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Inverter System: A Solution to Improve the Efficiency of New Energy Generation in Factories

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ABSTRACT

The report mainly analyzes whether the inverter system could improve the efficiency of converting new energy into factory electricity based on McLuhan's laws of media theory. Firstly, the report asserts the significance of using new energy and the importance of utilizing the inverter system to improve the power conversion of new energy in factories. Secondly, it mainly describes McLuhan's theory from four different aspects. In addition, according to the four aspects of McLuhan's theory, the rationality and feasibility of the inverter system solution are analyzed. Then, it is concluded that the inverter system can well improve the conversion efficiency of new energy generation in factories. Finally, this paper claims suggestions from two different perspectives to promote the development of the inverter system.

1. Introduction

1.1 Inverting System's Background in Australia

When global warming and other global climate issues increase dramatically, new energy will gradually replace by traditional energy, which could effectively reduce carbon emissions and environmental pollution. In addition, there are abundant natural resources in Australia, such as solar, wind, tidal and so on^[1]. However, new energy transferring efficiency is extremely low. In order to strengthen the utilization of new energy in factories and improve the conversion rate of new energy, the Australian government has set new energy targets to expand the utilization of renewable energy while reducing the utilization of traditional energy^[1]. In Australia, states and provinces have announced legisla-

tion and regulations providing incentives and funding to ensure that their objectives are achieved^[1]. Moreover, the main form of converting new energy into electricity is direct current, while modern factories usually use alternating currents. Thus, an inverter power conversion device is proposed, which could convert direct current into alternating current and gradually improve the conversion rate of new energy^[1].

1.2 Research Aim

The report is aimed to analyze whether the use of inverter conversion systems in the Australian power system could improve the efficiency of converting new energy sources into power sources. Besides, the report will utilize McLuhan's theory to analyze the conceptual framework and recommendations based on the problem and solution.

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2. The Description of McLuhan's Media Theory

McLuhan's media theory mainly summarizes the inevitable process of the development of the media of things and forms his theory of the media of things. Besides, the theory is mainly composed of four parts to form a media system, enhancement, retrieve, reserve and obsolescence. The following will mainly introduce the basic meaning of these four aspects [2].

2.1 Description of Enhancement

Media technology is a special process of gradually increasing the intensity so that the media surface shape changes. When the intensity of media increases to a certain degree, it will become an important factor influencing the change of media [2].

2.2 Description of Retrieve

As for retrieve, the emergence of new media technology is based on the internal characteristics of the old media, and it is a process of continuous sublimation. However, it will not be separated from the internal characteristics of the old media. Moreover, new media technology and the characteristics of the old media interact with each other so that it can be applied in the new things [2].

2.3 Description of Reverse

Concerning reverse, the new media is based on the comprehensive promotion and characteristics of the old media. When the characteristics of the old media are sublimated to the extreme, it will be reversed. Thus, it will endow the new media with new internal characteristics [2].

2.4 Description of Obsolescence

Since the emergence of new media, its typical characteristics will be superior to the original characteristics of old media in most cases, which will make the old media gradually fade out of people's sight and be eliminated and replaced by new media [2].

3. The Solution of Analysis Based on McLuhan's Theory

The inverter system is a special kind of electronic equipment system which can convert direct current into alternating current. Since the current power consumption in factories is alternating current, and the current form of new energy converted into electric energy is direct current. Thus, the inverter system is needed to improve the conversion ef-

iciency and use efficiency of new energy. The solution will be analyzed based on McLuhan's theory [3].

