Government of India
Ministry of Power

PROPOSED COMPREHENSIVE AWARD SCHEME FOR POWER SECTOR (2007-08)

Central Electricity Authority
New Delhi

October, 2008

INDEX

PRPOSED COMPREHENSIVE AWARD SCHEME FOR POWER SECTOR (2007-08)

1.0 INTRODUCTION

With a view to ensuring optimum availability of generating units during daily peak period and to encourage thermal power stations to undertake planned maintenance of their units, a scheme for Meritorious Productivity Award was first conceived in 1983 when Plant Load Factors of utilities thermal power stations were around 50%. This Scheme was further reviewed and revised in 1992-93 and new schemes for Incentive Award for Efficient & Economic Operation of Thermal Power Stations for reducing their Specific Secondary Fuel Oil Consumption as also Auxiliary Power Consumption were also introduced. These award schemes have shown encouraging results. Thermal Power Stations have considerably improved their performance and All India average PLF of power stations have increased to the level of 74.8% in 2004-05 which has now further increased to 78.6% during the year 2007-08. There has been improvement in the field of Secondary Fuel Oil Consumption & also in Auxiliary Power Consumption due to concerted efforts of O&M personnel of thermal power stations. In view of this, it was felt that performance indices/award criteria set for the above award schemes needed modifications to suit the present day performance level. It has also been considered desirable to extend the scheme to cover all important & relevant areas of power sector such as hydro projects, transmission projects, distribution companies, nuclear projects and other new areas of importance related to power sector such as, early completion of projects. During the award function held on 22nd March, 2008, Shri Sushil Kumar Shinde, Hon'ble Union Minister of Power suggested to include award for performance of Rural Distribution Franchisees. The same has now been incorporated in the award scheme. In case of Performance Award for Thermal Power Stations, earlier Operating Station Heat Rate of Coal/Lignite/Gas based stations was being compared with Normative Value of their Station Heat Rate. Now the Operating Station Heat Rate is being compared with Design Station Heat Rate. In case of Transmission System Availability Award, the eligibility criteria of State Transmission Utilities (STUs) of minimum 75% of Financial Transmission Assets of 220 kV and above as compared to the total transmission assets for award purpose was being considered which has now been dispensed with. As a result, all STUs would qualify for the award. Secondly, private transmission licenses with 2000 ckt. kms or more of transmission lines of voltage level of 220 kV or above have been introduced in the scheme. For early completion of power transmission projects, earlier existing / extension of sub-stations was considered for award purpose, but now onwards, only new sub-stations would be considered for the award purpose. Based upon the suggestion, a modified proposal for Comprehensive Award Scheme was prepared in August, 2008.

2.0 OBJECTIVE

The objective of Comprehensive Award Scheme is to develop the spirit of competitiveness among the various power stations/projects in the power sector. The personnel engaged in the power projects/stations should be encouraged & motivated to improve the efficiency & productivity and show better results. It will be helpful in achieving the goal set by Ministry of Power for reliable, affordable & quality power supply for all consumers by 2012.

3.0 COMMENCEMENT

The Comprehensive Award Scheme was implemented from the year 2004-05 is continuing on annual basis.

4.0 SCOPE

The Comprehensive Award Scheme covers the following award schemes:

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- Performance Award Scheme For Thermal Power Stations – 6 Awards.
- Award Scheme for Early Completion of Thermal Power Projects - 6 Awards.
- Performance Award Scheme for Hydro Power Stations - 3 Awards.
- Award Scheme for Early Completion of Hydro Power Projects - 3 Awards.
- Award Scheme for Transmission System Availability - 2 Awards.
- Award Scheme for Early Completion of Transmission Projects - 2 Awards.
- Performance Award Scheme for Nuclear Power Stations – 1 Award.
- Performance Award for distribution companies - 3 Awards.
- **Performance Award for rural distribution franchises – 3 Awards**

Now total number of awards works out to be 29 instead of 26 of earlier scheme.

5.0 GENERAL CONDITIONS

i) All stations/projects of Central, State, Private Sector (Excluding Captive Power Plants) are eligible to compete for the awards under this scheme.

ii) The evaluation of performance shall relate to the financial year i.e. from 1st April to 31st March.

iii) Selected Stations/Projects shall be awarded suitably and there shall be no cash awards.

iv) The complete data for the financial year shall be submitted to CEA by 30th August every year. It shall be the responsibility of the concerned organization to ensure that the data is complete in all respects.

v) Any data furnished may be verified by CEA from station/project records. For this purpose, station/ project would make available any records required by CEA and extend all co-operation. CEA also reserves the right to depute its officers to verify the data furnished by the stations/ projects.

vi) The decision of the CEA in the evaluation of the data for the award and assignment of ranking shall be final and binding.

vii) Ministry of Power and Central Electricity Authority will have the sole and exclusive right to alter, modify or suspend the scheme at any time and in any manner without assigning any reason thereof.

viii) Bench marking criteria for each scheme shall be developed by CEA.

ix) Above conditions are applicable to all Award Schemes covered in Comprehensive Award Scheme. However, any other condition included in a particular Award Scheme shall also be applicable to that scheme only.

PERFORMANCE
AWARD SCHEME FOR THERMAL POWER STATIONS

1.0 PREAMBLE

The incentive award scheme in force till 2003-04 provided separate awards for important operational parameters viz. Plant load factor, secondary oil consumption and auxiliary power consumption. The scheme since then has been modified and a new scheme has thus been introduced from year 2004-05. The new scheme for 'Thermal Power Stations Performance Awards' has been developed with a view to accord recognition to Power Stations based on their all round performance by integrating the operational parameters like sp. secondary fuel oil consumption, auxiliary power consumption & Peaking Plant load factor (Peaking PLF) as above and also including Station Heat Rate as an additional parameter. **Earlier Normative Station Heat Rate was considered for evaluation. Now the design station heat rate would be considered for evaluation.**

2.0 OBJECTIVE

The scheme in its present form is intended to foster the competitive spirit amongst various Power Stations so as to encourage them to improve performance in all spheres of their working. The scheme would also help in evolving benchmarks for various performance indices.

3.0 NATURE OF AWARD

Six (6) number highest ranking thermal stations will be given awards in recognition of their operational performance.

4.0 ELIGIBILITY

The scheme shall cover all coal/ lignite based and combined cycle gas turbine based thermal power stations of Central, State and Private sector (excluding captive power plants) which meet the following requirements:

a) Coal/lignite based thermal stations should have units of size 100 MW or above

b) Combined Cycle Gas Turbine (CCGT) based power stations should have at least one GT of size 30 MW or above.

5.0 EVALUATION CRITERIA

The parameters to be evaluated have been listed in the enclosed Annexure-'A'. The weightage assigned to each of these parameters, in case of coal/lignite based stations and CCGT stations, have also been given therein. The criteria for assigning marks are given in enclosed Annexure-'B'.

Data received from all stations shall be processed and marks assigned as per above marking scheme. Total score shall be considered for ranking. All thermal stations (coal/lignite based stations and CCGT stations) of Central, State, and Private Sectors shall be considered at par.

6.0 DATA REQUIREMENT

The Chief Executives of all Thermal Stations shall be required to furnish complete data in **prescribed formats** to the Nodal Officer of CEA as specified hereunder:

S.No.	Parameter	Formats	
		Coal/ lignite based stations	CCGT stations
1.	Heat Rate	Annexure- I (Coal/Lignite)	Annexure-I (CCGT)
2.	Aux. Power Consumption	Annexure- II (Coal/Lignite)	Annexure- II (CCGT)
3.	Peaking PLF	Annexure- III (Coal/Lignite)	Annexure- III (CCGT)
4.	Sp. Secondary oil consumption	Annexure- IV (Coal/Lignite)	N/A

7.0 TIME SCHEDULE FOR SUBMISSION OF DATA

All Thermal Stations shall send the above data to CEA **regularly each month.**.In any case, the data must reach CEA latest by 2nd week of the following month for which the data is being reported upon..

8.0 NODAL OFFICER

Chief Engineer (C&E)
Central Electricity Authority
Sewa Bhawan, R. K. Puram
New Delhi-110066.

