Project Proposal

# Introduction

The product is an Android phone app designed to calculate electricity tariffs in Sri Lanka based on the meter reading provided by a consumer. The app can also provide a graphical/numerical view of bill trends based on historical data so that a consumer can analyze the usage statistics over time.

# Functionality

As an initial step, a consumer has to provide the final meter reading as stated in the last electricity bill issued by the electricity board.

The user will be able to input the next meter reading using three different modes that can be convenient to each individual. They are,

* By an image taken from the phone camera if the phone has an in built camera.
* By user’s voice read out if the phone supports voice recognition.
* By providing the numeric input via the GUI.

The consumer only has to provide the meter reading using one of the above-mentioned methods and the app will do the required data analysis and calculations.

Proper validation in place will validate whether that the user has the required phone hardware to allow the required capturing of data and will provide necessary error messages informatively if applicable to the user via the GUI .

Based on the hardware features supported in a user’s phone, all possible capture modes will be enabled and image capture will be the default. This is done in order to support older phone models to use this app since those older models may not be able to produce a viable clear image for the OCR functionally to work accurately.

The app will use the latest tariff rates provided by the electricity board as well as the tariff category for its calculation. (Domestic and Religious Premises customers)

Once the last mentioned meter reading extracted as stated above, the consumer can view the following information.

* The calculated bill value and the number of units utilized for a month based on the previous and current month’s meter reading.
* The number of units utilized and the bill value for a required period of time, for example the bill value for a day or week based on the last meter reading recorded and the current meter reading.
* Graphical bill trends and the average units consumed per day based on historical statistics.
* Notifications/reminders to check your meter reading can be set if required by the user.

# Benefits to a user

This app will allow a consumer to cross check the bill value stated on the monthly bill issued by the electricity board against the bill value for the month generated via the app, so that a consumer can ensure that the monthly bill issued by the electricity board is devoid of any human error that can occur in the manual meter reading and calculation involved in the billing process.

Since the app maintains historical statistics, a consumer can view the bill trends and thereby make smart choices to bring down the electricity bill by analyzing the average consumption for the month so far.

# Technology

The app would include a simple set of GUI, a local storage database to store consumer billing data and the calculation modules used to implement the functions. App is targeted to support from Android version gingerbread to the latest lollipop builds.

# Commercialization

Consumers can download and use the app free of charge for a period of 3 months. Thereafter a subscription fee of 0.99 USD per year is applicable if usage statics features are to be used. Basic functionality of calculating the bill value will be available for all (to be verified)