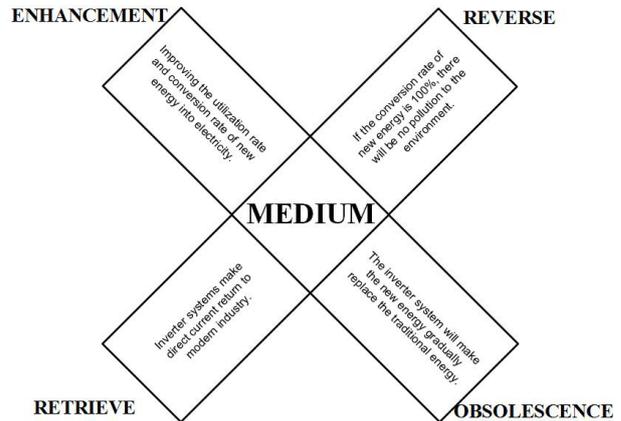


Figure 1. Visualization of McLuhan's theory

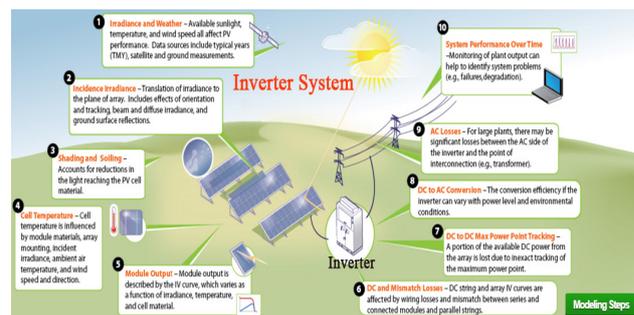


Figure 2. Inverter system schematic diagram

3.1 Analysis of Solution Using Enhancement

In Australia, factories usually use alternating current for daily production and work. Until the beginning of the 21st century, thermal power generation has been the main method to generate electricity, which is mainly through burning traditional energy. In addition, this way of power generation is highly efficiency and it causes massive pollution to the environment. Since Australia is rich in new energy, Australian engineers began to use new energy for power generation, while the power generation is very poor [3]. As the current form generated by new energy generation is mainly direct current, which cannot be directly used in factories, it only use in the residents' life. Thus, the engineers in Australia invented inverter systems that can convert direct current into alternating current, which can be used in factories. With continuously improvement and upgrade, it can be effectively used in the electricity generated by new energy in the factory, which can improve the utilization rate and conversion rate of energy [3].

3.2 Analysis of Solution Using Retrieve

In the mid-20th century, as the immature technology, fac-

tories mainly used direct current for daily production and work. Compared with alternative current, as the development of technology, factories mainly use alternating current for daily production and work and it has become the main form of power plants^[6]. In Australia, since the use of traditional energy generation, the environment is greatly damaged so that they decided to utilize new energy generation. Since the power generation of new energy is mainly direct current, the inverter systems invented by engineers are used to convert direct current into alternating current, which makes direct current return to the society with a new appearance. For this system, new energy will become the main source of power generation^[6].

3.3 Analysis of Solution Using Reverse

If the power supply inverter system can convert 100% of the direct current generated to alternating current by the new energy, it can completely replace the traditional energy generation form. Moreover, traditional energy generation mainly burns fossil fuels for thermal power generation. Besides, this way of generating electricity will release a large amount of greenhouse gases and harmful gases, which could pollute the environment and do harm people's health^[5]. When it can completely replace the traditional energy, we can protect the environment and guarantee people's health to the greatest extent. Moreover, the ultimate in power generation technology has changed the fundamental characteristics of the utilization of alternative current. Through the continuous replacement, the final determination of the use of direct current to alternative current power generation, which is different from the traditional alternative current power generation^[5].

3.4 Analysis of Solution Using Obsolescence

With the continuous improvement of the inverter system, the efficiency of converting direct current to alternative current will be improved. As the development of science and technology in recent years, conversion efficiency has been greatly improved. Over time, engineers strive to maximize conversion efficiency^[4]. In this way, new energy generation will become the main part of power generation technology, gradually replacing the traditional energy generation. In addition, traditional energy generation technologies are as obsolesces and elimination as old media. Moreover, through the upgrading of technologies, new generation technologies will keep pace with the development of The Times to ensure the timeliness of technology products^[4].

4. Conclusion & Recommendations

4.1 Conclusion

In conclusion, based on McLuhan's media theory, the inverter system could improve the conversion efficiency of new energy generation from four different perspectives.

First of all, the inverter system can strengthen the new energy generated by the efficient utilization of electrical energy in the factory, improve the utilization rate and conversion rate of energy. Secondly, the inverter system can convert the direct current to the alternating current so that the direct current with a new appearance back to the factory. Thirdly, if the inverter system conversion efficiency can be achieved to the maximum, AC is the most fundamental characteristic of the change in the final determination of the use of direct current to alternating current power generation. Finally, with the continuous improvement of the inverter system and the development of science and technology, the new energy generation technology will eventually replace the traditional energy generation technology.

4.2 Recommendations

Actually, about how to promote the better development of inverter system, some recommendations will be put forward from the following perspectives.

Firstly, the Australian government needs to increase investment in the inverter systems. In addition, the new way of generating electricity requires a complete overhaul of the current generation infrastructure, which already costs quantities of money. Moreover, it will cost more than ever before to make this new, pollution-free power generation system available in the industry and in People's Daily lives^[7].

Secondly, engineers and scientists need to work harder to improve the conversion efficiency of inverter systems. Also, the current technology is not yet mature so that the conversion efficiency needs to gradually reach 100% to replace the traditional power generation^[8].

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