Tele/fax : 011- 26102029,26108462

e.mail: **direval.cea@nic.in or direval.cea@live.com**

Annexure-'A'

PARAMETERS FOR THERMAL POWER STATIONS PERFORMANCE AWARD AND THEIR WEIGHTAGE

Parameter	**Weightage**	
	Coal/lignite based stations	**CCGT stations**
Peaking PLF.	50	**50**
Station Heat Rate	15	**30**
Sp. Secondary Fuel Oil Consumption	15	Not Applicable
Aux. Power Consumption.	20	20
TOTAL	100	100

ANNEXURE -'B'

CRITERIA FOR ASSIGNING MARKS

Parameter **(1)**	**Criteria for Coal/lignite based stations** **(2)**	**Criteria for CCGT stations** **(3)**	**Remarks** **(4)**
Peaking P.L.F.	National Avg. PLF 0 ≥ 90%PLF 50	National Avg. PLF 0 ≥ 90%PLF **50**	• Marks on pro-rata basis for values in between. • Generation during morning & evening peak hours (4 hours each) to be extrapolated for the day and averaged over the year
Station Heat Rate	**Deviation of 20% and Above from Design Station Heat Rate 0** **Minimum deviation from Design Station Heat Rate 15**	**Deviation of 20% And Above from Design Station Heat Rate 0** **Minimum deviation from Design Station Heat Rate 30**	• **Marks on pro-rata basis for values in between.**
Sp. Secondary FuelOil Consumption	Compliance with normative value 0 Maximum improvement from Normative value achieved during the year by any station 15	Not Applicable	• Marks on pro-rata basis for values in between. • Norms for stations having different unit sizes shall be worked out on weighted average basis
Aux. Power Consump.	Compliance with Normative value 0 Maximum improvement from Normative value achieved during the year by any station 20	Compliance with Normative value 0 Maximum improvement from Normative value achieved during the year by any station 20	• Marks on pro-rata basis for values in between. • Norms for stations having different unit sizes shall be worked out on weighted average basis

Note: For coal/lignite based stations with units of 200 MW and above and central sector CCGT stations, the normative values for various operational parameters shall be as per CERC's notification, as applicable. For lower unit sizes of coal/lignite based stations and other CCGT stations, the normative values shall be as determined by CEA.

Annexure - I (Coal/Lignite)

FORMAT FOR FURNISHING MONTHLY HEAT RATE DATA BY COAL/LIGNITE BASED THERMAL POWER STATIONS FOR PERFORMANCE AWARD SCHEME

i) Name of Station:
ii) Station Capacity:
iii) No. of Units with size:
iv) Design Parameters for Coal / Lignite Based Stations:

No.of units	Unit Capacity (MW)	Date of Commi-ssioning	Make		Boiler Efficiency	Turbine Heat Rate	Unit Heat Rate (7)x100/(6)	Weighted Design Station Heat Rate w.r.t. Capacity
			Boiler	Turbine	(%)	(kcal/kWh)	kcal/kWh	kcal/kWh
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-	-(6)-	-(7)-	-(8)-	-(9)-
Unit- 1								
Unit- 2								

Unit- n								
Station								

v) Operating Performance Data for COAL/ LIGNITE BASED STATIONS for the year :_____

Month	Coal/Lignite Stocks in the beginning of the month	Coal/Lignite Stocks at the end of the month	Coal/Lignite received during the month	Total Coal/Lignite Consumption during the month (2)+(4)-(3)	Generation during the month	Average GCV of Coal/Lignite	Specific Coal/Lignite Consumption (5)/[(6) *1000]	Oil Consumption	Specific Oil Consumption (9)/(6)	Average GCV of Oil	Actual Station Heat Rate (7)*(8) + (10)*(11)/1000
	(Tonnes)	(Tonnes)	(Tonnes)	(Tonnes)	(MU)	(kcal/kg)	(kg/kWh)	(kl)	(ml/kWh)	(kcal/l)	(kcal/kWh)
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-	-(6)-	-(7)-	-(8)-	-(9)-	-(10)-	-(11)-	-(12)-
April											
May											
June											
July											
August											
September											
October											
November											
December											
January											
February											
March											
Total/Weighted average											

Date:

Signature with Name & Designation of forwarding Officer

Annexure - II (Coal/Lignite)

FORMAT FOR FURNISHING MONTHLY SECONDARY Fuel OIL CONSUMPTION DATA BY COAL/LIGNITE BASED THERMAL POWER STATIONS FOR PERFORMANCE AWARD SCHEME

i) Name of Station:
ii) Station Capacity:
iii) No. of units with size:
v) Secondary Fuel Oil Consumption Data for Coal/ Lignite based Stations for the year :_____

S. No.	Month	Opening Stock	Receipt	Closing Stock	Oil Consumption (2)+(3)-(4)	Energy generated	Specific secondary oil consumption (6)/(7)
		(kl)	(kl)	(kl)	(kl)	(MU)	(ml/kWh)
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-	-(6)-	-(7)-	-(8)-
1	April						
2	May						
3	June						
4	July						
5	August						
6	September						
7	October						
8	November						
9	December						
10	January						
11	February						
12	March						
	Total/Weighted average						

Date: **Signature with Name & Designation of forwarding Officer**

Annexure - III (Coal/Lignite)

FORMAT FOR FURNISHING MONTHLY AUXILIARY POWER CONSUMPTION DATA BY COAL/LIGNITE BASED THERMAL POWER STATIONS FOR PERFORMANCE AWARD SCHEME

i) Name of Station:

ii) Station Capacity:

iii) No. of Units with size:

iv) Type of Cooling Water System (Once Through or Cooling Tower) :

v) Auxiliary Power Consumption Data for Coal/ Lignite based Stations for the year :_____

S. No.	Month	Energy Generated during the month	Energy Sent out during the month	Auxiliary Power consumption of the Plant [(3)- (4)]	Auxiliary Power consumption [(5)*100/(3)]
		(MU)	(MU)	(MU)	(%)
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-	-(6)-
1	April				
2	May				
3	June				
4	July				
5	August				
6	September				
7	October				
8	November				
9	December				
10	January				
11	February				
12	March				
	Total/Weighted average				

Date: **Signature with Name & Designation of forwarding Officer**

Annexure - IV (Coal/Lignite)

FORMAT FOR FURNISHING MONTHLY PEAK HOURS GENERATION DATA BY COAL/LIGNITE BASED THERMAL POWER STATIONS FOR PERFORMANCE AWARD SCHEME

i) Name of Station:

ii) Station Capacity:

iii) No. of Units with size:

iv) Duration of Peak Hours:

Morning Peak 4 Hrs:

Summer: 5 Hrs to 9 Hrs

Winter : 6 Hrs to 10 Hrs

Evening Peak 4 Hrs:

Summer: 18 Hrs to 22 Hrs

Winter : 17 Hrs to 21 Hrs

v) Peak Hours Generation data for Coal/ Lignite based Stations for the year :_____

S. No.	Month	Energy recorded during morning peak 4 hours block	Energy recorded during evening peak 4 hours block	Total energy recorded during peak hours [(3) + (4)]
		(MU)	(MU)	(MU)
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-
1	April			
2	May			
3	June			
4	July			
5	August			
6	September			
7	October			
8	November			
9	December			
10	January			
11	February			
12	March			
	Total			

Note: A copy of the meter print out covering details of energy meter readings on half hour/ fifteen minutes basis for the morning & evening peak hours must be enclosed failing which data would be considered as incomplete.

Date: **Signature with Name & Designation of forwarding Officer**

Annexure - I (CCGT)

FORMAT FOR FURNISHING MONTHLY HEAT RATE DATA BY COMBINED CYCLE GAS TURBINE (CCGT) POWER STATIONS FOR PERFORMANCE AWARD SCHEME

i) Name of Station:
ii) Station Capacity:
iii) No. of Units with size:
iv) Design Parameters for CCGT STATIONS:

No. of Modules	Module capacity (MW)	Date of Commi-ssioning	Make		Module Heat Rate	Weighted Design Station Heat Rate w.r.t. capacity
			GT	ST	(kcal/kWh)	(kcal/kWh)
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-	-(6)-	-(7)-
Module- 1						
Module- 2						

Module- n						
Station						

v) Operating Performance Data for CCGT Stations for the year :_____

Month	Liquid Fuel Stocks in the beginning of the month	Liquid Fuel Stocks at the end of the month	Liquid Fuel received during the month	Total Liquid Fuel consumption during the month [(2)+(4)-(3)]	Generation during the month	Average GCV of Liquid Fuel	Specific Liquid Fuel Consumption (5)/[(6) *1000]	Gas Consumption at S.T.P.	Specific Gas Consumption (9)/(6)	Avgerage GCV of Gas at STP	Actual Station Heat Rate (7)*(8)+ (10)*(11)
	(kl)	(kl)	(kl)	(kl)	(MU)	(kcal/l)	(l/kWh)	(M cu.m)	(cu.m/kWh)	(kcal/cu.m)	(kcal/kWh)
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-	-(6)-	-(7)-	-(8)-	-(9)-	-(10)-	-(11)-	-(12)-
April											
May											
June											
July											
August											
September											
October											
November											
December											
January											
February											
March											
Total/Weighted average											

