

NATIONAL ENERGY CONSERVATION AWARD - 2006
ZONAL RAILWAYS
"Award Questionnaire"

SI. No	General Description			
1	Name of the Zonal Railway			
2	Registered Office address with telephone, fax nos. & e-mail.			
3	Name, designation, address, mobile, telephone, fax nos. & e-mail of responsible person who could be contacted in connection with the application for Award			
Traction Energy Details ---- Part-A				
4	Energy Consumption and cost			
4.1	Purchased Energy for Electric Traction	2003-04	2004-05	2005-06
	(i) Energy consumed for Traction (Lakhs kWh/ Year)			
	(ii) Electric bill Paid for Traction (Rs. Lakhs/ Year)			
	(iii) Contracted demand (MVA)			
4.2	High Speed Diesel use for Traction			
	Purchased Diesel for Traction	2003-04	2004-05	2005-06
	(i) Quantity purchased for Traction (kL/Year)			
	(ii) Diesel cost in Lakh Rs.			
4.3	Total Energy Cost [4.1 (ii) + 4.2 (ii)]			
	(in Rs. Lakhs/ Year)			
4.4	GTKM on Electric Traction			
	(i) GTKM for Goods			
	(ii) GTKM for Passenger			
	(iii) Total GTKM			
5	SPECIFIC ENERGY CONSUMPTION REDUCTION			
5.1	TRACTION (Electric)	2003-04	2004-05	2005-06
	(i) SEC for Goods (kWh/ 1000 GTKM)			
	(ii) SEC for Passenger (kWh/ 1000 GTKM)			
	(iii) % SEC reduction during 2004 – 05 & 2005-06 for (Passenger) w.r.t. preceding year*.	--		
	(iv) % SEC reduction during 2004 – 05 & 2005-06 for (Goods) w.r.t. preceding year*.	--		
	(v) Planned SEC target for the year 2005-2006 & 2006-2007	--		
	(a) For Passenger (kWh/ 1000 GTKM)			
	(a) For goods ((kWh/ 1000 GTKM)			

* **[(Specific energy consumption during current year - specific energy consumption during procceding year)/ (specific energy consumption during procceding year)] x 100**

5.2	TRACTION (Diesel)	2003-04	2004-05	2005-06
	(i) SFC for Goods (Liters/ 1000 GTKM)			
	(ii) SFC for Passenger (Liters/ 1000 GTKM)			
	(iii) % SFC reduction during 2004 – 05 & 2005-06 for (Passenger) w.r.t. preceding year.	--		
	(iv) % SFC reduction during 2004 – 05 & 2005-06 for (Goods) w.r.t. preceding year.	--		3
	(v) Planned SEC target for the year 2005-2006 & 2006-2007			
	(a) For Passenger (Liters/ 1000 GTKM)			

(b) For Goods (Liters/ 1000 GTKM)				
6	ANNUAL ENERGY SAVINGS	2003-04	2004-05	2005-06
(i)	Annual Electric energy savings achieved (Lakhs kWh/ Year)			
	(a) Current year GTKM for passenger x [(SEC of previous year - SEC of current year in kWh/ 1000 GTKM) x 1000]			
	(b) Current year GTKM for Goods x [(SEC of previous year - SEC of current year in kWh/ 1000 GTKM) x 1000]			
	(c) Total annual electric energy saving (lakhs kWh/ year) [6 (i)(a) + 6 (i)(b)] / 10 ⁵			
(ii)	Diesel saving achieved (Kilo Liters/ Year)			
	(a) Current year GTKM for passenger x [(SEC of previous year - SEC of current year in Liters / 1000 GTKM) x 1000]			
	(b) Current year GTKM for Goods x [(SEC of previous year - SEC of current year in Liters / 1000 GTKM) x 1000]			
	(c) Total annual HSD saving (Kilo Liters / year) [6 (ii)(a) + 6 (ii)(b)] / 10 ³			
(iii)	% saving 2004 – 05 & 2005 – 06 for Electric Traction			
	(a) For Passenger [(savings in current year/ electricity consumption of previous year)] x 100			
	(b) For Goods [(savings in current year/ electricity consumption of previous year)] x 100			
(iv)	% saving 2004 – 05 & 2005 – 06 for Diesel			
	(a) For Passenger [(savings in current year/ diesel consumption of previous year)] x 100			
	(b) For Goods [(savings in current year/ diesel consumption of previous year)] x 100			
7	IMPLEMENTATION OF ENERGY CONSERVATION MEASURES & INVESTMENT **			
7.1	TRACTION (Electric)	2003-04	2004-05	2005-06
(i)	No. of measures implemented			
(ii)	Investment made (Rs.Lakhs/ Year)			
(iii)	Saving achieved (Lakhs kWh/ Year) due to implementation of EC measures/ projects			
(iv)	Saving achieved (Lakhs kWh / Year) due to improvement in SEC [referece Sl. No. 6(ii)(c)]			
(v)	Saving achieved (Lakhs Rs./ Year) due to improvement in SEC			
(vi)	Electricity cost (Rs.Lakhs/ Year) [referece Sl. No. 4.1(ii)]			
(vii)	% Saving of electricity cost [Savings achieved in current year (Sl. No. 7.1 (v) / energy cost of previous year)]			

