STATE ENERGY CONSERVATION AWARD - 2016

"Award Questionnaire"

Sector Name: **Sector Code:**

1	Name of the Unit				
2	The Sector* to which unit's nomination should be considered				
3(a)	Complete address of Unit's location (including Chief Executive's name & designation) with mobile,telephone,fax nos. & e-mail (All details to be submitted)				
3(b)	Year of Establishment				
3(c)	Whether ISO 50001 Energy Management System Cretified (Yes/No). In case Yes, pl indicate certification date and attached a copy of certificate				
4(a)	Name, designation, address, mobile, telephone,fax nos. & e-mail of responsible person who could be contacted in connection with the application for Award (All details to be submitted)				
4(b)	Name, designation, address, mobile, telephone,fax nos. & e-mail of Certified Energy Manager who has been designated as Energy Manager of the plant				
5	**Production and capacity utilization details**				
Year	**Products manufactured (Please list all the major products)**	**Units** (Please specify)	**Installed Capacity (a)**	**Actual Production (b)**	**% Capacity Utilisation (b/a) x 100**
2014-15					
2015-16					
6	**Energy Consumption details**	**2014-15**		**2015-16**	
6.1	**Electricity Consumption Units (Lakhs kWh/ year)**				
(A)	***Purchased Electricity (Lakhs kWh/ year)***				
(B)	***Own Generation (Lakhs kWh/ year)***				
a)	***Through DG sets (Lakhs kWh/ year)***				
b)	***Through Steam and/or gas turbine route (please specify)(Lakhs kWh/ year)***				
c)	***Through Renewable Energy (Lakhs kWh/ year)***				
d)	***Electricity supplied to the grid/ others (specify) (Lakhs kWh/ year)***				
(C)	**Own generated electricity consumption within the plant (Lakhs kWh/ year)** [a + b + c – d]				
(D)	**Total consumption of electricity** (purchased + own generated electricity consumption within the plant) (Lakhs kWh/ year) (A + C)				
(E)	**Total Electricity Consumption in MTOE(Metric tonne of oil equivalent) ([6.1(D)*860]/100)**				
6.2	**Fuel Consumption for process heating**	**2014-15**		**2015-16**	
	Note:1. It should not include fuel used for self generation of electricity and as a Raw Material and/or industrial Units using fuel for Cogeneration Plant 2. For computing fuel consumption for process heating in case of steam being used from a cogeneration plant , the following relation may be used: Fuel consumption for process heating, kg/year= (steam quantity used for process heating, kg/year(enthalpy of steam, kcal/kg - boiler feed water enthalpy, kcal/kg)) / (Boiler efficiency xGCV of fuel, kcal/kg). For different steam pressure extractions, the above relation to be repeated				
(A)	**Coal**				
(i)	Quantity used for process heating (tonnes/ year)				
(ii)	Weighted Av. Gross Calorific value (GCV) (kCal/ kg)				
(iii)	Total heat value of coal used **(Million kCal/year) [A (i) x A (ii)]/1000**				
(B)	***Other purchased solid fuels (pl. specify)provide data on similar lines as indicated under 'Coal'***				
(C)	***Furnace Oil (FO)***	**2014-15**		**2015-16**	
(i)	Quantity used for process heating (kL/ year)				
(ii)	Av. GCV (kCal/ kg)				
(iii)	Av. Heat value (kCal/ litre) 0.95 x C(ii)				
(iv)	Total heat value of furnace oil (Million kCal/year) [C(i) x C(iii)]/1000				

