MINISTRY OF POWER

NOTIFICATION

New Delhi, the 26th June, 2008

G.S.R. 486(E).— In 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;

d) 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.

[F. No. 10/15/07-EC]

DEVENDER SINGH, Jt. Secy.

Form 1

Details 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-I)	
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 utilisation details

Year	Main products	Units (Please specify)	Installed capacity (a)	Actual production (b)	% Capacity utilisation (b/a) x 100	Specific energy consumption
	Product 1 Product 2 Other products					
200-200						

		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)	Fuel used (HSD/LDO/LSHS/LSFO –(Refer annexure 2)	
(iv)	Gross calorific value (kCal/kg)	
(v)	Annual fuel consumption (tonne)	
(vi)	Total annual fuel cost (Rs. Million)	

		Year 200 - 200
(b)	**Through steam turbine/ generator**	
(i)	Annual generation (Millions kWh/ year)	
(ii)	Fuel used state which type of fuel was used (C=coal, B=biomass, E=electricity). If coal was used, state which grade i.e., C/I=imported or C/F=Coal of grade F	
(c)	**Through gas turbine**	
(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 (Millions 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 lignite cost for process (Rs. Million/year)	

		Year 200 - 200
(b)	**Through steam turbine/ generator**	
(i)	Annual generation (Millions kWh/ year)	
(ii)	Fuel used state which type of fuel was used (C=coal, B=biomass, E=electricity). If coal was used, state which grade i.e., C/I=imported or C/F=Coal of grade F	
(c)	**Through gas turbine**	
(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 (Millions 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 lignite cost for process (Rs. Million/year)	

		Year 200 - 200
(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)	

		Year 200 - 200
(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 byproduct 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/[illegible])	
(iii)	Quantity used for power generation (tonnes/year)	
(iv)	Quantity used for process heat (tonnes/year)	
(v)	Annual cost of the others source	

Signature
Name of the energy manager,
Name of the company
Full address
Seal

Signature
Name of the accredited energy auditor
Accreditation details
Seal

Annexure1 - Name of sectors

Aluminum, cement, chemicals, chlor-alkali, fertilizers, 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	Low Sulphur Heavy Stock
LSFO	Low Sulphur Furnace 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

2475 GI/08-4

Form 2

Details of action taken on recommendations of accredited energy 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[1]	Annual energy[2] savings				
						Oil	Gas	Coal	Electricity	Other
1										
2										
3										
4										
5.										
6.										
7.										
8.										
9.										
10.										

Signature
Name of the energy manager
Name of the company
Full address
Contact person
Email address
Telephone/ Fax numbers
Plant address

Signature
Name of the accredited energy auditor
Accreditation details
Seal

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1 Estimate the predicted life of the measure, meaning the number of years 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 3

Suggested 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 heat 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 recommendations.

A. Implemented:

Sl. No.	Description of energy efficiency improvement measure	Category[3]	Investment (Rupees)	Verified savings[4] (Rupees)	Verified energy savings	Units[5]	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 implementation
1								
2								
3								

Signature
Name of the energy manager
Name of the company
Full address
Contact person
Email address
Telephone/ Fax numbers
Plant address

Signature
Name of the accredited energy auditor
Accreditation details
Seal

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3 Use "C. No" column of form 2 as reference – See Annexure "3" for adoption
4 First year
5 Use conventional energy, volume or mass units with proper prefix k = 10^3, M = 10^6, G = 10^9

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