Application of New Green Energy-Saving Technology in Construction Engineering

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Abstract: With the continuous development of China's current social economy, China's construction industry has also achieved remarkable development. In the current construction industry, relevant management personnel in order to promote the orderly development of construction projects, began to use more green energy-saving technologies in construction projects to continuously improve the construction quality of construction projects. With the continuous improvement of China's current scientific and technological level, more and more new green and energy-saving technologies have been widely applied in construction projects, fully highlighting the characteristics of green and environmental protection in construction projects.

1. Introduction
In the current era, the concept of green energy conservation has permeated each other in various fields. In the process of building engineering construction, due to the huge quantities of the whole project and the serious problem of energy consumption in the construction, it is very important to apply green energy-saving technology in the current building engineering construction, which requires relevant technicians to scientifically and reasonably apply green energy-saving technology according to the construction requirements and construction standards of the building engineering, so as to meet people's living needs to the greatest extent.

2. The Concept of New Green energy-saving Technology
In the whole construction process, the relevant construction links and construction techniques cannot be separated from scientific and reasonable construction technology, so as to improve the construction quality and construction efficiency of the construction project as a whole [1]. In the current era, with the continuous development of China's economy, the problems of air pollution and greenhouse effect are becoming more and more prominent. Therefore, the relevant environmental protection departments in China have started to promote the development concept of green environmental protection to improve the environmental protection benefits of construction projects as a whole. During the whole construction process, construction technologies are not only conducive to improving the service life of buildings as a whole, but also affect the consumption of energy. Therefore, in the current construction projects, more new green energy-saving technologies are applied in practical work. In addition, with the significant improvement of people's quality of life and living standard, people's requirements for living environment are constantly changing. The application of new green energy-saving technologies in the construction of construction projects also meets people's requirements for buildings. In the current era, energy-saving and environment-friendly construction technologies are favored by people. Therefore, in the process of construction projects, relevant technical personnel should continuously strengthen the research on new green and energy-saving technologies and carry out relevant construction technology reforms according
to the actual construction status. The application of new green energy-saving technologies in construction projects meets the requirements of the current era for construction projects and is in line with the development direction of the current era. In the process of construction projects, new green energy-saving technologies occupy a very important position and conform to the environmental awareness of modern people.

3. The Significance of Using New Green energy-saving Technology in Construction Engineering

Energy is an important foundation for a country's sustainable development, and the development of any industry cannot be separated from energy. However, in the current era, due to the rise of various industries in our country, resources in our country are relatively scarce. At the same time, in the construction process of construction projects, the energy consumption problem is also very serious due to the huge quantities of the whole construction process. China is a big country in the manufacture of construction waste. In the current era, more and more scientists have strengthened their research on new green energy-saving technologies to continuously reduce the energy consumption generated in construction projects [2]. In the construction projects, energy consumption will not only cause waste of related costs, but also make the surrounding environment of the construction not develop harmoniously. Therefore, it is very important to apply new green energy-saving technologies in the construction projects in the current era. In the new green energy-saving technology, some constructors have added solar energy technology and various recycled materials, effectively reducing the consumption of related energy in the construction projects, and also reducing the pollution of construction projects to the surrounding areas, so that construction projects can get green and sustainable development in the current era. With the wide application of the current concept of green energy conservation in the construction process of construction projects in our country, green energy conservation technology has been widely implemented in the current nationwide construction projects. The Figure 1 shows the energy consumption reduced after the application of green energy conservation technology in various regions of our country.

![Figure 1. The energy consumption reduced after the application of green energy conservation technology in various regions of our country](image-url)
It can be seen from the above that the application of new green energy-saving technologies in the construction process of construction projects has become the development direction and important development focus of construction projects in the current era. Relevant technicians must strengthen the application of new green energy-saving technologies so as to promote the orderly development of construction projects in China.

4. The Principle of Using New Green energy-saving Technology in Construction Engineering

4.1 Targeted Principle
The first principle to be followed in the application of new green energy-saving technology in construction is the targeted principle. The application of new green energy-saving technology is mainly to reduce the energy consumption and construction cost in the whole project construction. In this case, relevant technical personnel should strengthen the research on green energy-saving technology, so as to promote the cost and application effect of the project construction to be well controlled [3]. When relevant technicians apply new green energy-saving technologies in construction projects, they need to complete them in accordance with the corresponding procedures and standards. At the same time, they need to make more guarantees at the technical level, so as to ensure that the application system of new green energy-saving technologies can be continuously improved. Relevant technicians should make a comprehensive and in-depth analysis of the construction environment of the whole building project and the surrounding environment before applying green energy-saving technology. For example, in the process of construction of some small projects, when applying green energy-saving technology in this project, the key point is to strengthen the recycling of energy and reduce the energy consumption in the whole construction process. In the process of construction of some large-scale projects, it is necessary to coordinate the natural environment of the construction project and the related factors such as human society, so that the construction of the construction project can be continuously developed.

