# The Energy Conservation (Form And Manner And Time For Furnishing Information With Regard To Energy Consumed And Action Taken On Recommendations Of Accredited Energy Auditor) Rules, 2008

UNION OF INDIA
India

# The Energy Conservation (Form And Manner And Time For Furnishing Information With Regard To Energy Consumed And Action Taken On Recommendations Of Accredited Energy Auditor) Rules, 2008

## Rule
## THE-ENERGY-CONSERVATION-FORM-AND-MANNER-AND-TIME-FOR of 2008

- Published on 26 June 2008
- Commenced on 26 June 2008
- [This is the version of this document from 26 June 2008.]
- [Note: The original publication document is not available and this content could not be verified.]

The Energy Conservation (Form And Manner And Time For Furnishing Information With Regard To Energy Consumed And Action Taken On Recommendations Of Accredited Energy Auditor) Rules, 2008Published vide Notification G.S.R. 486(E), dated 26.6.2008, published vide Notification Gazette of India, Extra, Ptar 2, Section 3(i) dated 30.6.2008.

**10.**

/527In exercise of the powers conferred by clause (h) of sub-section (2) of section 56 read with clause (k) of section 14 of the Energy Conservation Act, 2001 (52 of 2001), the Central Government, hereby makes the following rules, namely:-

## 1. Short title and commencement

.-(1) These rules may be called the Energy Conservation (Form and Manner and Time for Furnishing Information with Regard to Energy Consumed and Action Taken on Recommendations of Accredited Energy Auditor) Rules, 2008.(2)They shall come into force on the date of their publication in the Official Gazette.

## 2. Definitions

.-(1) In these rules, unless the context otherwise requires,-(a)"Act" means the Energy Conservation Act, 2001 ;(b)"Form" means the forms specified under rule 3;(c)"year" means the financial year beginning on the 1st day of April and ending on the 31st March following;(2)Words and expression used herein and not defined, but defined in the Act shall have the meanings assigned to them in the Act.

## 3. Form and time limit for furnishing of information by the designated consumers with regard to energy consumed and action taken on the recommendations of the accredited energy auditor

.-(1) Every designated consumer within three months of the submission of energy audit report by the accredited energy auditor shall, furnish in electronic form as well as in a hard copy, to the designated agency,-(a)details of information on energy consumed during the year preceding to the year for which energy audit was undertaken as verified by the accredited energy auditor, in Form 1;(b)details of specific energy consumption product-wise for the period referred to in clause (a), in Form 1;(c)details of the action taken on the recommendations made by the accredited energy auditor in the energy audit report submitted under the Act, in Form 2;(2)Every designated consumer shall furnish to the designated agency every year, the details of progress made in consequence of the action taken by it as per clause (c) of sub-rule (1) of rule 3 together with the details of energy efficiency improvement measures implemented and consequent savings achieved in Form 3, within three months of the close of that year.

## 4. Manner of furnishing information

.-(1) Every designated consumer shall furnish the information under rule 3 after getting the same authenticated by its energy manager appointed or designated in terms of notification number S.O. 318(E), dated the 2nd March, 2007.(2)The information under sub-rule (1) shall be strictly in accordance with the energy audit report of the accredited energy auditor.FORM 1Details Of Energy Consumed And Specific Energy Consumption, Product-Wise, Based On Verified Data[See rule 3 (1) (a) and (b)]

1. Name of the Unit
2. The sector in which unit falls(Refer Annexure 1)

3 (a) Complete address of Unit's location (including Chief Executive's name and designation) with mobile, telephone, fax nos. and e-mail.

(b) Year of establishment

4. Registered office address with telephone, fax numbers and e-mail

5. Name, designation, address, mobile, telephone, fax numbers and e-mail of energy manager

6. Production and capacity utilization details

| Year | Main products | Units (Please specify) | Installed capacity (a) | Actual production (b) | % Capacity utilisation(b/ x 100 | Sp en co |
|---|---|---|---|---|---|---|
| 200-200 | Product 1 | | | | | |
| | Product 2 | | | | | |
| | Other products | | | | | |
| | Year 200-200 | | | | | |

7.0 Energy consumption and cost

7.1 Electricity consumption and cost

(A) Purchased electricity

(i) Units(millions kWh/year)

(ii) Total cost (Rs.millions/year)

(iii) Plant connected load (kW)

(iv) Contract demand (kVA) with utility

(v) Connected load (kW)

(B) Own Generation

(a) Through Diesel Generating sets

(i) Annual generation(millions kWh/year)

(ii) Total cost (Rs.million/year)

(iii) Fueal used (HSD/LDO/LSHS/LSFO-(Refer Annexure 2)

(vi) Total annual fuel cost (Rs. million)

(b) Through steam turbine/generator

(i) Annual generation (millions kWh/year)

(ii) Fuel used state which type of fuel was used (C=coal, B=biomas, E=electrifity). If coal was used, state which grade, i.e., C/I=Imported or, C/F=Coal of grade F

(c) Through gas turbind

(i) Annual generation (millions kWh/year)