Date:

Signature with Name & Designation of forwarding Officer

Annexure - II (CCGT)

FORMAT FOR FURNISHING MONTHLY AUXILIARY POWER CONSUMPTION DATA BY COMBINED CYCLE GAS TURBINE (CCGT) POWER STATIONS FOR PERFORMANCE AWARD SCHEME

i) Name of Station:

ii) Station Capacity:

iii) No. of Units with size:

iv) Type of Cooling Water System (Once Through or Cooling Tower) :

v) Auxiliary Power Consumption Data for CCGT Stations for the year :_____

S. No.	Month	Energy Generated during the month	Energy Sent out during the month	Auxiliary Power consumption of the Plant [(3)- (4)]	Auxiliary Power consumption [(5)*100/(3)]
		(MU)	(MU)	(MU)	(%)
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-	-(6)-
1	April				
2	May				
3	June				
4	July				
5	August				
6	September				
7	October				
8	November				
9	December				
10	January				
11	February				
12	March				
	Total/Weighted average				

Date: **Signature with Name & Designation of forwarding Officer**

Annexure - III (CCGT)

FORMAT FOR FURNISHING MONTHLY PEAK HOURS GENERATION DATA BY COMBINED CYCLE GAS TURBINE (CCGT) POWER STATIONS FOR PERFORMANCE AWARD SCHEME

i) Name of Station:

ii) Station Capacity:

iii) No. of Units with size:

iv) Duration of Peak Hours:

Morning Peak 4 Hrs:

Summer: 5 Hrs to 9 Hrs

Winter : 6 Hrs to 10 Hrs

Evening Peak 4 Hrs:

Summer: 18 Hrs to 22 Hrs

Winter : 17 Hrs to 21 Hrs

v) Peak Hours Generation Data for CCGT Stations for the year :_____

S. No	Month	Energy recorded during morning peak 4 hours block	Energy recorded during evening peak 4 hours block	Total energy recorded during peak hours [(3) + (4)]
		(MU)	(MU)	(MU)
-(1)-	-(2)-	-(3)-	-(4)-	-(5)-
1	April			
2	May			
3	June			
4	July			
5	August			
6	September			
7	October			
8	November			
9	December			
10	January			
11	February			
12	March			
	Total			

Note: A copy of the meter print out covering details of energy meter readings on half hour/ fifteen minutes basis for the morning & evening peak hours must be enclosed failing which data would be considered as incomplete.

Date: **Signature with Name & Designation of forwarding Officer**

AWARD SCHEME FOR EARLY COMPLETION OF THERMAL POWER PROJECTS

1.0 PREAMBLE

This Award Scheme has been instituted by Ministry of Power and Central Electricity Authority to encourage the public sector, private sector and joint sector organizations to strive for an early completion of Thermal Power Projects in the Country and to accord recognition to them for the same.

2.0 OBJECTIVE

The proposed Award Scheme is intended to motivate the project team involved in the execution of the thermal power projects so that the time overruns and consequently the cost overruns are minimized and the project completion is achieved as per schedule or earlier. The award is not intended really to extend any help in the form of bonus or promotion, which are within the purview of local authorities, but is actually a reward in recognition of the hard and effective contribution lent to the project for its successful completion.

3.0 NATURE OF AWARD

i) Award Scheme is meant for only Coal/Lignite based thermal power projects.

ii) The thermal power projects shall be categorized as follows for the purpose of this Award Scheme:

Category A - Unit size of 500 MW and above
Category B - Unit size of 200/210/250 MW/300 MW

iii) There shall be **three (3) awards** in each Category of thermal units i.e. in all; there shall be **six (6) awards** for thermal power projects.

4.0 ELIGIBILITY

The thermal power projects that will be covered under the Award Scheme are as under:

a) All Coal / Lignite based power projects with unit size of 200 MW and above will be eligible for participation in this Award Scheme.

b) The thermal units that have been completed within the "Reasonable Time Schedule" as given in para 5.3 will be eligible for the Award.

c) Only thermal projects which apply and participate in the Award Scheme shall be considered for the award.

d) The Award Scheme will cover the thermal power projects, unit-wise which are completed during a financial year between 1st April and 31st March (both dates inclusive).

5.0 EVALUATION CRITERIA

i) Each category of eligible thermal units would be graded separately in ascending order of their ratio of actual completion period to the Reasonable Time Schedule.

ii) The thermal unit having the lowest ratio of actual completion period to the reasonable time schedule in each category of projects would be declared as the **"Best Executed Project of the Year"** and awarded a "**Gold Plated Shield**" along with certificate to this effect.

iii) The thermal unit in each category with second higher ratio would be declared as the **"Second Best Executed project of the Year"** and awarded a "**Silver Plated Shield"** along with certificate to this effect.

iv) Similarly the thermal unit in each category with third higher ratio would be declared as the **"Third Best Executed project of the Year"** and awarded a "**Bronze Plated Shield"** along with certificate to this effect.

v) Out of the eligible participants, a few deserving contestants which are not selected for shield but have achieved the bench mark of "Reasonable Time Schedule" as indicated in Para 5.3 may be awarded with certificate of merit in recognition of their performance.

5.1 DATE OF START OF THE PROJECT

The date of start (Zero date) of the project shall be the date of Letter of Award (LOA) for the main plant equipment.

5.2 DATE OF COMPLETION OF THE PROJECT

The date of completion of trial operation (duration of trial operation of the generating unit shall be fourteen (14) days out of which at least seventy-two (72) hours shall be continuous operation on full load or any other duration as may be agreed to, between project developer and contractor.) shall be taken as the date of completion for the purpose of this Award Scheme.

5.3 REASONABLE TIME SCHEDULE

The time period as indicated below shall be considered as the "Reasonable Time Schedule" for completion of the unit from its date of start.

a) Reasonable Time Schedule for Green Field Projects

Unit size of 500 MW and above	- 44 months for first unit of the project. Subsequent units at an interval of 6 months each.
Unit size of 200 /210/ 250/ 300 MW	- 33 months for first unit of the project. Subsequent units at an interval of 4 months each.

b) Reasonable Time Schedule for Extension Projects.

Unit size of 500 MW and above	- 42 months for first unit of the project. Subsequent units at an interval of 6 months each.
Unit size of 200 /210/ 250 / 300 MW	- 31 months for first unit of the project. Subsequent units at an interval of 4 months each.

6.0 DATA REQUIREMENT

Thermal Power Projects participating in the Award Scheme shall submit the data in the prescribed proforma as per Annexure-I.

7.0 TIME SCHEDULE FOR SUBMISSION OF DATA

The Chief Executive Officer/ Authorised Person of the project shall submit application for Award latest by 31st August of every year for the thermal projects/Units completed during the previous financial year. The proposal for the Award shall be submitted to the Nodal Officer of CEA designated for the purpose.

8.0 NODAL OFFICER

Chief Engineer (TPM),
Central Electricity Authority,
9th Floor, South Wing,
Sewa Bhawan, R.K.Puram,
New Delhi-110066.
Telefax :011- 26105075
e-mail : jpk.cea@nic.in, jp_kardam@yahoo.com balbir.cea@nic.in

Scheme Code: Th-2

ANNEXURE-I

PROFORMA

AWARD SCHEME FOR EARLY COMPLETION OF THERMAL POWER PROJECTS

1. Name of the Utility
2. Name of the Project
3. Name and address of the Chief Executive Officer (CEO) of the Project
4. Details of the Project:
   - (i) Details of unit under consideration (Unit No. & Capacity in MW)
   - (ii) Date of start of Work (Zero date):

     Date of Letter of Award (LOA) for Main Plant Equipment
     (Enclose copy of letter of award of contract)
   - (iii) Date of completion of the project:

     (Enclose the supporting documents including the results of the relevant trial operation/tests etc.)

Certified that the information furnished above is true to the best of my knowledge and belief and is based on the documentary evidence.

(Signature of CEO of the Project)

Name: _____

Designation: _____

Office Seal: _____

Counter Signature

(Signature of CEO of the Utility)

Name: _____
Designation: _____
Office Seal: _____

PERFORMANCE AWARD SCHEME FOR HYDRO ELECTRIC POWER STATIONS

1.0 PREAMBLE

Hydro Power Stations Performance Award Scheme has been conceived with a view to accord recognition to hydro power stations based on the best all round performance covering all activities including operation, environmental, social and management aspects.

