

Wind power

About wind power generation

Wind power generation is the power generation method which turns a dynamo by power in case a wind blows, and makes electricity from the power.

Since it can generate electricity without exploiting oil and limited resources called a nuclear fuel like thermal power generation or nuclear power generation since what exists in a nature is used, wind power generation is resource drain. It is reliable, and since carbon dioxide is emitted, it does not become precocious. Wind power generation is the power generation method apt to the current energy situation.

Structure of wind power generation

Wind power generation turns big feather (= braid) by the power of a wind first. Rotational speed is early carried out through the machine called "speed up gears" after that, and a dynamo is turned and generated by the rotation.

The feature of wind power generation

The point that 40% of the energy by which the feature of wind power generation is brought to global environment, such as waste and carbon dioxide, from the point of not taking out that where a burden is placed, and wind force, at the time of power generation is convertible for electric power and that conversion efficiency is high etc. are got.

Moreover, the energy of the wind which turns a braid is proportional to the 3rd power of wind velocity. I hear that the electric power which will be outputted if wind force doubles increases 8 times. Therefore, it is, so that the strength of a wind is strong. Since a production of electricity increases, installation to a place with much quantity which a wind naturally blows is desired. Therefore, the point that a setting position will be restricted is also one of the features.

Furthermore, the electric power supply which land with much quantity which a wind blows, or a wind may stop blowing at summer in particular, and can do the difference of the time which can be generated so much also in one year, and the time which cannot be generated There is also an unstable point.

The situation of introduction of wind power generation

If the wind-power-generation introduction situation of each country is seen, the amounts of introduction of European countries or the United States including Germany are high, but introduction in China comes to be performed briskly these days, and it will be in 2011.26% of the entire world (the 1st in world) is formed.

Incidentally Japan ranks 13th in the world about 1% of the entire world at the end time of 2011. In addition, from the first, the area of a country is narrow, since there is little flat ground, there are few flows [a style], and Japan is wind power generation. Since it is the environment where it is seldom suitable for carrying out, generating electricity by wind force is not not much easy. To moreover, damage to the windmill which natural disasters, such as a typhoon and thunder, do and plant construction Aggravation etc. of the scene to depend have accumulated the problem.

The merit demerit of wind power generation

If wind power generation is seen globally, it will have spread considerably also in renewable energy, but it has not spread greatly to there in Japan as above-mentioned. Although there are high technical capabilities about them in Japan, why is it that spread does not progress?

This has a reason in that there are many portions to which the weak point of wind power generation overlaps with geographical problems, such as geographical feature of Japan and climate. Let's see in detail.

The merit of wind power generation

- Structure is comparatively easy.
- Take out neither carbon dioxide nor waste.
- Energy conversion efficiency is high.
- A diffusion rate is high also in renewable energy.

The demerit of wind power generation

- Since natural power is used, it does not become a positive energy source.
- Land is large and geographical conditions, such as necessity, are severe.
- It is easy to damage by a natural disaster.

Conclusion

It is expected that most quantity has already spread also in renewable energy, and it will be introduced and will develop greatly [from now on] in the world since internal structure is also easy for wind power generation. In Japan, there are many slopes, and although introduction is seldom progressing from the badness of geographical conditions with few strongly stable winds, now, the feature of large Japan, such as territorial waters which are island countries, is employed efficiently. The experiment which installs feather at sea and generates electric power on a large scale is also conducted.

Other

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• [日本自然エネルギー株式会社](#)

• [NBS - 風力発電](#)