(ii) Fuel used (state which type of fuel was used Natural Gas (NG), Piped Natural Gas (PNG), Compressed Natural Gas (CNG), Naphtha)

(iii) Gross calorific value (kCal/SCM)

(iv) Annual fuel consumption (SCM)

(v) Total annual fuel cost (Rs. million)

(C) Total generation of electricity (millions kWh/year) 7.1 (B) [a(i)+b(i)+c(i)]

(D) Electricity supplied to the grid/others (specify million kWh/year)

(E) Total Electricity consumed (millions kWh/year) 7.1 [A(i)+C-D]

7.2 Fuel consumption and % cost for process heating

(A) Coal

(i) Gross calorific value (kCal/kg)

(ii) Quantity purchased (tonne/year)

(iii) Quantity used for power generation (tonne/year)

(iv) Quantity used as raw material, if any (tonne/year)

(v) Quantity used for process heating(tonne/year)

(vi) Total coal cost for process (Rs. million/year)

(B) Lignite

(i) Gross calorific value (kCal/kg)

(ii) Quantity purchased (tonne/year)

(iii) Quantity used for power generation (tonnes/year)

(iv) Quantity used as raw material, if any (tonne/year)

(v) Quantity used for process heating(tonne/year)

(vi) Total used for process heating (tonne/year)

(C) Biomass other purchase solid fuels (please specify) bagasse, rice husk, etc.

(i) Average moisture content as fired (%)

(ii) Average gross calorific value as fired (kCal/kg)

(iii) Quantity purchased (tonne/year)

(iv) Quantity used as raw material, if any (tonne/year)

(v) Quantity used for process heating(tonne/year)

(vi) Total baggase cost for process (Rs. million/year)

7.3 Liquid

(A) Furnace Oil (F.O.)

(i) Gross calorific value (kCal/kg)

(ii) Quantity purchased (kL/year)

(iii) Quantity used for power generation (kL/year)

(iv) Quantity used as raw material, if any (kL/year)

(v) Quantity used for process heating(kL/year)

(vi) Total F.O. cost for process heating (Rs. million/year)

(B) LowSulphurHeavy Stock (LSHS)

(i) Gross calorific value (kCal/kg)

(ii) Quantity purchased (tonne/year)

(iii) Quantity used for power generation (tonne/year)

(iv) Quantity used as raw material, if any (tonne/year)

(v) Quantity used for process heating(tonne/year)

(vi) Total LSHS Cost for process heating(Rs. million/year)

(C) HighSulphurHeavy Stock (HSHS)

(i) Gross calorific value (kCal/kg)

(ii) Quantity purchased (tonne/year)

(iii) Quantity used for power generation (tonne/year)

(iv) Quantity used as raw material, if any (tonne/year)

(v) Quantity used for process heating(tonne/year)

(vi) Total HSHS cost for process heating (Rs. million/year)

(D) Diesel Oil

(a) High Speed Diesel (HSD)

(i) Gross calorific value (kCal/kg)

(ii) Quantity purchased (kL/year)

(iii) Quantity used for power generation (tonne/year)

(iv) Quantity used as raw material, if any (kL/year)

(v) Quantity used for process heating(kL/year)

(vi) Total HSD cost for process heating (Rs. million/year)

(b) Light Diesel Oil (LDO)

(i) Gross calorific value (KCal/kg)

(ii) Quantity purchased (kL/year)

(iii) Quantity used for power generation (kL/year)

(iv) Quantity used as raw material, if any (kL/year)

(v) Quantity used for process heating(kL/year)

(vi) Total LDO cost for process heating (Rs. million/year)

7.4 Gas

(A) Compressed Natural Gas (CNG)

(i) Gross calorific value (kCal/SCM)

(ii) Quantity purchased (million SCM/year)

(iii) Quantity used for power generation (million SCM/year)

(iv) Quantity used as raw material, if any (million

SCM/year)

(v) Quantity used for process heating(million SCM/year)

(vi) Total cost of natural gas for process heating (Rs. Million/year)

(B) Liquefied Petroleum Gas (LPG)

(i) Gross calorific value (kCal/SCM)

(ii) Quantity purchased (million SCM/year)

(iii) Quantity used for power generation (million SCM/year)

(iv) Quantity used as raw material, if any (million SCM/year)

(v) Quantity used for process heating(million SCM/year)

(vi) Total cost of LPG for process heating (Rs. million/year)

(C) Gas generated as by product/waste in the plant and used as fuel

(i) Name

(ii) Gross calorific value (kCal/SCM)

(iii) Quantity used for process heating (million SCM/year)

(iv) Total cost of by product gas for process heating (Rs. Million/year)

7.5 Solid waste

Solid waste generated in the plant and used as fuel

(i) Name

(ii) Gross calorific value (kCal/kg)