2.0 OBJECTIVE

The main objective for introduction of the Performance Award Scheme for Hydro Electric Power Stations are:

i) To encourage optimum availability of generating units during peak periods, where ever applicable.
ii) To encourage hydro power stations to undertake planned maintenance etc. with proper maintenance planning.
iii) To minimize the down time of units under planned maintenance/forced outage.
iv) To encourage healthy competition in power generation.
v) To encourage environmental management and social responsiveness.

3.0 NATURE OF AWARD

The scheme envisages a total number of three awards for hydro electric power stations in recognition to their operational performance for highest raking HE Power Stations having Installed Capacity of 100 MW and above for ROR as well as for reservoir based schemes.

4.0 ELIGIBILITY

Every hydro electric power station in the Central Sector/State Sector/Joint Sector/Private Sector/(IPP) having a total station installed capacity of 100 MW and above as on 1st April of the year of Award shall be considered for Award under this scheme.

5.0 EVALUATION CRITEIA

The parameters to be evaluated have been listed in enclosed Annexure-1, the weightage assigned to each of the parameters has also been given therein. The criteria for assigning marks are given in enclosed Annexure-II.

Data received from all hydro power stations shall be processed and marks assigned as per above marking scheme. Total score shall be considered for ranking. All hydro power stations of Central, State and Private Sector shall be considered at par.

6.0 DATA REQUIREMENT

The Chief Executive Officers of all HE Stations shall be required to furnish complete data in prescribed format as given in Annexure-III to Central Electricity Authority.

7.0 TIME SCHEDULE FOR SUBMISSION OF DATA

The application for award along with requisite data shall be submitted by **31st August every year** to CEA. The proposal for award shall be submitted to the Nodal Officer of CEA designated for the purpose. In case partial data is received for any stations, Zero marks shall be assigned to the parameters for which data is not received.
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8.0 NODAL OFFICER

Chief Engineer (H P & I)
Central Electricity Authority,
7th Floor (North) : Sewa Bhawan,
R.K. Puram, New Delhi – 110 606
Telfax No. – 011-26103332

Annexure-I

PARAMETERS FOR HYDRO POWER STATIONS PERFORMANCE AWARD AND THEIR WEIGHTAGE				
	Broad Category	Parameter	Weightage	Criteria for assigning Marks
	Operational Performance	Availability	70	O-1
		Generation	30	O-3
		Total	100	

Annexure-II

		CRITERIA FOR ASSIGNING MARKS		
Sl. No	**CRITERIA**	**Parameters**		**Marks**
	Operational Performance			
	O-1	Availability (%)	70	
		<85	0	
		>99.8	70	
		Marks on pro-rata basis for availability values in between		
	O-3	Generation	30	
		(%) Achievement over mutually agreed generation targets		
		<75	0	
		>=100	30	
		Marks on pro-rata basis for generation values in between		
	Total		100	

Annexure-III

FORMAT FOR DATA REQUIRED FROM HE STATIONS OF INSTALLED CAPACITY 100 MW & ABOVE FOR PERFORMANCE AWARD 2007-08

1.0 General

i) Station Name :

ii) Type of Station : Storage/ROR

iii) Power House : Surface/underground

iv) Station Capacity including unitwise derated/uprated capacity

v) Date of commissioning

2.0 Performance data for the Station for the period (1.04.2007- to 31.03.2008)

Sl. No.	Parameter	Data	Unit	Remarks
1.	Availability	Yearly	%	
2.	Generation	Month wise generation	MU	

Note:

The operating availability of the HE station is to be calculated as indicated below:

Operating availability (%) =100-FO- PM

FO= Forced outage non-availability (%)

$$= \frac{(Cf1\ \ hf1+cf2\ hf2.....Cfn\ \ hfn)x100}{CxH}$$

Where Cf1, Cf2 ..... Cfn are the capacities in MW of the generating units on forced outage and hf1, hf2..... hfn are the duration of each outage in hours during the year. C is the total installed capacity in MW and H is the total period in hours during the year.

PM = Planned maintenance Non- availability (%)

$$= \frac{Cp1\ \ hp1+Cp2\ \ hp2 + ... Cpn\ \ hpn)\ \ x\ 100\ )}{CxH}$$

Where Cpl, Cp2 ..... Cpn are the capacities in MW of units on planned shutdown, hp1, hp2 ..... hpn are the duration of each shutdown in hours during the year. C is the total installed capacity in MW and H is the total period in hours during the year.

AWARD SCHEME FOR EARLY COMPLETION OF HYDRO POWER PROJECTS

1.0 PREAMBLE

This award scheme has been instituted by Ministry of Power & Central Electricity Authority to minimise delay and encourage the public sector, state sector, private sector, and joint sector organizations to strive for early completion of Hydro Power Projects in the country and to accord recognition to them for the same.

2.0 OBJECTIVE

The proposed Award Scheme is intended to motivate the project team involved in the execution of hydro power projects so that the time overruns and consequently the cost overruns are minimized and the project completion is achieved as per schedule or earlier. The award is not intended really to extend any help in the form of bonus or promotion, which are within the purview of local authorities, but is actually a reward in recognition of the hard and effective contribution lent to the project for its successful completion.

3.0 NATURE OF AWARD

i) Award Scheme is meant only for hydro power projects.

ii) The hydro projects shall be categorized as follows for the purpose of this Award Scheme:

Category A – Generating Unit size above 100 MW
Category B – Generating Unit size of 25 MW to 100 MW

iii) There shall be two (2) awards in category A and one (1) award in category B of hydro generating units i.e., in all; there shall be three (3) awards for hydro generation projects.

4.0 ELIGIBILITY

The hydro power projects that will be covered under the Award Scheme are as under:

a) All Hydro Power Projects with unit size of 25 MW and above will be eligible for participation in this Award Scheme.

b) The hydro units that have been completed within the "Reasonable Time Schedule" will be eligible for the Award.

c) Only hydro projects, which apply and participate in the Award Scheme, shall be considered for the Award.

d) The Award Scheme will cover the hydro power projects, unit-wise which are completed during a financial year between 1st April and 31st March (both dates inclusive).

5.0 EVALUATION CRITERIA

i) Each category of eligible hydro generating units would be graded separately in ascending order of their ratio of actual completion period to the Reasonable Time Schedule.

ii) The hydro unit having the lowest ratio of actual completion period to the reasonable time schedule in each category of projects would be declared as the **"Best Executed Project of the year"** and awarded.

iii) Similarly the generating unit in **category- A** with next higher ratio would be declared as the **"Second Best Executed project of the Year"** and awarded.

The decision of CEA in each case shall be final.

5.1 DATE OF START

The date of start (Zero Date) of the project shall be the date of award (LOA date) for generating unit or major civil works which ever is earlier.

5.2 DATE OF COMPLETION

The date of successful synchronization of the Generating Unit with grid shall be taken for the purpose of this Award Scheme.

5.3 REASONABLE TIME SCHEDULE

The time schedule as specified by concerned authority shall be the reasonable time schedule reckoned for the purpose of their scheme.

5.4 UNFORSEEN CIRCUMSTANCES

The delay in completion of the project for the reasons beyond control of the project authorities, mentioned hereunder, may be deducted from the overall/ actual time of completion.

i) Earthquakes resulting in stoppage of construction work.

ii) Floods and cyclones causing damage of constructed work.

iii) Geological problems leading to delay in construction work.

iv) Other such contingencies, which may be considered, appropriate by Central Electricity Authority (CEA).

6.0 DATA REQUIREMENT

Hydro Power Projects participating in the Award Scheme shall submit the data in the prescribed proforma as per Annexure-I.

7.0 TIME SCHEDULE FOR SUBMISSION OF DATA

The Chief Executive Officer/ Authorised Person of the project shall submit application for Award latest by 31st August of every year for the Hydro projects/Units completed during the previous financial year. The proposal for the Award shall be submitted to the Nodal Officer of CEA designated for the purpose.

