



Ministry of Petroleum & Natural Gas, Government of India

## Make Gas and Kerosene last longer

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### Do you know that housewives can save upto 30% of cooking gas or kerosene by following a few simple 'fuel-saving tips'?

We at PCRA have conducted a series of experiments on how to save cooking gas or kerosene. This was done in collaboration with the Indian Oil Corporation Ltd. (R&D Center), and the Institute of Hotel Management and Catering & Applied Nutrition, NEW Delhi. Our experiments have revealed that it is possible to save upto 30% of cooking gas or kerosene by following good cooking practices. It will be surprising to discover that certain cooking habits cause substantial waste of fuel.

Given below are a few tips on how to minimize losses and get value for the money you spend on cooking gas or kerosene:-



#### A few minutes of planning ensures a big fuel saving

Every thrifty you can avoid an idle flame if you prepare and keep all materials required for cooking within reach, before lighting the stove. Experiments have revealed that keeping the flame of the larger burner burning unnecessarily in a gas stove, results Even a few paise saved everyday will amount to a sizeable saving by the end of a month.

#### Remember

Light your stove only after you have kept all the ingredients within your reach and ready for cooking. Put off an idle flame at once.

#### Pressure cooking saves fuel

Pressure cooking is one of the fastest and most economical ways of cooking. Experiments have shown fuel (kerosene or cooking gas) savings of 20% on rice, 46% on soaked gram dal and 41.5% on meat, as compared to ordinary cooking. The savings in cooking time were equally high. To obtain further savings from a pressure cooker, use the separators of the cooker to cook different items such as rice, vegetable and dal, all at the same time. Just think of the fuel and money you will save! And have your entire meal ready quickly.



#### Remember

Pressure cooking saves Fuel and time. Use separators in the pressure cooker to cook different items at the same time.



#### Use optimum quantity of water

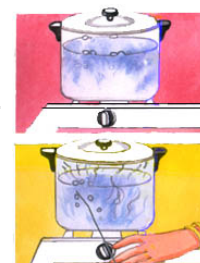
The quantity of water used differs for various dishes. And even for the same dish, different housewives use varying quantities of water. Since water is extensively used in cooking, you should remember that surplus water wastes fuel. Besides, when the excess water is drained subsequently, precious nutrients are lost. An experiment on cooking rice with double the required quantity of water has revealed that fuel consumption increased by 65% So use only the optimum quantity of water for cooking.

#### Remember

Surplus water consumes additional fuel which could otherwise be saved.

#### Reduce the flame when boiling starts

When a vessel's contents reach boiling point, a low flame is enough to keep them boiling. Addition of more heat at the boiling stage causes further evaporation of the liquid without serving any useful purpose. Hence, when water or any other liquid is boiling, reduction in the flame will reduce wastage. This is possible in a gas stove by turning the knob to 'simmer' position or in a kerosene stove by lowering the wicks. Experiments conducted have revealed a saving of 25% fuel when the flame was reduced after boiling had started. Try it yourself. You will find that the time taken to cook is just the same.



#### Remember

Always reduce the flame once boiling starts.



#### Soak before cooking

Experiments have shown that soaking ingredients such as dal and rice for various intervals of time before cooking saves fuel. 250 gms of kabuli chana (chick peas) when soaked overnight in water consumed 22% less fuel as compared to the fuel required for the same quantity of unsoaked kabuli chana.

#### Remember

Sizeable savings in fuel are possible if you soak cereals in water before cooking.

#### Shallow, wide vessels save fuel

A visible flame touching the sides of vessel wastes fuel since it gives out heat to the surroundings. But if you cover the flame as much as possible by using a broad vessel, you will save fuel. Our tests have established that for most stoves, a vessel of 25 cm. Diameter is ideal for cooking. A vessel of this diameter tends to cover the flame completely. Where a narrower vessel cannot be avoided, try and reduce the flame so that it does not creep up on the sides of the vessel.



#### Remember

Hide the flame with broad bottomed, vessel. Do not use vessels which are narrow as they allow the flame to creep up on the sides.

#### Put the lid on heat losses



It is a good practice to cover cooking vessels and pans with a lid, as an open vessel loses heat to the atmosphere which means a waste of fuel. A vessel of 100sq.cm. opening, containing not water at 96°C would waste 7.2 GMs Of gas per hour. The heat loss would increase by 2-1/2 times if there is wind blowing through the kitchen. If the vessel is covered by a lid, the heat loss would drop appreciably to 1.45 gm. Of gas per hour as heat is retained within the vessel.

**Remember**  
Always place a lid on an open cooking vessel or pan.

**The small burner saves fuel**

A cooking gas stove has a big burner and a small burner. The small burner consumes 6% to 10% less gas than the big burner ! An experiment on cooking 250 GMs Of potatoes revealed that the small burner consumed 6.5% less gas but took 7 minutes more than the big burner. Similarly in a kerosene stove, by cooking at lower flame you will use less fuel. You can now imagine how much fuel is being avoidably wasted. True, the small burner of the lower flame takes a little more time to complete cooking, but then you are not always in such a hurry that you can afford to waste fuel.



**Remember**  
Use the small burner or lower flame more often, as the case may be especially when you have time to spare.



**A clean burner helps save fuel**

It is important to clean the burner of your gas range regularly and trim or replace the wicks of the kerosene stove. Soot clogged gas burners and charred wick-ends of a kerosene stove increase fuel consumption. Regular maintenance of your stove helps you save fuel. In case stove knobs do not move freely, get them attended to.

**Remember**  
A bright, steady blue flame means efficient burning. If you see an orange, yellow or non-uniform flame, clean the burner or wick as the case may be.

**For additional saving**

The use of 'ISI' marked kerosene wick stoves in place of non-'ISI' marked stove saves upto 25% of kerosene and the use of higher efficiency 'ISI' marked LPG stove (the thermal efficiency level of which is 68%+) saves upto 15% of gas.



**Clean vessels help too**

A coating of undissolved salts is usually found on the insides of kettles and cookers. Even a millimeter thick coating can reduce the flow of heat to the vessel's contents. This increases your fuel consumption by as much as 10%.



**Remember**  
Cooking vessels should always be scrubbed clean.

**Allow frozen food to reach room temperature before cooking**

Cold milk, frozen meal or any other cold food-stuff from the refrigerator should not be taken straight to the cooking pot. Keep it out of the refrigerator for some time before putting it on the stove. Very cold food consumes a larger amount of fuel.



**Eat together Save Fuel**

If all members of the family eat together, which signifies togetherness and increases joy, frequent reheating of food before serving can be avoided. If eating together is not possible, store cooked, hot food in insulated containers to serve it hot later.