(D)	**Diesel/ Other oils (Purchased) (if any)Provide data on similar lines as indicated under 'Furnace Oil'**					
(E)	**Natural Gas**	**2014-15**	**2015-16**			
(i)	Quantity used for process heating (Lakh m^3/ year)					
(ii)	Av. GCV (k Cal/ m^3)					
(iii)	Total heat value **(Million kCal/year) [E(i) x E(ii)]/10**					
(F)	**Any other purchased gas (Say LPG etc.)**					
(G)	***Gas generated as by product/ waste in the plant and used as fuel***					
(i)	Name_____					
(ii)	Quantity (Lakh m^3/ year)					
(iii)	Av. GCV (kCal/ m^3)					
(iv)	Total heat value **(Million kCal/year) [G(ii) x G(iii)]/10**					
(H)	***Solid waste generated in the plant and used as fuel***					
(i)	Name_____					
(ii)	Quantity (tonnes/ year)					
(iii)	Weighted Av. Gross Calorific value (GCV) (kCal/ kg)					
(iv)	Total heat value used **(Million kCal/year) [H(ii) x H(iii)]/1000**					
(I)	***Liquid effluent / waste generated in the plant and used as fuel***					
(i)	Name_____					
(ii)	Quantity (kL/ year)					
(iii)	Av. GCV (kCal/ kg)					
(iv)	Av. Heat value (kCal/ litre) {Sp. gravity x I(iii)}					
(v)	Total heat value ,MkCal/year **(Million kCal/year) [I(ii) x I(iv)]/1000**					
7	**Total thermal energy consumption in Million kCal/ year**	**2014-15**	**2015-16**			
(a)	6.2[A (iii) + C (iv) +E (iii)+ G (iv)+ H(iv)+ I (v) … etc.]					
(b)	**Total Thermal energy consumption in MTOE per year [7(a)/10]**					
8	**Achievement of energy savings from implementation of new Energy Efficiency Projects during the year 2015-16 (The energy savings achieved shall only from the projects which have been implemented during 2015-16)**					
	Year	**Annual Electricity Saving (Lakh kWh)**	**Annual Fuel Savings**			
			Coal (Metric Tonnes)	**FO/LSHS/HSD/RFO (kL)**	**Gas (Lakh m^3)**	**Total (MkCal)**
(a)	**2015-16**					
	Year	**Annual Energy Savings (Rs. Lakhs)**		**One time investment (Rs. Lakhs)**		
(b)	**2015-16**					
9	**Energy consumption per unit production of 'major energy consuming product(s)' and accounting of energy consumption**					

Year	**Specific Electrical Energy Consumption In kWh/tonne**** [Total Electrical Energy Consumption in kWh/Actual Production in tonne] **(i)**	**Specific Thermal Energy Consumption In Million kCal/tonne**** [Total Thermal Energy Consumption in Million kcal/Actual Production in tonne] **(ii)**	**Specific Electrical Energy Consumption Reduction over 2014-15 [9(a) (i) - 9(b) (i)]/ 9(a) (i)**	**Specific Thermal Energy Consumption Reduction over 2014-15 [9(a) (ii) - 9(b) (ii)]/ 9(a) (ii)**
(a) 2014-15			-	-
(b) 2015-16				

MTOE=Metric Tonne of Oil Equivalent

1 kWh = 860 kCal

1 MTOE =10^7 kCal

1 Mkcal = 10^6 kCal

** or use actual units. For example, automobile industry may mention kWh and Million kCal/equivalent Vechicle (car, truck, bus, jeep, scooter etc.)

Note: (a) Refinery and Petrochemical sector should also report specific energy consumption in MBTU/Bbl/NRGF or Energy Index as applicable

Year	**MBTU/Bbl/NRGF (or any other Energy Index as applicable)**
2014-15	
2015-16	

(b) Integrated Steel Plant should also report Specific Energy Consumption in Million kCal/tonne of crude steel (tcs)

Year	**Million kCal/tcs**
2014-15	
2015-16	

(c) Cements plants should report Specific Electrical Energy Consumption per tonne of clinker & cement, and Specific thermal energy consumption per kg of clinker and cement

Year	Specific Electrical Energy Consumption		Specific Thermal Energy Consumption	
	kWh/tonne of clinker	kWh/tonne of cement	kCal/kg of clinker	kCal/kg of cement
2014-15				
2015-16				

(d) Fertilizer Plants should also report Specific Energy Consumption in Million kCal/tonne of Ammonia and Urea

Year	***Million kCal/tonne of Ammonia**	***Million kCal/tonne of Urea**
2014-15		
2015-16		