8.0 NODAL OFFICER

Chief Engineer (HPM),
Hydro Project Monitoring Division,
Central Electricity Authority,
7th Floor, North Wing, Sewa Bhawan, R.K. Puram,
New Delhi – 110 066.
E-mail ID: <chief_hpm@yahoo.com>

Annexure-I

PROFORMA:

AWARD SCHEME FOR EARLY COMPLETION OF HYDRO POWER PROJECTS

1. Name of the Utility:
2. Name of the Project:
3. General details of the Project:

   a) No. of units, their ratings and capacity:

   b) Brief details of major components of project:

   c) Whether it is an extension or a new power project:
4. Name and address of the Chief Executive Officer (CEO) of the project:
5. Details of the Project:

   a) Details of unit under consideration

   - ❖ Unit Number:
   - ❖ Capacity in MW):

   b) Date of Start of work (Zero date):

   Give date of Letter of Award- for generating unit or Contract date for major civil works which ever is earlier)

   (Enclose copy of letter of award)

   c) Date of completion of the Project with Unit wise date of successful synchronization:

   (Enclose the supporting documents including the results of the relevant trial operation /tests etc)

   d) Reference time period for construction

   - ❖ Completion period as per original sanction letter:
     (Enclose copy)
   - ❖ Completion period as per the letter of award of contract for main Generating Unit / Major Civil Works:
     (Enclose copy)

- Completion period if given extension:

  Give justification for extension along with copy of approvals (Enclose copy)

Certified that the information furnished above is true to the best of my knowledge and belief and is based on the documentary evidence.

(Signature of CEO of the Project)

Name: _____

Designation: _____

Office Seal: _____

Counter Signature

(Signature of CEO of the Utility)

Name: _____

Designation: _____

Office Seal: _____

AWARD SCHEME FOR POWER TRANSMISSION SYSTEM AVAILABILITY

1.0 PREAMBLE

This Award Scheme has been instituted by Ministry of Power and Central Electricity Authority to encourage the power transmission licensees in the country to strive for better efficiency in maintenance and operation of transmission systems and to accord recognition to efficient utilities for maintaining higher transmission system availability.

2.0 OBJECTIVE

The main objective of the scheme is:

- To ensure optimum availability of EHV AC transmission systems in the country.
- To encourage electricity utilities having poor transmission system availability to improve.

3.0 NATURE OF AWARD

There will be three awards as given below:

Category-I - For all Central and State transmission Licensees except those in the states of North-Eastern Region, Sikkim, Uttarakhand, Himachal Pradesh and Jammu & Kashmir. The scheme is also valid for private / joint venture (JV) transmission licensees in these states with transmission lines in excess of 2,000 circuit kms.

i) Best transmission system availability award for transmission system of 220 kV and above; and
ii) Second Best transmission system availability award for transmission system of 220 kV and above.

Category-II - For all transmission Licensees in the special category States of North-Eastern Region, Sikkim, Uttarakhand, Himachal Pradesh and Jammu & Kashmir who have predominantly 132 kV transmission System. The scheme is also valid for private/ JV transmission licensees in these States with transmission lines in excess of 2000 circuit kms.

iii) Best transmission system availability award for transmission system of 132 kV and above.

4.0 ELIGIBILITY

Category-I

All 220 kV and above AC transmission systems with elements up to the Low Voltage sides of the transformers shall be considered for determining the Transmission System Availability.

Category-II

All 132 kV and above AC transmission systems with elements up to the Low Voltage sides of the transformers shall be considered for determining the Transmission System Availability

5.0 EVALUATION CRITERIA

Transmission System Availability for all Transmission Licensees' of Inter-State Transmission System shall be calculated as per Appendix - III to Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations 2004 notified on 26/03/2004. The relevant extracts of CERC Tariff Regulations 2004, Appendix- 'III' are enclosed at Annexure I.

Transmission System Availability for other transmission Licensees' system shall also be calculated in line with the above referred CERC Regulations.

6.0 DATA REQUIREMENT

The utilities participating in the award scheme shall submit Transmission system availability of their system during the period 2007-08 alongwith the transmission element data and outage data for the transmission system in the prescribed proforma as per Annexure-II and III to the respective Regional Power Committees (RPCs).

7.0 TIME SCHEDULE FOR SUBMISSION OF DATA

It will be the responsibility of the Transmission Licensees to ensure that complete data as required in respect of its system reaches respective RPC latest by 31st August every year. The Transmission Licensees for which data is not received in RPC by this date may not be considered for the Award. The RPCs will verify the data and send the verified data to CEA by 30th September every year.

8.0 NODAL OFFICER

Shri Pankaj Batra
Director (GM),
Central Electricity Authority
Sewa Bhawan (N), 6th Floor,
Rama Krishna Puram,
New Delhi - 110 066

Annexure I

EXTRACTS from Appendix III to CERC TARIFF REGULATIONS 2004, Order dated 26th March 2004

Procedure for calculation of Transmission System Availability

1. The transmission elements shall be grouped into following categories for the purpose of calculation of availability of Regional Transmission Systems:

i) AC transmission lines: Each circuit of AC transmission line shall be considered as one element.

ii) Inter-Connecting Transformers (ICTs): Each ICT bank (three single phase transformer together) shall form one element.

iii) Static VAR Compensator (SVC): SVC along with SVC transformer shall form one element. However, 50% credit to inductive and 50% to capacitive rating shall be given.

iv) Switched Bus Reactor: Each switched Bus Reactor shall be considered as one element.

2. The Availability of Transmission System shall be calculated as Under:

% System Availability

$$= \frac{o \times AV_o + p \times AV_p + q \times AV_q + r \times AV_r}{o + p + q + r} \times 100$$

Where

0	is Total number of AC lines.
AV_o	is Availability of o number of AC lines,
p	is Total number of switched bus reactors.
AV_p	is Availability of s number switched bus reactors.
q	is Total number of ICTs.
AV_q	is Availability of q number of ICTs.
r	is Total number of SVCs.
AV_r	is Availability of r number of SVCs.

3. The weightage factor for each category of transmission elements shall be as under:

(a) For each circuit of AC line – Surge Impedance Loading for Uncompensated line (SIL) multiplied by Circuit km. SIL rating for various voltage level and conductor configuration is given in Annexure-I A.

For inter-regional AC lines, 50% of the weightage factor shall be allocated to each Region.

(b) For each ICT bank – The rated MVA capacity.
(c) For SVC–The rated MVAR capacity (inductive & capacitive).
(d) For switched Bus reactor – The rated MVAR capacity.

4. The availability for each category of transmission elements shall be calculated based on the weightage factor, total hours under consideration and non-available hours for each element of that category. The formulae for calculation of Availability of each category of the Transmission elements are enclosed at Annexure-IB

5. The transmission elements under outage due to following reasons not attributable to Transmission Licensees shall be deemed to be available:

i) Shut down of transmission elements availed by other agency/agencies for maintenance or construction of their transmission system.

ii) Manual tripping of line due to over voltage and manual tripping of switched bus reactor as per the directions of RLDC.

6. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.

i) Outage of elements due to acts of God and force majeure events beyond the control of Transmission Licensees. However, onus of satisfying the Member Secretary, RPC that element outage was due to aforesaid events and not due to design failure shall rest on the Transmission Licensee. A reasonable restoration time for the element shall be allowed

by Member Secretary, RPC and any additional time taken by Transmission Licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to Transmission Licensee. Member Secretary, RPC may consult Transmission Licensee or any expert for estimation of restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.

ii) Outage caused by grid incident/disturbance not attributable to Transmission Licensee, e.g. faults in substation or bays owned by other agency causing outage of Transmission Licensee's elements, tripping of lines, ICTs, etc due to grid disturbance. However, if the element is not restored on receipt of direction from RLDC while normalising the system following grid incident/disturbance within reasonable time, the element will be considered not available for whole period of outage and outage time shall be attributable to Transmission Licensee.

7. If the outage of any element causes loss of generation at Central Sector Station(s) then the outage period for that element should be deemed to be twice the actual outage period for the day(s) on which such loss of generation has taken place.