4.2 Diversification Principle
With the continuous development of science and technology in our country, there are many types and ways of using new green energy-saving technologies. With the continuous enrichment of scientific research achievements in related industries, the research and development efforts of new green energy-saving technologies are also increasing year by year. Under this background, when relevant technicians apply new green energy-saving technologies in the construction process of construction projects, they should choose diversified new green energy-saving technologies according to the actual construction needs and the construction status quo [4]. For example, in the process of some engineering construction, a variety of new green and energy-saving technologies have been implemented in the same field, and good construction results can be achieved in the actual construction process. However, there are still many differences in the application of various new green and energy-saving technologies, which requires relevant technicians to coordinate these diversified new green and energy-saving technologies and jointly improve the quality and effect of construction projects.

5. The Strategy of Using New Green energy-saving Technology in Construction Engineering

5.1 Application of New energy-saving Technology for Natural Resources
In order to ensure that the new green energy-saving technology can play its due value and effect in the construction of construction projects, relevant technicians should scientifically and reasonably carry out the development of new natural resources when applying the new green energy-saving technology. First of all, in the process of construction, relevant technicians should make full use of solar energy technology, which can replace the combustion of natural gas or coal, effectively reduce the energy loss generated in the whole construction, and also protect the surrounding environment to a certain extent. Relevant technicians need to build a solar energy heat collection device on the roof of the building to generate a large amount of solar energy, and the solar energy will be converted into heat energy after
being concentrated. So as to meet the needs of people's daily life. At the same time, in the construction process of construction projects, wind technology should also be used to convert wind energy into electric energy. This technology is used in areas where windy weather occurs all the year round. Relevant technicians can build wind generators according to the natural resources of the area. On the one hand, they can provide sufficient power for the construction of construction projects on site to prevent the occurrence of insufficient power supply during the construction on site. On the other hand, relevant technicians can also build wind generators on roofs to meet the needs of people's daily life and effectively reduce the output of electric energy. At the same time, relevant technicians should strengthen the effective utilization of domestic wastewater or rainwater in the construction process of the construction project, so as to meet the requirements of environmental protection in the construction of the whole construction project. With the continuous development of science and technology in our country, a new and environmentally friendly material has emerged in building materials, namely alcohol-based liquid fuel, which belongs to a kind of biomass energy and the main raw material is methanol. Methanol comes from a wide range of sources and its price is relatively low. It is the most popular clean energy in construction projects in the current era. Therefore, the use of this material in current construction projects can effectively reduce energy consumption and construction cost in the whole construction project.

5.2 Architectural Design
In the whole process of construction, architectural design is also very important, and the application of green energy-saving technology in the whole design is also conducive to highlighting the environmental protection features of construction projects as a whole. First of all, when designing the roof of a building, relevant designers should choose a covering material with strong thermal insulation and waterproof performance, so that the loss of indoor heat can be reduced as much as possible even in cold winter, and longer cold air can be preserved in summer. Relevant designers should give full play to the role of indoor thermal insulation when designing the outer wall of buildings, and make more use of some energy-saving and environment-friendly building materials to meet the needs of green design of the whole building project. When designing the doors and windows of buildings, the wall surface and the overall layout of the buildings should be comprehensively considered. Too many doors and windows should not be designed to avoid wasting resources. Relevant designers should meet the specifications and requirements of architectural design when designing the number and location of doors and windows, and should also highlight the green and environmental protection features of the whole building project. In designing the indoor heating system, attention should be paid to saving water resources. The heating technology of circulating water can be used to realize the recycling of resources, and the utilization of circulating water resources can also improve the temperature of the buildings as a whole and achieve good heat preservation effect.

5.3 Application of energy-saving and Environmental Protection Materials
In the current construction process, in addition to the relevant staff to use new green energy-saving technologies, they should also use more advanced green environmental protection materials in the current era to meet the green energy-saving standards. In the actual construction process of the construction project, relevant technicians must scientifically and reasonably select energy-saving materials according to the use specifications of materials, effectively reduce the waste of materials, and at the same time meet the requirements of green energy-saving construction of the whole construction project. Relevant construction personnel should also have a certain awareness of environmental protection during the construction of green and energy-saving materials. Relevant management personnel can organize training activities before construction, so that this part of construction personnel can realize the importance of using energy-saving and environment-friendly materials and the problems needing attention in the construction process, which is beneficial for each construction personnel to have a comprehensive understanding of energy-saving technologies. In addition, in the engineering design stage, relevant designers should fully embody the characteristics of green environmental protection in
the construction of construction projects. The green energy-saving technologies and materials used should conform to the construction standards of buildings, fully consider the design of overall buildings, and then scientifically and reasonably apply new energy-saving technologies according to the layout of buildings.

6. Conclusion
In the current era, new green energy-saving technology have been widely used in construction projects. The application of new green energy-saving technology in the construction projects can not only effectively reduce the energy consumption, but also promote the sustainable development of ecology in our country. Relevant technicians should fully consider the construction requirements and construction standards of the whole building when applying green energy-saving technology in the construction projects, so as to ensure that the green energy-saving technology can play its due value and effect in practical application.

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