

IMPLEMENTATION OF PRE PAID POWER ENERGY METER WITH LOAD CONTROL USING GSM

ABSTRACT

The present trend of tariff collection suffers from inefficient system of billing and collection in the way of waiting of valuable manpower. So our aim is to overcome these problems with the introduction of 'POWER CARD' - A NEW APPROACH TO TARIFF COLLECTION. (The rate at which electrical energy is supplied to a consumer is known as tariff. In this power card system the consumer purchases the prepaid card, which is available in different designations as per his requirements. This POWER CARD project is fitted inside the consumer's home, before the energy meter. When user inserts the Power Card in his Power Card System's Card Holder, the Card Detector takes care of verifying the authenticity of the power card inserted. If it is found OK then his total units consumed is started counting and accordingly his card's units are determined. At the same time his home gets power supply through Energy Meter. Simultaneously, the card analyzer checks the designation of the power card inserted and makes the corresponding output line high. When the total consumption reaches 90% of the designated unit value, alerts consumer notices it; he can buy another card to his requirements to avoid any future power cut. Else, after total power consumption reaches the power card's designation unit values the system automatically extends power for some days and disconnects the power supply.

This system is efficient, therefore accurate assessment of energy audit program and also necessary to promote a goodwill and consumer relation and thereby ensuring exact revenue collection, which is exact proportion to the generation of electrical energy.

This project has following advantages:

1. The man power is decreased considerably, and recording of energy meter reading and preparation of bills for other consumers is simplified.
2. Accurate meter reading and billing and no problems due to faulty and non-reading meters.
3. The consumer is free from maintaining past records.
4. No meter reading problem due to the door locked cases.

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5. The main advantage is avoiding the problem of tariff collection i.e., no detecting of tampering and theft of power.
6. The number of cards released by electricity can predetermine load.
7. The supply authorities can maintain good relation and gain good will from consumer.
8. The consumer gets options to buy his convinced designated power card, hence to control his monthly budget.