

RESTRICTED

ABSTRACT

Sri Lanka is a tropical country and situated very close to the equator. Therefore, almost entire land is exposed to the sun light throughout the year. Therefore, solar energy can be utilized effectively in most parts of the country. As SLN being one of the major power consuming organizations in the country, seeking for renewable energy sources is vital for future requirements. With this fact this study is focused on investigation and analysing the challenges of effective utilization of solar energy to Sri Lanka navy. The scope of the research is SLN Dockyard which is the largest command represents the entire population of SLN.

To achieve these research objectives, researcher conducted a review of literature pertaining to the effective usage of solar energy. Then the researcher identified few key factors which are determining the awareness of solar energy application as Awareness on renewable energy sources, Energy consumption pattern, Local knowledge on solar applications and Popularity of solar energy in SLN. Then the researcher has tested these factors how influential towards the Transition of solar power in SLN. The researcher selected 120 participants from SLN Dockyard to collect data and these respondents are taken as the sample of the study. Structured questionnaires distributed among them to collect data. The collected data analysed through SPSS software and derived results presented through graphs, charts and tables. According to the findings of the study, researcher noted that all formulated hypotheses are accepted and Awareness of renewable energy and Popularity of solar energy in SLN are significantly influence on implementing solar energy in SLN Dockyard. Further, researcher noted that still there is a research gap for investigating on large scale solar application in SLN. Researcher recommended conducting further researches on large scale solar applications in SLN.

Keywords: *Renewable Energy, Energy Consumption, Knowledge, Popularity*