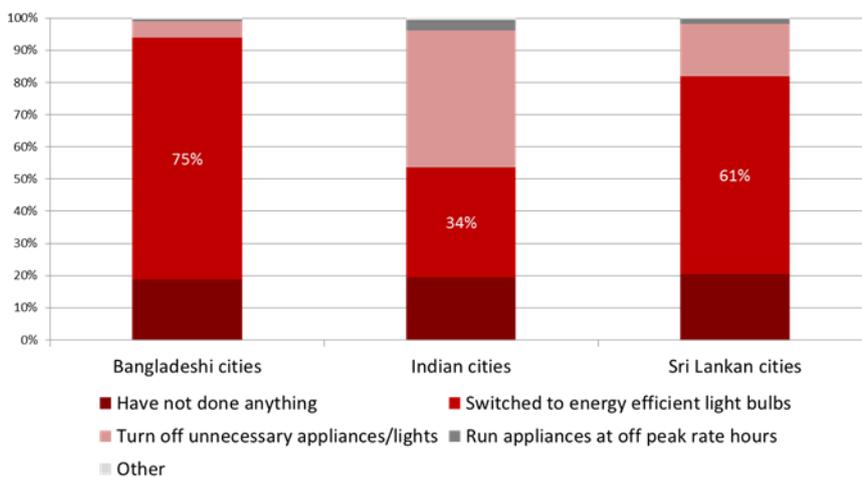


LACK OF EFFICIENT USE OF ELECTRICITY

The cost of producing electricity in Sri Lanka is among the highest in the region and the cost of generating electricity during peak demand times is much greater than the cost of producing it at off peak. However this is not reflected in the Sri Lankan electricity tariff structure for domestic, general purpose and religious consumer categories, since there is no time of day metering. So consumers in these categories lack an incentive to reduce electricity consumption during times of peak demand. A survey of urban low income micro-entrepreneurs in selected cities in Bangladesh, India and Sri Lanka reveals that they are interested in reducing their electricity bills, and many have already taken action¹. For example, over 61% of Sri Lankan micro-entrepreneurs surveyed reported the use of energy efficient or CFL light bulbs and about 80% have taken some kind of action to reduce electricity consumption (Figure 1).

Figure 1: Switching to energy efficient lighting is the most common method of reducing electricity consumption (% low income micro-entrepreneurs who use electricity for business)



“My electricity bill has risen lately. Since I am the only earning member of my family, things are difficult for me. I switch off my refrigerator when I am not using it, but I would like to know more about how else I can reduce my electricity bill.”

– Nazreen, Colombo

DEMAND SIDE MANAGEMENT

DSM is defined as “modification of consumer demand for energy through various methods such as financial incentives and education”. DSM has been effectively used in the past to conserve energy. As mentioned above, a successful DSM technique promoted by both Ceylon Electricity Board (CEB) and Lanka Electricity Company Pvt. Ltd (LECO) has been the use of energy efficient or CFL light bulb.

The best form of DSM is to shift consumers away from using electricity at times of peak demand. In order to do this, we need to introduce time-of-day billing/metering. This requires policy change, and significant capital investment in the form of installing smart meters.

¹<http://lirneasia.net/projects/2012-2014-research-program/improving-service-delivery-for-e-inclusion/>

But in the absence of time-of-day metering, what else can be done to help consumers use electricity efficiently?

Solution 1: More information through bills

Information can be printed on the back of electricity bills giving details of energy efficient appliances and energy efficient methods of using existing appliances. For example, the information given can include the approximate consumption of electricity by commonly used household appliances.

The calculation has to be given in the format below as the consumer is most familiar with the notion “number of units consumed” and NOT “number of kWh”.

E.g.: 1 fan for 10 hours = 2 units units of electricity

Sri Lankan distribution companies have made efforts to inform consumers of DSM methods through their websites. However information on websites only reaches a limited audience.

Solution 2: Solutions for the Energy Hungry House; consuming more than the neighbors

Providing information on consumption patterns of other consumers can be used to prompt changes in behavior.

An info graphic (in the local language), can be added to the electricity bill of high consumers, highlighting their greater consumption as compared to other similar households in the area. Trials on this were conducted with success by the Singapore energy regulator, the Energy Market Authority (EMA). Higher consuming households were informed that their consumption was above the average when compared with similar households, thus nudging these consumers towards lower consumption.

Solution 3: Know your amount payable; bills through SMS

Most consumers only find out their consumption once they receive their monthly bill. Energy calculators are available online, however not all consumers will be able to access these. A solution to this is bill by SMS; the consumer is sent a SMS which gives the number of units consumed and the cost.

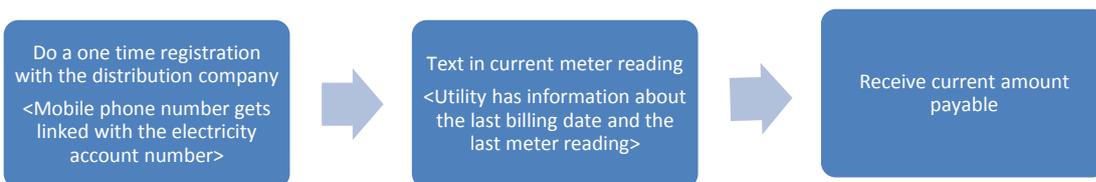
This helps the consumer keep track of electricity amount payable and avoids a ‘bill shock’ where a consumer receives an unexpected amount in the bill at the end of the month and has difficulty paying.

Basic Solution



The format of the SMS has to be specified and printed on the monthly bill

An Advanced Solution



For further information please see <http://lrneasia.net/projects/2012-2014-research-program/improving-service-delivery-for-e-inclusion/>