



STUDY ON SOLAR ENERGY TECHNOLOGY FOR HIGHWAY SERVICE AREA

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ABSTRACT

As the renewable and clean energy, solar power won't cause environmental pollution that's created by ancient energy like coal, oil, and different fossil fuels throughout the mistreatment method. Development and utilization of inexperienced energy area unit one among the foremost necessary energy saving measures. throughout the past thirty years, several developed industrial countries and a few developing countries have hooked up nice importance to the event of star technology and star technology has been wide promoted and employed in residential areas.



KEY WORDS: *renewable and clean energy.*

INTRODUCTION

The pace of analysis and application of solar power in Europe is additionally in no time and also the use of star heat is additional intensive, involving power generation, domestic plight, heating, native heating water, and then forth. over ninetieth of the star heat is employed for residential areas within the EU [1]. China began to use solar power early within the Seventies, achieving smart leads to the beacon lights. within the Nineties, star electrical phenomenon technology began to be employed in road lighting and signals and star water heat entered the agricultural residential areas underneath the support of China government by the late twentieth century. within the twenty first century, star electrical phenomenon technology has been greatly promoted by the growing attention of state and also the improvement of photovoltaic cell production technology, meantime solar power applications field conjointly enlarged step by step.

DISCUSSION

Nowadays, solar technology is step by step extended to main road traffic field with the introduction of recent traffic lighting devices like star traffic lights, star orientation lights, star street lamps, and then forth. However, few solar power technologies are employed in main road topographic point in China. because the basic infrastructure serving for vehicles and passengers, the general operate of main road topographic point determines the standard and potency and also the economic edges of the service. Owing to the so much location faraway from urban areas, usually main road service areas have few external energy sources to use, whereas conjointly overwhelming additional energy. it's comparatively closed and freelance system. The closeness and independence of main road topographic point determines its dependence and pressure on resources and surroundings. the applying of star technology within the construction of main road topographic point couldn't solely alleviate the deficiency of resources, cut back energy consumption, and improve potency of resource and energy, however conjointly cut back environmental pollution,

maintain ecological balance, improve main road operational potency, and optimize the service quality. The intensive researches on main road topographic point began abroad within the early Nineties. yankee Association of thruway and Transportation (AASHTO) printed the third edition of "expressway service construction guide" in 2001, that stressed the applying of inexperienced building technology from the aspects of domestic waste matter, garbage, and then forth. The studies within the field of main road service facilities in Japan outlined the look layout, bailiwick forms, style principles, and then on comprehensively, clearly, and thoroughly. in keeping with "Japan main road style Manual" of 1980 version, the look necessities of service rest facilities were outlined. The technical standards {and style} strategies of main road new rest facilities area unit created in "Japanese main road design essentials" in 1991 from additional comprehensive aspects. The researches on main road topographic point were launched comparatively late in China. The operate, size, and technical needs of service facilities were merely regulated in "Technical Standards of main road Construction (JTG B01-2003)" [2], while not involving the energy saving technology. Hui and Liu [3] analyzed the house size and parking capability of main road rest facilities in keeping with the sector survey knowledge and theoretical calculations for Shenda main road topographic point in Northeast China. Nilotic [4] created a study within the operate, location, spacing management, and bailiwick style needs of main road service. Shanghai dialect [5] projected the biological disposal technique of main road topographic point sewerage for vegetation watering and bathroom flushing. principle [6] mentioned the economic effects of biological contact reaction treatment technology victimization main road topographic point disposition. It may well be seen that the researches on main road topographic point in China centered principally on the layout and scale of the facilities, the operation manner, facility and waste matter treatment, and then forth however few on energy saving technology. In the meantime, several researches were created on the economic impact assessment of star technology. Maria and Marano [7] mentioned the economic analysis strategies of star electrical phenomenon systems underneath totally different weather conditions and observed that the economic analysis strategies were associated with native policy yet as technical level and weather conditions. Schröder Associate in Nursing Reddemann [8] created an analysis within the economic influence of plight consumption and energy potency on star collectors in several months and weather conditions in terms of the German federal government's economic conditions. Zilla and Abraham [9] proved that the economic effects became higher with the rise of helpful life amount, fuel costs, and market demand supported the institution of a model for the economic usefulness of star plight systems and conjointly all over that the impact of series star collectors is healthier than that of parallel collectors. Hawlader et al. [10] created the economic analysis for star heating water system by victimization totally different variables and all over that the designed collector space is 1000 m² for best payback amount and internal rate of come back. Yi [11] created Associate in Nursing analysis within the energy consumption constitution and energy saving manner for residential building. It may be seen that star technology brings terribly extended economic edges yet as reducing environmental pollution.

CONCLUSION

In summary, a {great deal} of analysis works are created associated with the 2 fields of road spot and star technology and bought great accomplishment. However, sadly, few works were created combining the 2 topics along of road services and solar power saving to create a general analysis on star technology in inexperienced road spot thanks to the look and construction of the service chiefly undertaken by the transport authorities, including the faraway location of the service and its subordinate position within the transit. during this context, it's quite necessary and imperative for launching the analysis on star technology and economic effects of road spot to push low-carbon road spot development and guide star engineering observe

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