ANNEXURE-I A

SURGE IMPEDENCE LOADING (SIL) OF AC LINES

S.No.	Line Voltage (kV)	Conductor Configuration	SIL (MW)
1	765	Quad Bersimis	2250
2	400	Quad Bersimis	691
3	400	Twin Moose	515
4	400	Twin AAAC	425
5	400	Quad Zebra	647
6	400	Quad AAAC	646
7	400	Tripple Snowbird	605
8	400	ACKC (500/26)	556
9	400	Twin ACAR	557
10	220	Twin Zebra	175
11	220	Single Zebra	132
12	132	Single Panther	50
13	66	Single Dog	10

ANNEXURE-IB

Formulae for calculation of Availability of each category of transmission elements

AV_o (Availability of o no. of AC lines) $= \sum_{i=1}^{o} \frac{Wi\,(Ti - T_{NA}i)}{Ti} \Big/ \sum_{i=1}^{o} Wi$

AV_p (Availability of p no. of Switched Bus reactors) $= \sum_{m=1}^{p} \frac{Wm(Tm - T_{NA}m)}{Tm} \Big/ \sum_{m=1}^{p} Wm$

AV_q(Availability of q no. of ICTs) $= \sum_{K=1}^{q} \frac{Wk(Tk - T_{NA}k)}{Tk} \Big/ \sum_{k=1}^{q} Wk$

AV_r(Availability of r no. of SVCs) $= \left[\sum_{l=1}^{r} 0.5\frac{W_l l\,(T_l l - T_{NAl} l)}{T_l l} + \sum_{l=1}^{r} \frac{0.5\,W_C l\,(T_C l - T_{NAC} l)}{T_C l} \right] \Big/ \left[\sum_{l=1}^{r} 0.5 W_l l + \sum_{l=1}^{r} 0.5\,W_C l \right]$

Where Wi = Weightage factor for i th transmission line
Wm = Weightage factor for m th bus reactor
Wk = Weightage factor for k th ICT
$W_l l$ & $W_C l$ = Weightage factors for inductive & capacitive operation of l th SVC

Ti, Tk, $T_l l$, $T_C l$, & Tm - The total hours of i th AC line, k th ICT, l th SVC (Inductive Operation), l th SVC (Capacitive Operation) & m th Switched Bus Reactor during the period under consideration (excluding time period for outages not attributable to transmission licensee for reasons given in Para 6 of the procedure)

$T_{NA}i$, $T_{NA}k$ $T_{NA\,l}l$, $T_{NAC}l$ & $T_{NA}m$, The non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per Para 5 of the procedure) for ith AC line, kth ICT, lth SVC (Inductive Operation), lth SVC (Capacitive Operation) & mth Switched Bus Reactor.

Scheme Code: Tr-1

ANNEXURE-II

Transmission Element Data as on 31/03/2008

Name of the Transmission Licensee:

Transmission Lines

S.No.	Name of the Transmission Line	Voltage Level (kV)	S/C or D/C or S/C on D/C Tower Line	Line Length (Ckt. Km.)	Conductor Type & Configuration	SIL	Date of commissioning	Date of Comml. Operation
1								
2								
3								
4								
5								

Sub-Stations

S.No.	Name of the Sub-Station	Voltage Level (kV)	No. of ICTs / Switched Bus Reactors / SVCs	MVA Capacity of ICTs / MVAR of Switched Bus Reactors / SVCs	Date of commissioning	Date of Comml. Operation
1						
2						
3						
4						
5						

Scheme Code: Tr-1

ANNEXURE-III

Transmission System Outage Data

Name of the Transmission Licensee:
Period: 2007-08

(Elementwise chronological listing)

S.No.	Name of the Transmission Element	OUTAGE		RESTORATION		DURATION OF OUTAGE ATTRIBUTABLE TO						Deemed Availability	REASON OF OUTAGE	Loss of Generation if any, due to outage	SIL for lines / MVA capacity for ICTs / MVAR for bus reactors and SVCs	Ckm for lines and number for ICT/bus reactor / SVC	Weightage factor	Time considered for availability	Element wise availability	Availability X Weightage factor
		DATE	TIME	DATE	TIME	UTILITY ITSELF		OTHERS		System constraints/ Natural calamity/										
		dd/mm/yy	hrs : mm	dd/mm/yy	hrs : mm	Hrs	Min	Hrs	Min	Hrs	Min			(MU)				(Hrs)		
	Transmission Lines																			
1																				
2																				
3																				
	Inter-connecting Transformers (ICT) (Location & MVA Capacity)																			
1																				
2																				
3																				
	SVCs (Location & MVAR Capacity)																			
1																				
2																				
3																				
	Bus Reactors (Location & MVAR Capacity)																			
1																				
2																				
3																				

AWARD SCHEME FOR EARLY COMPLETION OF POWER TRANSMISSION PROJECTS

1.0 PREAMBLE:

This Award Scheme has been instituted to encourage all the organizations to strive for an early completion of Power Transmission Projects.

2.0 OBJECTIVE:

The main objective of the Award Scheme is to expedite the execution of the power transmission projects so that the time overruns and the cost overruns are minimized and project completion is achieved on schedule or earlier.

3.0 NATURE OF AWARD :

The award shall be worked out as follows:

(i) There shall be only one Category for Power Transmission projects of voltage level of 220 kV and above.

(ii) There shall be two awards for Power Transmission projects, one award each for transmission line and sub-station.

(iii) Power Transmission Projects completed on or before 'stipulated time schedule' or the 'reasonable time schedule', which ever is lower, would be graded in ascending order of their ratio of actual completion time to the 'reasonable time schedule'.

(iv) The Power Transmission Project which has the lowest ratio would be awarded the "Best Executed Power Transmission Project of the Year" and given a "Gold Shield" along with certificate to this effect.

(v) The Power Transmission Project with the next higher ratio would be awarded the "Second Best Executed Power Transmission Project of the Year" and given a "Silver Shield" along with certificate to this effect.

4.0 ELIGIBILITY:

4.1 The Award Scheme will cover all the power transmission works, having voltage levels 220 KV and above as per the scope defined in the project report. The power transmission projects may include AC transmission lines having total Circuit Kilometers (ckm) not less than 100 , AC substations, HVDC Transmission lines, HVDC Terminal Stations and Back to Back HVDC sub-stations. The power transmission works, having voltage level below 220 KV, even if part of the project, shall not be considered under this award scheme.

4.2 The Power Transmission Projects as a whole, which have actually been completed within the 'reasonable time schedule' in a financial year between 1st April and 31st March (both the dates inclusive), shall be eligible for consideration for this award.

5.0 EVALUATION CRITERIA:

5.1 Date of Start:

The Date of Start (Zero date) of the project shall be from the date of approval/sanction of the transmission works covered under the project.

5.2 Reasonable Time Schedule:

(i) The 'Reasonable Time Schedule' for completion, counting from the date of approval/sanction for the following types of the power transmission projects covered under the scheme shall be taken as under:

Time Period in Months

Sl. No.	***Transmission Work***	***Plain Area***	***Hilly Terrain***	***Snow bound area /@ very difficultTerrain***
a)	765 kV S/C Trans. Line	32	38	44
b)	+/- 500 kV HVDC Trans. Line	24	30	36
c)	400 kV D/C Quad. Trans. Line	36	42	48
d)	400 kV D/C Triple Trans. Line	32	38	44
e)	400 kV D/C Twin Trans. Line	28	34	40
f)	400 kV S/C Twin Trans. Line	24	30	36

g)	220 kV D/C Twin Trans. Line	28	34	40
h)	220 kV D/C Trans. Line	24	30	36
i)	220 kV S/C Trans. Line	20	26	32
j)	New 220 kV AC Sub-Station	24	27	30
k)	New 400 kV AC Sub-Station	24	27	30
l)	New 765 kV AC Sub-Station	30	34	$
m)	HVDC bi-pole terminal	36	38	-
n)	HVDC back-to-back	26	28	-

@ e.g.,Leh, Laddakh

$ No 765 kV S/S has been planned in Difficult terrain.

(ii) In case of power transmission projects having any combination of above mentioned types of the projects the reasonable time schedule of the activity having maximum time period shall be taken as the 'Reasonable Time Schedule' of the power transmission project as a whole, assuming that the other activities of the project are taken up in parallel. In the cases where a transmission line falls in plain as well as in the hilly terrain/s*now* bound area / very difficult terrain, the reasonable time period shall be considered only in proportion to the transmission line length falling in such area/terrain.

5.3 Date of Completion of the Project:

In case of Power Transmission projects, date of commissioning of the entire projects shall be taken as date of completion for the purpose of this award scheme. In case of AC sub-station, date of test charging the last bay, as per the scope defined in the project report, shall be taken as date of completion. In case of back-to-back HVDC link, the date of completion shall be taken as the date on which the B/B station is test charged and power flow commences from either end to the other.

6.0 DATA REQUIREMENT:

The data required for evaluation of the award scheme shall be submitted on the proforma annexed, for each project separately.

7.0 TIME SCHEDULE FOR SUBMISSION OF APPLICATION AND DATA FOR AWARD:

The Utilities shall submit the details for Award in duplicate by the end of the calendar month following the month of completion of the whole transmission project. The details shall be submitted, in the prescribed proforma annexed (Annexure- Tr-2), to CEA:

8.0 NODAL OFFICER

Chief Engineer (PSPM),
Central Electricity Authority,
Sewa Bhawan, R.K. Puram,
New Delhi – 110066.

9.0 GENERAL CONDITIONS:

The award scheme will not be applicable to R & M schemes of Power Transmission systems.

