

Clean Energy for Developing Innovatively Technological Entity Applying to Practical Utilization

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Abstract

The clean energy of wind generator, photovoltaic and nuclear one would become new prevalent name in recent years, therefore the research and development for applying to practice utilization is about to become dominantly important. The detail wind one would be used for having much strong wind territories such as north America where the sufficient wind force is going to happen. Moreover, the photovoltaic generator can be used in big western regions then transforming into electric capacity for utilizing to general family. At the same time, the nuclear one can transform to stable electric voltage and transfer. The combined the electrical capacity can be transferred into customers from big western region to eastern one. We should optimize those combinations with controlling monitor and using with artificial intelligence state grid. UHV technological application results With using DC(direct current) 7 hundred thousand voltages can be transferring into eastern territory. Hydraulic power as a traditional one could be applying to many regionally electric supplement with ensuring the stable resource.

Keywords: Clean energy; Development; Application; Wind; Photovoltaic; nuclear; practice; utilization

Introduction

In recent years the clean non contamination energy will be proceeding dominantly in every place of world, so the corresponding work needs to be done by us critically. In the view of different departments the plan that may be made and proceeded and monitored should be proposed to the determining agenda severely and promptly for building a series of regularly operative ones on agenda. For enhancing efficiency and quality and reducing damage and cost the detail plans and activities should be exhibiting in front of our mostly many citizen continuously and constantly. On the long view, we must make the step towards clean energy fast and entirely for making sure through expressed the innovation results. UHV (ultra-high voltage) technology would be applying to the remote distance from western region to eastern one with 8 hundred thousand voltages. So that the transferring technology should be developed and applied to remote distance. On the other side, the overlapping transferring should be searched and

innovative through two and three energy synchronously doing where the low cost and high efficient paths would be explored. Those clean low contamination generator would be invented and optimized for enhancing the efficiency and reducing assembly control cost. Hydraulic power as a old one can be advocated for managing stability and security whose device maintenance and regulation is going to be proceeded easily. As an important factor those clean energy will be utilized further in near future so the relatively knowledge and experience should be explicit and discussed frequently in manufacturer in order to enhance relational innovations [1-4].

Discussions

Wind power and photovoltaic play an important role in the future energy system, but also cannot be separated from the supplement of nuclear power. The following is a comprehensive introduction and development prospect analysis of these four. They are

including in developing wind power, photovoltaic, nuclear power, hydraulic one whose evident roles are clean low contamination energy. In this paper the detail narration is about to be discussed and researched as future utilizing cleansed ones in below. As for developing innovatively new energy we firstly need to know how they have characteristics at all, then consider throughout their principles for utilizing to practical application.

Wind Power Generation & Nuclear Power

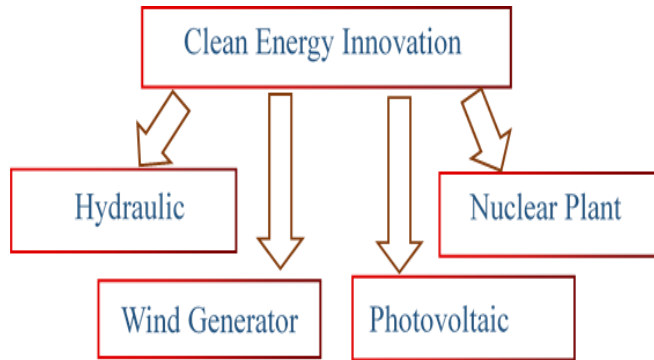


Figure 1: The clean energy classification in recent years.

Wind power refers to a renewable energy technology that uses wind to drive windmill blades to rotate and then drive generators to generate electricity. It is a clean, efficient and environmentally friendly form of energy, which is of great significance for reducing greenhouse gas emissions and protecting the environment.[1] On the other hand, it has bigger power Kw in the respect of modeling parameters choice with long radius, heavy mass and wind speed etc. of turbine blade. Thereby, the choice of mentioning above parameter which would be devised with the bigger power even more than 2 million wattage capacity for each wind generation must have been available. At the same time, it is of importance for lowering the made cost including in material output and assembly difficulty even transporting output of the machinery set. Only if the whole assembly cost becomes decrease can the economic waste be declined at all. So the reasonable optimum design parameters will be calculating the output power for a territory in addition to considering economic output, then the engineering project may be proceeding in light of the optimizing parameters provided for it. As shown in Figure 1 the clean energy will be classifying into four kinds as hydraulic power, nuclear power, wind generator and photovoltaic one. The below two has been innovation powers whilst side two has become experience ones. Both of them belongs to clean environmental power supplies which can create non contamination power. The former will develop continuously forwards and the latter will develop with the society demand and policy plan because they have potential risky for human security such as flood and nuclear leaking contamination. The technical principle of wind power is simple, but it requires well-designed and built windmills and generators to ensure the efficiency and quality

