Fact Sheet

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Estimating Standby Power Consumption from Televisions, Set Top Boxes and No-Load Losses from Personal Computers

What is Standby Power?

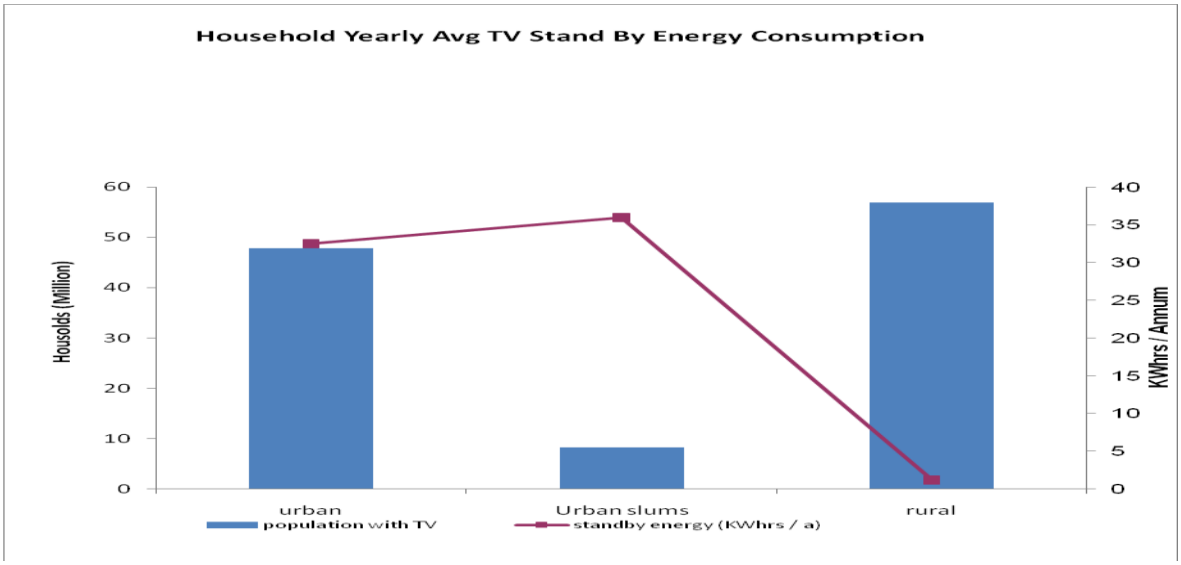
Standby power can be defined as electricity used by appliances while they are switched off or are not performing their primary function. Standby power consumption is often smaller than the total power consumption. However due to the long running hours in standby mode, and the high penetration rate of certain appliances, the total standby power consumption for the country can turn out to be significant. No-Load loss is Power and energy lost by an electric system when not operating under demand. This means that the system consumes power even when its internal power switch is switched off. Because of its silent nature standby and no load losses are often overlooked, and can become an obstacle to efficiency without planners being aware of the threat

Choosing Appliances

Not all appliances have standby power consumption. We decided to choose 3 appliances to take a look at standby power, based on penetration of the appliances, the quantum of standby power consumption, and the potential growth over the next few years. The 3 appliances that were decided on were Televisions, Set-Top Boxes, and Personal Computers.

Lifestyle Issues

Whether an appliance is left on standby or not is also an issue that is governed by life styles and living standards. Therefore it is important to see, who are the ones that are the major contributors to standby power? We find that in most cases the rural poor have very small standby consumption while the urban population has a much higher Standby consumption. As we can see from the following graph that the standby consumption from Televisions and Set -Top boxes are substantially higher in the case of urban population. The same is true for set-top boxes. This is not because people in rural India want to save



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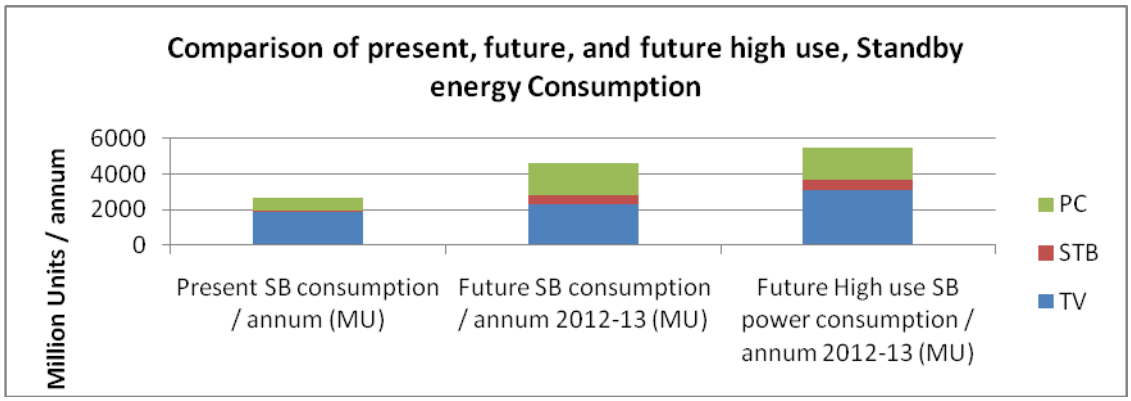
electricity and their bills. In fact no one interviewed understood the standby concept. The driver for the low standby consumption behavior is the bad quality of power and the impact this can have on the appliances themselves. This is a very important insight as policy makers will have to take a different approach in their efforts to curtail standby power consumption depending on which segment they want to target to change the usual behavior pattern.

Present and Future Standby Consumption

The standby power consumption was calculated by doing a survey in households of different categories mainly Urban, Urban slums and Rural. The total standby power consumption at present was found to be substantially high at around 2700MU in 2008.

In five years in the low growth scenario we find that the total standby power consumption from these 3 appliances will be a massive 4618 MU. In the rapid growth scenario the total standby power consumption in the year 2013 is a mind boggling 5500MU.



The rapid increase in standby power consumption makes it a very urgent issue that needs to be tackled as quickly as possible. As with all energy efficiency issues if left unchecked the losses keep mounting as consumers buy inefficient products and the cost of replacement as well as the time taken for replacement increases.

Contact info@prayaspune.org for details.

- **Standby power consumption needs to be checked now, otherwise we could be saddled with inefficient appliances for a decade or more.**
- **Standby power can be reduced by two methods. One is by limiting the standby power consumption of new appliances, and the other is by changing usage behavior.**
- **Delay in bringing in standby legislation will require more effort towards changing consumer behavior - an expensive proposition involving dissemination of information and educating the public.**
- **There already exist appliances with 1watt standby and less. Immediate legislation is needed to ensure that appliances having more than 1 watt standby are not sold.**