



## Schedule No- 9

### Domestic Liquefied Petroleum Gas (LPG) Stoves

#### 1. Scope

- 1.1 This schedule specifies the energy Star labeling requirements for Domestic Gas Stoves using Liquefied Petroleum Gas being manufactured, imported, or sold in India.
- 1.2 The scope covers Domestic Gas Stoves intended for use with Liquefied Petroleum Gas at 30 gf / cm<sup>2</sup> gas inlet pressure.
- 1.3 This Star labeling programme is on voluntary basis till further orders.

#### 2. Normative Reference

- 2.1 This Schedule shall be read in conjunction with IS 4246:2002 with all amendments, wherever applicable.

#### 3. Terms and Definitions

**Domestic Gas Stove:** The domestic gas burning appliance consisting of single or multiple burners, injector jets, gas taps, burner pan supports, piping and fitting intended for use with Liquefied Petroleum Gas at 30 gf / cm<sup>2</sup> gas inlet pressure.

Pressure regulator is not included as part of the stove.

#### 4. Eligibility Criteria:

- 4.1 Manufacturers of equipment / importers / persons-in-trade can participate in the scheme by registering with the Bureau.
- 4.2 The appliance is usable with only liquefied petroleum gas (LPG) and not with any other family of gases.
- 4.3 BIS License mark certification for the product is mandatory and the gas stove may also be marked with the Standard mark governed by the provisions of the Bureau of Indian Standard Act 1986 and the rules and regulations made there under.

The qualification criteria for participation in the Standard & Labeling program for Domestic Liquefied Petroleum Gas (LPG) Stoves shall be as follows:-

Following categories are eligible to qualify for participation:

1. Manufacturers of equipment
2. Importers



3. Persons-in-trade

5. Testing Guidelines

5.1 The testing code and procedure for Domestic Gas Stoves using Liquefied Petroleum Gas would be as per IS 4246: 2002 – with all amendments.

5.2 Thermal Efficiency:

The thermal efficiency of Domestic Gas Stoves using Liquefied Petroleum Gas shall be determined as per test procedure specified in “Clause 26 of IS 4246: 2002” – with all amendments.

5.3 Manufacturers are required to submit the test report from BIS / BIS Approved / NABL Certified / CSIR laboratory only.

6. Energy Efficiency Criteria:

6.1 The Thermal Efficiency of each burner of Domestic LPG Stove shall not be less than as specified in clause 7.1 below.

6.2 For Domestic LPG Stove, the lowest thermal efficiency of a burner of the stove (having one or more number of burners) will be considered for Star labeling, as energy efficient product.

7. Star Rating Plan :

7.1 The Star Rating levels for Labeling Programme for Domestic LPG Stoves will be as given below :

Star Rating	Thermal Efficiency (As per IS 4246:latest)
1 Star	If Thermal efficiency $\geq 68\%$ & $< 72\%$
2 Star	If Thermal efficiency $\geq 72\%$ & $< 75\%$
3 Star	If Thermal efficiency $\geq 75\%$ & $< 78\%$
4 Star	If Thermal efficiency $\geq 78\%$ & $< 81\%$
5 Star	If Thermal efficiency $\geq 81\%$

7.2 Under the check/challenge testing process (as given in Scheme), the LPG stoves shall be tested for thermal efficiency only.

7.3 Tolerance: No Negative Tolerance is applicable.

7.4 This schedule applies to all sizes of domestic gas stoves and not limited to any preferred size.



8. **Manner of Display:-** The Star label design and manner of display will be as per details given below:

### 8.1 Family of Models

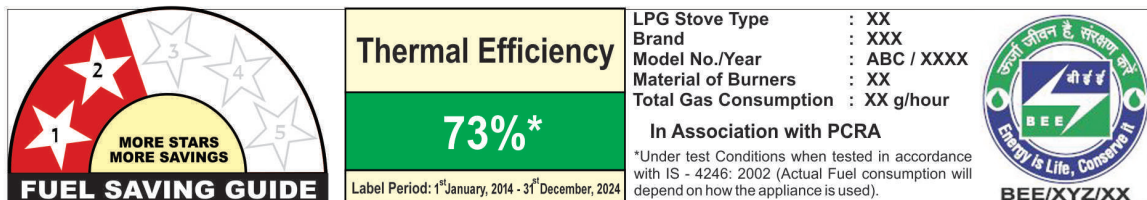
Family of Models is the range of models of one particular brand, to which a single set of test reports is applicable and where each of the models has the same material of gas stove body design and material of burners, total gas consumption in g/h and rating of individual burners in kcal/h and having same energy efficiency rating and performance characteristics. The term 'model' is synonymous with 'family of models'.

### 8.2 Placement & Manner of Display

All the approved Domestic Gas Stoves using Liquefied Petroleum Gas must display the Energy Efficient Star label at the point of manufacturing. The Star label shall be adhered/ transfixed / aluminium anodized label, on the front of the unit or display front. The Star label may also be printed on the exterior of the packaging of the equipment.

### 8.3 Star Label Design :

The Energy Efficiency Star Label for domestic LPG Stove shall be cut to outlines shown below-



#### i. Colour Scheme for Logo

##### BLUE –

Hue (H)-239° Saturation(S):64% Brightness (B):59%

Luminance or lightness (L):28, chromatic components -a: 24 b: 54

Red(R):54 Green (G):55 Blue (B):151

Cyan(C):97% Magenta (M):95% Yellow(Y):6% Black (K):1%

Web color code - #363797

##### GREEN –

Hue (H)-150° Saturation(S):10% Brightness (B):67%

Luminance or lightness (L):61, chromatic components -a: 53 b: 32

Red(R):0 Green (G):170 Blue (B):87

Cyan(C):81% Magenta (M):10% Yellow(Y):90% Black (K):1%

Web color code - #00AA56



- ii. **Material, Shape and placement:** The Star label shall be adhered/ transfixed / aluminium anodized label, on the front of the unit or display front. The Star label may also be printed on the exterior of the packaging of the equipment.