***1** Please specify feed stock base of the Plant: Naptha/ mixed feed stocks/ Furnance oil and LSHS/ gas/ other

***2** Please mention Specific Energy Consumption of other products (if any) separately

10 Summary

Please summarize the information and data provided in this questionnaire as per the format given below:

STATE ENERGY CONSERVATION AWARD –2016

SUMMARY SHEET

Unit Name ……. **Sector Name……**

Sector Code:

a.	**Specific Energy Consumption (SEC) Reduction during the period 2014 - 2016**				
	(S.No. 9)				
Year	Product	Specific Electrical Energy Consumption kWh/ tonne	% Reduction over 2014 - 2015	Specific Thermal Energy Consumption Million kCal/ tonne	% Reduction over 2014 - 2015
2014 - 2015			--		--
2015 - 2016					
Remarks: Use actual units as requested in Note under Sl No. 9 in the case of Refinery, Integrated steel plants, Cement plants and Fertilizer plants.					

b.	**Absolute Savings and its percentage over previous year energy consumption**					
	Elect. Saving (Lakh kWh) in 2015-16 (i)	Thermal (Fuel) Saving (Million kCal) in 2015-16 (ii)	Elect.Consumption (lakh kWh) in 2014-15 (iii)	Thermal (Fuel) Consumption (Million kCal) in 2014-15 (iv)	% Elect.Saving (savings achieved/ electricity consumption of previous year) (i) / (iii) x 100	% Thermal (Fuel) Saving (savings achieved/ thermal energy consumption of previous year) (ii)/ (iv) x 100

I, …….. Solemnly declare that to the best of my knowledge the information given in the Award Questionnaire (State Energy Conservation Award-2016) thereto is correct and complete.

(Signature of the Chief Executive)

Name & designation of the

Chief Executive.....

Mobile No. ……

Date:

Place:

Organization Seal ……

Annexure - A

STATE ENERGY CONSERVATION AWARD - 2016		
Evaluation and weightage criteria - LARGE/MEDIUM/SMALL Scale Industries		
S. No.	**ITEM**	**Max 100 marks**
1	**ENERGY SAVINGS - Electrical and Thermal**	
i	Electrical Energy (EE) savings in 2015-16	
	% savings in EE over the previous year energy consumption (2014-15)	(20 marks)
ii	Thermal energy savings in 2015-16	
	% savings in Thermal Energy over the previous year energy consumption (2014-15)	(20 marks)
2	**SPECIFIC ENERGY CONSUMPTION REDUCTION**	
	% SEC reduction during 2015-16 over 2014-15	(40 marks)
3	**Specific Energy Consumption Comparisons with the best reported values among the participating units**	(10 marks)
4	ISO 50001 EnMs certified units	10 (marks)

NOTE:

1. **The above evaluation and weightage criteria is common for all the participating units. However for some sectors, the application of the above E& W criteria may not be feasible due to certain peculiar characteristics of the concerned sectors. Therefore, Award Committee reserves the right to modify the criteria for a particular sector, which shall be uniformly applied to all the participating units of that sector.**
2. **The distribution of weightage between specific electrical and thermal energy consumption reduction for a particular sector would be decided by the Award Committee**
3. **For those particular sectors, where it is not feasible to compare SEC with best reported value, 50% of the weightage may be merged with S.No.-2 and the balance 50% with S.No.-1, or as decided by the Award Committee**
4. **The participating units having negative specific electrical or thermal energy consumption will not be considered for the award.**
5. **For all the evaluation criteria, if the difference between the first and second unit in the particular criteria is more than 10% in the percentage score, then the second best unit will be awarded 10% less marks than that of the first unit and prorate will start from that unit onward. Similarly, if the difference between second and third unit is also found to be more than 10% ,the above methodology will be followed till the completion of the evaluation criteria of all the units**
6. **If it is found that for a particular unit in a particular sector, % SEC reduction is exceptionally high mainly due to increased capacity utilization or changes in the manufactured product combination and is affecting the weightage of other units, Award Committee reserve the right to modify the Evaluation & Weightage criteria for that sector**