SOLAR STREET LIGHT (INVERTER) PICBASED

**ABSTRACT:**

Our aim is to design and implement Solar Street Light system to drive a load using solar energy.

Existing techniques for solar based inverter and charger systems rely typically on one of the following methods: One of the methods makes use of comparator to provide automation for inverting and charging process. This reduces the battery life and it affects efficiency of system. Another problem with existing system is, CFL lamps used as load suffers from the starting problem in winter season. Existing systems does not include sufficient protection circuitry. Provide Locking Period to inverter. Locking period means once battery becoms low load i.e. CFL should be turn off when load is reduced from battery voltage of battery gets slight increased so controller will again sense battery vtg and turn on load at this time battery vtg is again become low so load will again turn off this again and again turn on and turn off of CFL will cause cfl damage and so decrease life of cfl.

But in our project we are using Microcontroller instead of comparators for automation purpose, which will improve accuracy and efficiency of system. To deal with starting problem of CFL lamp, we are going to use pre-heating condition.

Our system is well equipped with protection circuitry such as,

1. Over voltage/ current protection.
2. Reverse voltage protection.
3. Reverse polarity protection.

**BLOCK DIAGRAM:**

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