of power generation. The design of windmill blades needs to take into account wind speed, wind direction, terrain and other factors, and the generator needs to adapt to the needs of wind energy conversion to ensure the stability and reliability of power output. The application range of wind power generation is very wide, and it can be carried out in various terrain and climate conditions, such as coastal, inland, mountain and other areas. It can not only provide local clean energy and reduce the dependence on fossil fuels, but also provide power supply to remote areas and improve the living conditions of local residents. The advantages of wind power are not only its environmental protection and cleanliness, but also its economic benefits. Compared to traditional fossil fuel power generation, wind power has lower operating costs and can reduce its environmental impact. At the same time, wind power equipment construction period is short, small footprint, low maintenance costs, suitable for large-scale development and utilization. Above is the advantageous directions where the low cost and making cost is of maintaining the practical utilizing highly in remote territory like establishing in rural regional many windy place in order to acquire the enough capacity and localization. But there are some challenges and limitations to wind power. The instability of wind speed and direction will affect the power output, and corresponding technical and management measures should be taken to deal with it. In addition, the scale and distribution of wind power also need to match the grid system to ensure the stability and reliability of the power supply. Wind power and photovoltaic refers to the use of wind power and solar power generation, which belong to renewable energy, is one of the clean and environmentally friendly energy types. Their advantages are sustainability, low emissions and efficient use of resources, which can significantly reduce the use of fossil energy and effectively mitigate environmental problems. At present, with technological progress and equipment research and development, the cost of wind power and photovoltaic is declining year by year, and the development prospects are very optimistic. At the same time, the supply stability of wind and light energy has also been significantly improved to meet the energy needs of different regions. As two newest devices they is about to extend for long time due to their renewable and low contaminating despite it has some high cost and efficiency problem. We should make endeavour for promoting their material efficiency and reducing material made cost continuously for a long period. Much high plastic blades and silicon ones would be needed to make for the sake of reducing their high cost, which is the core factor narrating by this study. The engineer and professor needs to be searching and making good suggestion on how to decrease the cost matters. As known there are many demands that will be used in current conditions because the much clean and low contaminating electric demand is to need. In general, wind power is a renewable energy technology with broad application prospects, which provides clean and efficient power supply for human beings, and is

of great significance for protecting the environment and promoting sustainable development. In the future, with the continuous progress of technology and policy support, the application scope and scale of wind power generation will continue to expand. Nuclear power is an efficient and clean form of energy that uses the heat generated by nuclear reactions to generate electricity. The advantage of nuclear power compared to wind power and photovoltaic power is its stable, continuous energy supply ability to maintain power supply during extreme weather or insufficient light. [1] In addition, nuclear power plants have a long operating life, and almost no carbon emissions during operation, and the impact on the environment is minimal. However, nuclear power also has certain safety risks and regulatory difficulties, so it is necessary to strengthen safety management and technology research and development to ensure the safety and reliability of nuclear power. The innovative nuclear generator would create new paths to resolve the nuclear leaking accident security whose function may decrease the leaking due to accident happened, so the decreasing contamination emission is about to solve big story. The monitoring check may be utilized and the danger state will be alerting and regulating with emergent procedure, which may be designed and created with artificial intelligence software. The protection from its alerting status has to proceed when the accident trends to come out. The automatic monitor must be predicting the coming up time in advance for AI system to regulate the controlling panel automatically. If so the security matters can be decreased or eliminated completely. In the future, wind power and photovoltaic will become one of the dominant sources of electricity in many regions. In regions where wind energy is abundant, such as parts of North America, Europe and Asia, wind power will gradually replace traditional energy sources such as coal as one of the main sources of power generation. In areas with sufficient light, photoelectric energy will gradually replace fossil energy as an important power source. At the same time, the complementarity of wind power and photovoltaic will also be fully utilized, forming a good complementary relationship with other forms of energy such as nuclear power.

Hydraulic power generation

Hydraulic power as a recent time generation has been using the river depository for generating electric energy with water potential one whose use can be stability and reliability because the non contamination is of forming clean environmental effectiveness. Due to its big effectiveness it could have been used for several decades in China like San Gorge Bam. Because it may be

dependent on river water energy the hydraulic power generator can form stability power from continuous and reliable source. It can create several hundred middle windmills corresponding power in one second, so we must pay special attention to it currently. Hydraulic power generator refers to the use of water flow, tides, waterfalls, DAMS and other hydraulic resources, through hydropower equipment to convert water energy into electricity. Hydropower is an environmentally friendly, sustainable and cost-effective form of energy with the following characteristics:

First, hydropower is not limited by fossil fuels and can meet the growing demand for energy. Secondly, hydropower generation will not produce harmful emissions and will not pollute the environment. In addition, hydropower generation can adapt to different seasons and climate changes by adjusting water flow and water level, and has good stability. Finally, hydraulic power generation equipment usually has high energy conversion efficiency and operational stability, which can reduce energy costs [1].

In practice, hydroelectric power generation usually requires the construction of hydroelectric power stations, including DAMS, reservoirs, water turbines and other facilities. The construction of these facilities needs to take into account the terrain, water resources, ecological environment and other factors, but also need to consider how to protect water resources and ecological environment, to ensure the sustainability and environmental protection of hydropower generation. In order to realize the efficient and sustainable development of hydropower generation, a series of technical and management measures need to be taken. First of all, it is necessary to strengthen the management and protection of water resources to ensure the sustainability and stability of water resources. Secondly, it is necessary to optimize the operation and maintenance of hydropower equipment to improve energy conversion efficiency and operational stability. In addition, it is also necessary to strengthen technology research and development and innovation, improve the level of intelligence and automation of equipment, and reduce operating costs. In short, hydropower is an important form of renewable energy, with environmental protection, sustainable, cost-effective characteristics. By strengthening water resources management and protection, optimizing equipment operation and maintenance, and strengthening technology research and development and innovation, the efficient and sustainable development of hydropower generation can be achieved.

Conclusions

In general, wind, photovoltaic and nuclear power are all important components for future sustainable energy development. They each have unique advantage and characteristics that complement each other to build a cleaner and more efficient energy system. With the continuous progress of technology and policy support, the prospect of wind power, photoelectric and nuclear power is very broad. For wind power and photovoltaic, we expect their costs to be further reduced and supply stability for further improving. For nuclear power, we should strengthen safety management and technology research and development to ensure its safety and reliability. For wind and nuclear power, they need to effectively connect with other forms of renewable energy and form a good complementary relationship. In addition, we also need to fully consider the overall efficiency and economy of the energy system, and rationally allocate various forms of energy to achieve the best energy mix and maximize benefits.

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