** Please fill up the details as per the format given in Annexure "B"

7.2	TRACTION (Diesel)	2003-04	2004-05	2005-06
(i)	No. of measures implemented			
(ii)	Investment made (Rs. Lakhs/ Year)			
(iii)	Saving achieved (KL/ Year) due to implementation of EC measures/ projects			
(iv)	Saving achieved in (KL/ Year) due to improvement in SEC [referece Sl. No. 6(i)(c)]			
(v)	Saving achieved (Lakhs Rs./ Year) due to improvement in SEC			
(vi)	Diesel cost (Rs.Lakhs/ Year) [referece Sl. No. 4.2(ii)]			3
(vii)	% Saving of diesel cost			

	[Savings achieved in current year (Sl. No. 7.2 (v) / diesel cost of previous year)]			
8	Non-Traction Energy Details ---- Part-B	2003-04	2004-05	2005-06
8.1	Electricity Consumption and cost			
	Purchased Electricity for Non - Traction (Lakhs kWh/ year)			
	(i) Electricity consumed for Non-Traction (Lakhs kWh/Year)			
	(ii) Electricity bill Paid for Non-Traction (Rs. Lakhs/ Year)			
	(iii) Contracted demand (kVA) with Utility			
	(iv) Connected load in (kW)			
8.2	SPECIFIC ENERGY CONSUMPTION REDUCTION	2003-04	2004-05	2005-06
	(i) SEC for Non Traction in kWh/ kW, i.e. Electricity consumed in kWh/ connected load in kW of current year			
	(ii) % SEC reduction during the period 2004-2005 & 2005-2006 w.r.t. preceding year. (current year SEC-previous year SEC)/ previous year SEC			
8.3	IMPLEMENTATION OF ENERGY CONSERVATION MEASURES & INVESTMENT**			
	Non-Traction (Electric Energy)	2003-04	2004-05	2005-06
	(i) No. of measures implemented			
	(ii) Investment made (Rs.Lakhs/ Year)			
	(iii) Saving achieved (Lakhs kWh/ Year)			
	(iv) Saving achieved (Lakhs Rs./ Year)			
	(v) Energy cost (Rs.Lakhs/ Year)			
	(vi) % Saving of energy cost $[8.3(iv)/ 8.1(v)] \times 100$			

** Please fill up the details as per the format given in Annexure "B"

9	ORGANISATIONAL SET UP FOR ENERGY CONSERVATION.
(a)	Does your Zonal Railway have an Energy Conservation Cell?
(b)	If yes, who heads the EC Cell? Whether energy conservation is his exclusive or additional responsibility?
(c)	Give salient features of EC Cell's constitution, functions, amount of finances available, achievements, future plans and strategy followed to implement energy conservation/efficiency programmes and policies etc.
(d)	Does your Zonal Railway have energy accounting and monitoring procedures and system in place? Which department is responsible to maintain such records – EC cell or any other?
(e)	Has your Zonal Railway declared its Energy Management Policy? If yes, please attach a copy of the same.
(f)	Has your Zonal Railway appointed or designated an "Energy Manager"? If yes, please give his name, complete office address, telephone no., fax no. & E-mail address.
10	Whether any energy audit has been undertaken in your Zonal Railway in last three years? If yes, please
(i)	When was last energy audit carried out in the Zonal Railway? What is the frequency of carrying out energy audits?
(ii)	Who did the energy audit? Whether this was done by in-house team or an external agency/ consultant was engaged? Please give salient details.
(b)	Did you engage any Energy Service Company (ESCO) to implement energy efficiency/ conservation measures. If yes, please give the name of agency and other details (i.e. experience, benefits etc.)
11	What are the main constraints in your Zonal Railway in implementing the energy efficiency/conservation?

been undertaken may please be attached (Please also submit the above matter in a CD with scanned photograph and mark the name of your unit with address). The write-up submitted in the past schemes should not be repeated and also should not be more than 4 pages. The industrial units not adhering to this may lose certain weightage in the evaluation.