(iii) Quantity used for process heating (tonne/year)

| | |
|---|---|
| (iv) Total cost of solid waste for process heating (Rs. Million/year) | |
| 7.6 Liquid waste | |
| (A) Liquid effluent/waste generated in the plant and used as fuel | |
| (i) Name | |
| (ii) Gross calorific value (kCal/kg) | |
| (iii) Quantity used for process heating(tonne/year) | |
| (iv) Total cost of liquid effluent for process heating (Rs. million/year) | |
| 7.7 Others | |
| (i) Name | |
| (ii) Average gross calorific value (kCal/kg) | |
| (iii) Quantity used for power generation(tonnes/year) | |
| (iv) Quantity used for process heat (tonnes/year) | |
| (v) Annual cost of the other source | |

| | |
|---|---|
| ..... | ..... |
| Signature | Signature |
| Name of the energy manager, | Name of the accredited energy auditor |
| Name of the company | Accreditation details |
| Full address | Seal |
| Seal | |

ANNEXURE I - Name Of SectorsAluminum, cement, chemicals, chlor-alkali, fertilisers, gas crackers, iron and steel, naphtha crackers, pulp and paper, petrochemicals, petroleum refineries, sugar, textile.ANNEXURE 2

| | |
|---|---|
| HSD | High Speed Diesel |
| LDO | Light Diesel Oil |
| LSHS | LowSulphurHeavy Stock |
| LSFO | LowSulphurFurnace Oil |

| | |
|---|---|
| C | Coal |
| B | Biomass |
| E | Electricity |
| C/I | Coal Imported |
| C/F | Indian Coal grade F |
| NG | Natural Gas |
| PNG | Piped Natural Gas |
| CNG | Compressed Natural Gas |
| FO | Furnace Oil |
| LPG | Liquefied Petroleum Gas |
| SCM | Standard Cubic Metre(15°C and 1.01325 bar) |
| KL | Kilo Litre |
| Million | Ten (10) lakh |

FORM 2Details Action Taken On Recommendations Of Accredited Energty Auditor For Improving Energy Efficiency[See rule 3(1) (c)]

| Sl. No. | Energy efficiency improvement measures - (Suggested categories of areas of energy efficiency improvement for obtaining details of energy savings - See Annexure 3) | Investment Millions Rupees | Reasons for not implementing the measure | Date of completion of measure/likely completion | Life cycle years | Annual energy savings | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Oil | Gas | Coal | E |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |

..... .....

| | |
|---|---|
| Signature | Signature |
| Name of the energy manager | Name of the accredited energy auditor |
| Name of the company | Accreditation details |
| Full address | Seal |
| Contact person | |
| E-mail address | |
| Telephone/Fax numbers | |
| Plant address | |

**1. Estimate the predicted life of the measure, meaning the number of year the level of first year energy savings or even larger amounts will materialise.**

**2. Life commercial units of litre, kg, tonnes, normal cubic meter, kWh or MWh and Indicate the unit. Indicate the anticipated potential in energy savings.**

ANNEXURE 3Suggested Categories Of Areas Of Energy Efficiency Improvement For Obtaining Details Of Energy Savings

**1. Better house keeping measures**

**2. Installation of improved process monitoring and control instrumentation, or software**

**3. Fuel Handling System**

**4. Steam Generation System**

**5. Steam Distribution System**

**6. Electricity Generation System**

**7. Hot Water System**

**8. Compressed Air System**

**9. Raw/Process Water System**

**10. Cooling Water System**

**11. Process Cooling/Refrigeration System**

**12. Heating, Ventilation and Air Conditioning System**

**13. Electrical System**

**14. Lighting System**

**15. Melting/Heating/Drying Equipment (e.g.) Furnaces, Heaters, Klins, Ovens, Dryers, Evaporators, etc.**

**16. Heat Exchangers**

**17. Pumps, Compressors, Fans, Blowers, Piping, Ducting**

**18. Process Equipment (e.g.) Reactors, Separation Equipment, Material, Handling Equipment, etc.**

**19. Transformers**

**20. Electric Motors and Drives**

**21. Process Technology**

**22. Process Integration**

**23. Process Control and Automation**

**24. Other Non-equipment Measures (e.g.) Plant Operation/Scheduling, Tariff Schedule, etc.**

**25. Recovery of waste hear for process heat or power generation**

## 26. Retrofitting, modification or sizing of fans, blowers, pumps, including duct systems

## 27. Other

FORM 3[See rule 3(2)]Details Of Energy Efficiency Improvement Measures Implemented, Investment Made And Savings In Energy Achieved And Progress Made In The Implementation Of Other RecommendationsA. Implemented:

| Sl. No. | Description of energy efficiency improvement measure | Category | Investment (Rupees) | Verified savings (Rupees) | Verified energy savings | Units | Fuel | Remarks |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |

B. Under implementation:

| Sl. No. | Description of energy efficiency improvement measure | Category | Investment (Rupees) estimated | Verified savings (Rupees) estimated | Verified energy savings estimated | Units | Fuel | Status of implementatio |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |

| ..... | ..... |
|---|---|
| Signature | Signature |
| Name of the energy manager | Name of the accredited energy auditor |
| Name of the company | Accreditation details |
| Full address | Seal |
| Contact person | |
| E-mail address | |
| Telephone/Fax numbers | |
| Plant address | |

## 1. Use "C.No" column of Form 2 as reference - See Annexure "3" for adoption

## 2. First year

3. Use conventional energy, volume or mass units with proper prefix k=103,M=106, G=109