Annexure- Tr-2

Proposal for Award Scheme for Early Completion of Power Transmission Projects

Sl. N	PARTICULARS	DESCRIPTION
1.	**Name of the Utility:**	
2.	**Name of the Transmission Project proposed for the award:**	
3.	**Name and address of the Chief Executive Officer (CEO) of the Project:**	
4.	**Name of the competent authority to grant investment sanction:**	
5.	**Original Sanction Letter No. and Date:** (Enclose a copy of the sanction letter issued by Competent Authority)	
6.	**Detailed Scope of work of the Project:** (Furnish a copy of the project report)	
i.	**Transmission Lines:**(Furnish section-wise details of transmission lines) **a. Length of the Transmission Line(CKM)** • Length in Plain area (CKm): • Length in Hilly Terrain (CKm): • Length in Snow bound area/very difficult terrain (CKm): • Total Length (CKm): **b. The reasonable time Schedule as per Para 5.2 of the scheme**	
ii.	**New Sub-stations/HVDC Terminals/HVDC Back-to-Back Station:** (Furnish details of each sub-station, HVDC terminal station and Back-to-Back station) **a. Capacity of Sub-Stations/HVDC Terminal/ HVDC Back-to-Back Station (MVA / MW):** **b. Voltage level (kV):** a. **The reasonable time Schedule as per Para 5.2 of the scheme**	
7.	**Reasonable Time Schedule of the project as a whole as per Para 5.2 of the award scheme:**	
8.	**Date of approval/sanction for transmission works (Zero-Date):**	
9.	**Actual Date of Completion of the Power Trans. Project:** **i. Date of Completion of the Project (Enclose the supporting documents, statutory safety inspections viz. by Electrical Inspector etc.):** **ii. Actual Completion Period of the Power Trans. Project (9.i-8)**	

10.	**Ratio of Actual Completion Time to the 'Reasonable Time Schedule' of the project (9.ii / 7):**	
11.	**Any other information which Project Authority may like to give about the execution of the Project:**	
12.	**Brief Write up of the Utility**	
13.	**Photographs of the Project Commissioned**	
14.	**Certificate :** Certified that the information furnished above is true to the best of my knowledge and belief and is based on the documentary evidence. It is further affirmed that nothing has been concealed which might affect the decision on the award.	

(Signature of CEO of the Project)
Name: _____
Designation: _____
Office Seal_____
Date: _____

Counter Signature

(Signature of CEO of the Utility)
Name: _____
Designation: _____
Office Seal: _____
Date: _____

PERFORMANCE AWARD SCHEME FOR NUCLEAR POWER STATIONS

1.0 PREAMBLE

Incentive Award Scheme introduced in 1983 by Ministry of Power for meritorious productivity performance covers coal/lignite/gas/oil based power stations in public sector. The scheme was subsequently modified in 1992-93. Encouraged by the success of scheme in improving the performance of thermal power stations, it has been decided to extend the scheme to cover the nuclear power stations. Accordingly this award scheme has been instituted by Ministry of Power & Central Electricity Authority with a view to encourage the nuclear power stations for improving their generation performance & enhance their contribution in the supply of power.

2.0 OBJECTIVE

The main objective of award scheme is:

- To ensure optimum availability of Nuclear Generating Units during the year.
- To encourage Nuclear power stations to further improve their performance.
- To encourage early stabilization of newly commissioned nuclear units.

3.0 NATURE OF AWARD

The Nuclear Power Station having the highest Station Plant Load Factor (PLF) shall be awarded a shield along with certificate in recognition of its performance.

Other stations which have PLF above the benchmark (to be decided by CEA) shall be given a Certificate of Merit in recognistion of their performance.

4.0 PERIOD OF AWARD

The evaluation of performance shall relate to the financial year i.e. from 1st April to 31st March of every year.

5.0 ELIGIBILITY

All Nuclear power stations shall be covered under this scheme.

6.0 EVALUATION CRITERIA

6.1 **The effective capacity** of the station as on 1st April of the year of the award will be total of the capacities of the old units & the equivalent capacity of the newly commissioned, de-rated/up-rated & retired units. The equivalent capacity of newly commissioned, de-rated/up-rated & retired units shall be calculated as below:

(i) Newly commissioned unit:

Capacity of the newly commissioned unit will be included for the award from the date of its Commercial operation. Accordingly the energy produced by the unit from the date of its Commercial operation would be considered for the purpose of PLF calculation.

(ii) Retired unit:

The units retired during the year of award would be considered retired from the first of succeeding month of acceptance of retirement.

The equivalent capacity would be equal to the installed/de-rated capacity multiplied by number of the complete month's unit remained for the year of award and divided by twelve.

Equivalent capacity of unit retired during the year = $\frac{\text{Derated/ uprated capacity) x P}}{12}$

Where P = Number of completed months (including the month in which unit retired) the unit remained available during the year.

(iii) De-rated /up-rated unit:

The capacity of old unit shall be taken as de-rated/up-rated w.e.f., first of succeeding month of acceptance of de-ration/up-ration.

Equivalent capacity of de-rated/up-rated unit =

$$\frac{\text{(derated/uprated capacity) x N +(capacity before deration / up-ration x (12-N)}}{12}$$

Where N=Number of complete months unit taken as de-rated/up-rated during the year.

An example of calculation of effective station capacity is given at Annexure-I

6.2 **Plant Load Factor** of the Station shall be evaluated as follows:

$$\text{Plant Load Factor (PLF\%)} = \frac{\text{Energy generated by the station during the year(in MWhr) X 100}}{\text{Station's Effective Capacity in MW x Total hrs during the year}}$$

7.0 DATA REQUIREMENT

All Nuclear Power Stations would furnish their unitwise/ stationwise generation in MU recorded by energy meters and unit outages data (preventive/ forced outages with reasons of data outages) for each day over phone/ fax/ email etc. in the proforma decided by CEA. The station shall also furnish a copy of the printout of energy data for each day to CEA. The data would be considered as incomplete without the copy of the energy meter data printout. Any station not complying with this requirement will be disqualified for the purpose of the award.

8.0 TIME SCHEDULE FOR SUBMISSION OF DATA

All Power station would furnish the consolidated unit-wise and day-wise generation in MUs recorded by energy meter for the month by 15th of succeeding month to CEA. The complete corrected data for the year shall be submitted to CEA by 30th April of next financial year.

It will be the sole responsibility of Power stations to ensure that the complete data in respect of their power stations is furnished to CEA within stipulated time schedule.

9.0 NODAL OFFICER

All data pertaining to the scheme shall be furnished by the prescribed dates to:

Chief Engineer
Operation Performance Monitoring Division
Central Electricity Authority,
Sewa Bhawan, R K Puram,
New Delhi – 110066.

Annexure-I

NUCLEAR POWER STATION GENERATION AWARD SCHEME

Example Of Calculation for Station's Effective Station Capacity

Consider a particular Nuclear Station having three units of 220 MW Capacity at the beginning of a particular financial year. First unit of 220 MW got retired in the month of September. Second unit of 220 MW got de-rated to 100 MW in the month of June. Capacity of 3rd unit remained unchanged during the financial year. One new unit was put on commercial operation in the month of December. The Station's Effective Capacity shall be calculated as under :

Unit No. with details of up-ration/ de-ration	Name Plate Capacity	Calculation of Effective Capacity	Effective Capacity for the purpose of Award
Unit #1 of 220 MW got retired on 3rd September. (i.e. capacity considered up to September for Award purpose).	220 MW	220 x 6/12 = 110 MW	110 MW
Unit #2 of 220 MW got de-rated to 100 MW on 10th June (i.e. capacity de-rated from 1st July for Award purpose).	220 MW	220 x 3/12 +100 x (12-3) /12 = 55 + 75 = 130 MW	130 MW
Unit #3 of 220 MW through out the financial year	220 MW	220 MW	220 MW
Unit #4 of 235 MW put on commercial operation on 25th December (i.e. Capacity added from 1st January for Award purpose)	235 MW	235 x 3/12 = 58.75 MW	58.75 MW
Station's Effective Capacity	895 MW		**518.75 MW**

Performance Award Scheme for Distribution Companies

1.0 Preamble

This scheme has been formulated in which the awards are proposed to be given to the three best performing Distribution Companies in the country on the basis of predefined specific criteria.

2.0 Objective

The electricity distribution sector has been identified as a key area for the improvement of economy of the whole country. This Award scheme is intended to promote, encourage and recognise the efforts of the distribution companies to improve the efficiency of electricity distribution system in their area of supply.

3.0. Nature of Award

Three best performing distribution companies in the country will be awarded with shields (Gold, silver and Bronze respectively) in recognition of their performance improvement as follows:

Their performance would be judged on the basis of the evaluation criteria laid down in **Annexure-I**. These parameters would be reviewed based on the progress made by the distribution company in respect of improvement of their electricity distribution system to make it viable. The parameters would be valid till the same are modified by Central Electricity Authority (CEA).