- (i) Unit Profile
- (ii) Energy Consumption

Include information on total energy consumption (i.e. coal, oil, gas, electricity and money value). Information on energy consumption in terms of percentage of manufacturing cost should also be presented. Also, it should highlight the specific energy consumption for the period 2003-2004, 2004-2005 & 2005-2006. Good Computer Graphic Presentation related to Specific Energy Consumption may also be incorporated.

- (iii) Energy Conservation Commitment, Policy and Organizational Set up
(Please include a photo copy of unit's Energy Conservation Policy, if decided)

- (iv) Energy Conservation Achievements

Include one paragraph write-up on each major energy conservation project implemented during the year 2005-2006 only.

- (v) Energy Conservation Plans and Targets

- (vi) Environment and Safety

13 Whether any dispute pertaining to statutory requirements of safety and pollution control is pending with

14 DOCUMENTS ATTACHED:

- I. Copies of Certificates (with year wise marking) pertaining to statutory requirements such as safety and pollution control for the period 2003-06 are enclosed. (as applicable)
- II. One copy each of the audited annual reports for the years 2003-2004, 2004-2005 & 2005-2006 (or 2003, 2004 & 2005) are enclosed. (as applicable)
(Note: If audited report for the latest year is not available, the pre-audited report may please be enclosed indicating the same)
- III. A brief write up of the unit as mentioned at S.No.12 along with photographs depicting equipment / locations where energy efficiency activities have been undertaken and a CD containing the entire write-up is enclosed (Please ensure that name of the unit is written on the CD and it is virus free).

Date:
Place:

Signature of the Chief
Executive.....
Name & designation of the
Chief Executive.....
Organization Seal

Annexure "A"

EvaluationCriteria - Zonal Railway	
S. No	ITEM
1	Traction Energy
(a)	Specific Energy Consumption Reduction in electric traction (for Passenger and Goods)
(b)	Specific Energy Consumption Reduction in diesel traction (for Passenger and Goods)
(c)	% Annual energy savings in electric traction (for Passenger and Goods)
(d)	% Annual energy savings in diesel traction (for Passenger and Goods)
(e)	Implementation of energy conservation measures - % saving of energy cost in electric and diesel traction (for Passenger and Goods)
2	Non Traction energy
(a)	Specific energy consumption reduction
(b)	Implementation of energy conservation measures - % saving of energy cost
3	Organisational set-up for energy conservation
4	Conduct of energy audit
5	Commitment to environment and safety
6	Presentation of data as per the award questionnaire format

Annexure "B"

Please provide details in the following format on major energy efficiency improvement projects/ measures including in-house R&D efforts, technology innovation, energy substitution and renewable energy systems commissioned during last three years giving energy savings achieved and the investment incurred.

Year of Commissioning of the projects	Project description	Achievement of energy savings per year basis	
		Electricity	Fuels*
		(Lakhs (kWh))	Diesel Oil (KL)
	(i) Please list the projects title names which were implemented during the year (ii) Please mention the achievement of energy saving against each projects in the suitable columns. (iii) In case the unit has employed the latest technology/ trend setter technology/ renewable energy technology, please list the projects with an **mark, as weightage is earmarked for the same		
2003-2004			
	Sub Total		
2004-2005			
	Sub Total		
2005-2006			
	Sub Total		
	Grant total of 3 years		

* Delete or add fuels as the case may be

Note: (i) With the commissioning of a particular project/ measure, annual energy savings indicated in one year should not be shown again in the second or third year, as recurring energy saving.

(ii) Savings in fuel under the column "Total (fuel) in MkCal" should be presented in Million kCal by multiplying the HSD with the appropriate calorific value of the fuel and appropriate multiplying factor.

(iii) Under the column "project description", please list the title of the projects.

- (iv) Under the column "Achievements of energy savings per year basis" please mention the savings achieved
- (v) Please fill the above table separately for Traction and Non-traction energy use.