## 9. Fees

The user of label with respect to each equipment shall deposit a sum of Rs 1 lakh along with the application for seeking authority to use label, as a security deposit. The amount of labeling fee due in a financial year shall be paid by the user of the label to the Bureau of Energy Efficiency within one month of the close of each financial year. In case of default in payment of the due amount of labeling fee the security shall be forfeited. Further, participation by the defaulters in the scheme shall be subject to payment of full amount of labeling fee due with 10% interest thereon and with the approval of the National Standard & Labeling Implementation Committee.

- a. Registration fee is payable on application for assignment of authority to affix Star label is Rs. 2000/- (Rupees Two Thousand only).
- b. Registration fee is payable on application for renewal of authority to affix Star label is Rs. 1000/- (Rupees One Thousand only).
- c. Labeling fee for affixation of Star label on each piece of Domestic gas stove using Liquefied Petroleum Gas is Rs.1/- (Rupee One only).

## 10. Others

- (i) **Tolerance limits:** There is **no tolerance** for the Star Rating. All tested products shall meet the minimum threshold for each Star Rating Band.
- (ii) **Validity of Label:** Label to be valid until the next proposed change in the star rating for Domestic LPG Stoves or for a period of two years, whichever is earlier
- (iii) **Future Specification Revisions:** BEE reserves the right to revise this schedule, should technological and/or market changes affect its usefulness to consumers or industry or its impact on the environment. In keeping with current BEE policy, whenever there is any changes in the schedule particularly with regard to changes in the test procedure or the and/or the energy efficiency norms/values, the manufactures/user of the label shall ensure that their product meets the requirements of the revised schedule for which they should submit fresh application for fresh registration. To qualify as Star labeled product, a product model shall meet the BEE's revised schedule in respect of the products and models dispatched or shipped from the manufacturers premises immediately after the effective date of implementation of the revised schedule.
- (iv) **Label Design and Manner of Display:** *All Domestic LPG Stoves must display the label at the point of sale. The label shall be so fixed it is clearly visible. The manufacturers shall ensure that the star level approved to be displayed on the label of Domestic LPG Stoves shall be maintained during the validity period of label.*



ANNEXURE 1

**TEST REPORT FORMAT-Domestic LPG Stove**

This annexure shall provide the template of the test report to be used by manufacturers to BEE at the time of submission of their application. This must include (minimum requirement):

**A) General Details:**

i.	Name of the Company and address	
ii.	Name of Contact Person with Contact No.	
iii.	Name of Test Lab and Address	
iv.	Test Report No.	
v.	Date of Test	
vi.	Test standards	
vii.	Nature of Test and Details of Test conducted	

**B) Product Details:**

i.	Brand:	
ii.	Type:	
iii.	Model name/number:	
iv.	No. of Burners	
v.	Material of Burners	
vi.	Burners Specifications	Big Burner: Small Burner:

**C) Observations and Results:**

**(i) Burner 1-details:**

S. No.	Test Conducted	Test Results			Average
		1	2	3	
1.	Flow rate declared l/h				
2.	Flow rate observed, l/h				
3.	Mass of water taken (M <sub>1</sub> ), kg				
4.	Mass of vessel including lid & stirrer (M <sub>2</sub> ), kg				
5.	Initial temperature °C				
6.	Final temperature °C				
7.	Gas consumption (M <sub>3</sub> )				



	kg				
8.	Heating time seconds				
9.	Thermal efficiency on the basis of net calorific value of 10900 kCal/kg, %				
10	Thermal efficiency on the basis of actual net calorific value ..... kCal/kg, %				

**(ii) Burner 2-details:**

Sl. No.	Test Conducted	Test Results			Average
		1	2	3	
1.	Flow rate declared l/h				
2.	Flow rate observed, l/h				
3.	Mass of water taken (M <sub>1</sub> ), kg				
4.	Mass of vessel including lid & stirrer (M <sub>2</sub> ), kg				
5.	Initial temperature °C				
6.	Final temperature °C				
7.	Gas consumption (M <sub>3</sub> ) kg				
8.	Heating time seconds				
9.	Thermal efficiency on the basis of net calorific value of 10900 kCal/kg, %				
10	Thermal efficiency on the basis of actual net calorific value ..... kCal/kg, %				

- Test Method used for finding the Actual Net calorific value of LPG along with detailed calculations should be specified.
- Any other information which is not mentioned above but are vital for study may kindly be provided additionally.

Name:

Designation:

Signature with seal & date:



**FORMAT FOR SUBMISSION OF QUARTERLY DETAILS OF LPG STOVES PRODUCED / SOLD**

To be printed on company Letter Head / Chartered Accountant Letter Head

To,

The Director General,  
Bureau of Energy Efficiency,  
4<sup>th</sup> Floor, SewaBhawan  
R.K.Puram, New Delhi.

Company Name : .....

Agency Id: .....

Equipment Name:.....

**Production data Detail of the Star Rated Model**

**Production detail for the Financial Year:**

**Quarter:**

**Detail of the Production data:**

S. No.	Model Name	Application id	Production
<b>Total Production</b>			

The above figures have been verified from the book of accounts and relevant records produce before us.

Verified By:Chartered Accountant

Name & Signature of Chartered Accountant with Seal  
CA Membership No/Registration No.: