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ASSEMBLY AND PRODUCTION OF CFL LAMPS USING SELF HELP GROUPS

NIKHIL VARGHESE * V. BADRI NARAYANAN **

ABSTRACT

A Compact Fluorescent lamp is a type of fluorescent lamp which is designed to replace an incandescent lamp. The business plan entails the assembly and production of CFL lamps using Self-help groups. Many CFLs can fit in the existing incandescent light fixtures. Compared to incandescent lamps of the same luminous flux, CFLs use less energy and have a longer rated life. The widespread use of incandescent lamps by households and commercial users are a major area of potential efficiency gain in lighting. For example, to get the same light output, one 60W GLS bulb can be replaced by a 15W CFL. The PCBs in which circuit is drawn will be obtained from small scale industries, which are readily available at a low cost. The components like resistors, capacitors and transistor are available at extremely low prices and this does not vary with geography. As the Bulb manufacturers of choke coils are only present in clusters, the SHGs will be close to the Bulb manufacturing clusters. This can reduce the procurement lead time as well as carrying cost of inventory. As the work done by the SHGs involves very little technology, the starting of operations can be accomplished within a month of supply of components. The major cost component of CFL assembling is labor (40-45%) and Bulb(40-45%). In this stage, when the demand has attained critical mass and when the lowest cost possible for assembling of CFLs has been achieved, Bulb manufacture can also be entrusted to SHGs. Taking advantage of the clean development mechanism under the international climate change treaty, the government will be able to offset the cost of the CFL bulbs to the manufacturers or the distributors by availing carbon credits. Carbon credits allow developing countries to take energy saving action, with the developed countries bearing the costs of such action. The bulbs will be quality certified to work for 10,000 hours with a warranty from the distributor. Sensors shall be placed in each bulb between the bulb and the PCB circuit that will measure the current drawn by the CFL lamp which measures the energy consumption. One disadvantage with CFLs is that the initial costs are high. But then, the cost of operation is lower. By involving the state electricity boards, the lower cost of ownership can be made to compensate for the higher initial cost. The CFLs will be sourced by the distribution board from the SHGs according to demand. The consumers, instead of paying upfront the whole price will be paying in installments of 8-12 months depending on the price of CFL. It has to be noted that the installment amount would be designed in such a way that it would be marginally lower than the electricity cost saving per month in installing CFLs.