merit>

- It is possible to prevent the emission of the green house gas.
- It is possible to sell electricity.
- There are no costs for fuel.
- Installation costs will be cheaper with the subsidy from the prefecture.

<Demerit>

- Power generation at night is not possible.
- It is affected by the weather.
- There is a finacial risk.

Wind power of Aomori

<Merit>

- It can generate electricity for 24 hours.
- It can be established not only on land but also on the sea.
- kind to the environment.

<Demerit>

- Electric power generation is influenced by wind speed.
- Birds can be hit by the blodes.

~ It will be in the forefront of wind power generation ~

Theme

「Let's use solar power effectively.」

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Purpose, hypothesis, method

The first purpose is to prevent global warming and to solve the problem of lack of energy.
The second is to be useful in the coming future.
Our hypothesis is that six solar panels are needed to supplement the daily power consumption of a typical home.

Our method is to examine on the internet the daily power consumption of a typical home, and the electricity generated by a solar panel.
Then we will calculate how many solar panels are necessary.

Concept of research

First we examined the power consumption during one day. and electric power generation per day of 1 solar panel.
Based on it, we calculated how many panels they need.
In conclusion, power consumption per day of a standard house is about 15kwh.
One average sized panel can generate about 3kwh.
Therefore, it means five panels are needed to cover the power consumption of a standard home per day.
This experiment was done on a sunny day.

However, when it is rainy or cloudy, electric power generation decreases by 20~40% compared with a sunny day. We have a lot of challenges such as consider measures to solve this kind of problem.

Summary what we considered about this problem

① The size of solar generation of electicity and direction of installation and the rule of thumb of the inclination are simulated.

② The shape of the house is considered.

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The shape of the house is efficent to generate electricity