4.0 Eligibility

All the distribution companies having valid electricity distribution license by the Appropriate Electricity Regulatory Commission (ERC) engaged in the business of electricity distribution for consumers, are eligible for award. Further the Distribution Companies having AT&C losses 30% or less shall be eligible for award. For the eligibility of award a company must be supplying to at least 50% of their consumers at low voltage level.

5.0 Evaluation Criteria

5.1 The evaluation criteria shall be based on the following parameters:

	Parameter	**Maximum Marks**
*	AT&C loss reduction	50
*	Financial turn around	20
*	Metering of consumers	10
*	Reliability of supply	15
*	Functional performance	05
	Total marks	**100**

5.2 In case partial data is received from any distribution company no marks shall be assigned to the parameter for which full data is not received.

5.3 These parameters have been further sub-divided into various factors as detailed in **Annexure-I**. The evaluation shall be made on the basis of the criteria given in **Annexure-I.**

6.0 Data Requirement

The distribution companies shall submit the data in the prescribed proforma as per **Annexure-II** to CEA by the specified date.

7.0 Time Schedule for Submission of Data

The year for which award is being considered shall be referred as the consideration year.

Last date for submission of data for award for the consideration year shall be 31st August every year, unless extended.

8.0 Nodal Division

All correspondence pertaining to the scheme shall be made to:

Chief Engineer (DP&D)
Central Electricity Authority
6th Floor (North Wing), Sewa Bhawan, R.K. Puram-I
New Delhi-110606
Tele Fax 011-26102793, FAX 011-26197267
011-29943257(R) , Mobile No.9868913762

Email cedpdcea@yahoo.co.in

ANNEXURE-I

Evaluation Criteria for Award Scheme for Best Performing Distribution Companies

Qualifying Bench Mark for the Award:-

i) Only those distribution companies who have 30% (here in after termed as Maximum limit of AT&C losses) or less AT&C losses in the year 2007-08 shall qualify for the scheme

ii) For the eligibility of award a company must be supplying to at least 50% of their consumers at low voltage level.

1. AT&C Losses: Maximum marks - 50

The marks shall be based on i) Percentage value of AT&C Losses ii) Percentage reduction in AT&C losses compared to previous year (i.e. in 2007-08 as compared to 2006-07).

1.1 Percentage AT&C Loss (in the consideration year 2007-08) Maximum marks - 25

Based on the eligible proposals received, their percentage AT&C losses would be listed. Utility having the minimum percentage AT&C loss would be awarded a maximum of 25 marks. Example is as under:

Utility	**AT&C loss**
A	16%
B	20%
C	14%
D	15%
E	25%

Utility C having the minimum AT&C loss of 14% would get 25 marks. Rest of the utilities would be awarded marks on proportionate basis as explained below:

Marks awarded = Max Marks x (Max Limit % AT&C Loss – Utility's %AT&C Loss)/ (Max Limit of % AT&C Loss – Minimum value of % AT&C loss in the range)

Example:

Utility		**Marks**
A	=	25 x (30-16)/(30-14)=21.875
B	=	25 x (30-20)/(30-14)=15.625
D	=	25 x (30-15)/(30-14)=23.438
E	=	25 x (30-25)/(30-14)= 7.813

1.2 Percentage AT&C Loss Reduction in Consideration Year as Compared to Previous Year

Under this criterion there shall be two categories as follows:

A: Distribution Company having AT&C loss 10% or below for the consideration year

a) Company achieving maximum percentage loss reduction in consideration year over the previous year would get 25 marks. Rest to be awarded marks on proportionate basis in the range of 20-25.

b) Utility with negative percentage point reduction up to 0.5% would get 10 marks

Example:

Utility	AT&C loss in 2006-07	AT&C loss in 2007-08	Percentage Point reduction in AT&C loss	% Reduction in AT&C loss
	(X_1)	(X_2)	(X_1- X_2)	(X_1- X_2)*100/(X_1)
A	11	10	1	9.09
B	15	10	5	33.33
C	8.5	9	-0.5	-5.88
D	8	9.8	-1.8	-22.50
E	13	9.6	3.4	26.15
F	8.7	9	-0.3	-3.45

Utility B achieving highest percentage loss reduction in consideration year over the previous year will get full 25 marks, Utilities C and F with negative loss reduction, within the limit of 0.5 percentage point reduction will get 10 marks, Utility D will get zero marks as negative percentage point reduction is beyond 0.5 percentage point and other utilities would be awarded marks on pro-rata basis as under:

Marks awarded = 20 + 5 x (utility % loss reduction – minimum % loss reduction)/(maximum % loss reduction – minimum % loss reduction)

Example: **Utility** **Marks**

A = 20 + 5x (9.09-9.09)/(33.33 -9.09) =20

E = 20 + 5 x (26.15-9.09)/(33.33 -9.09)=23.52

B: Distribution Company having AT&C loss above 10% and upto 30% in the consideration year.

(i) Distribution company achieving maximum percentage loss reduction in consideration year over the previous year would get 25 marks. Rest of the utilities to be awarded marks on proportionate basis in the range of 20-25.

Utility	Percentage AT&C loss in 2006-07 **(X_1)**	Percentage AT&C loss in 2007-08 (X_2)	% Reduction in AT&C loss (X_1- X_2)*100/(X_1)
A	18	18	0
B	25	20	20.00
C	17	14	17.65
D	18	15	16.67
E	30	25	16.67

Distribution company B achieving highest percentage loss reduction in consideration year over the previous year will get full 25 marks, marks for other utilities would be awarded on prorata basis as under:

Marks awarded = 20+5x(utility % loss reduction – minimum % loss reduction)/(maximum % loss reduction – minimum %loss reduction)

Utility		**Marks**
A	=	20 + 5 x (0.00-0.00)/(20.00 -0.00) = 20.00
C	=	20 + 5 x (17.65-0.00)/20.00-0.00) = 24.41
D, E	=	20 + 5 x (16.67-0.00)/20.00-0.00) = 24.16

2. Financial Turn Around: Maximum marks = 20

2.1 The financial turnaround will be seen as a ratio of revenue earned to total expenditure (including power purchase cost, employees cost, Administrative & General and Repair & maintenance expenses, depreciation, ROE, interest etc) of the Distribution Company. The Distribution Company who has the highest ratio will get full marks (20) and other on pro-rata basis:

Example

Utility	**Ratio**
A	1.05
B	0.97
C	0.95
D	0.87

Utility A having the highest ratio as described above shall be awarded full 20 marks.

Marks awarded = Max marks x Utility's ratio / Max ratio in the range

Utility B would get 20 x 0.97 / 1.05=18.48
Utility C would get 20 x 0.95 / 1.05=18.10
Utility D would get 20 x 0.87 / 1.05=16.57

3. Metering: Maximum marks = 10

3.1 The marks for metering (distribution transformer metering and consumer metering) shall be awarded based on the percentage metering achieved over and above the cut-off level on pro-rata basis. This will exclude those consumers who are exempted by the appropriate regulatory commission in accordance with section 55 of the Electricity Act, 2003. The company who has achieved less than the cut-off level in a particular category shall get zero marks in that category.

(a) **DT Metering** Maximum Marks = 3

Cut-off level of DT metering at the end of consideration year: 80%

In this category utility having the highest percentage of metering shall be awarded full marks and marks of other utilities shall be awarded marks on

pro-rata basis. Utility with less than 80% metering shall not be awarded any mark under this category

Marks awarded = max marks x (Utility's % DT metering - cut-off level of % DT metering)/(Max value of % DT metering- cut-off level of % DT metering)

Example	**Utility**	**DT Metering (%)**
	A	87
	B	92
	C	94

Utility C having highest percentage of DT metering shall get full 3 marks and marks to other utilities shall be awarded marks on prorata basis as under:

Example: **Utility**		**Marks**
A	=	3 x (87-80) / (94-80) = 3 x 7 /14 =1.5
B	=	3 x (92-80) / (94-80) = 3 x 12/14 =2.57

(b) **Consumer Metering** Maximum Marks = 7

Cut-off level of consumer metering at the end of the consideration year: 90%

Consumer metering shall also include metering for agricultural consumers (This will exclude those consumers who are exempted by the appropriate regulatory commission in accordance with section 55 of the Electricity Act, 2003). In this category utility with highest percentage of metering shall be awarded full marks and marks to other utilities shall be awarded on pro-rata basis. Utility with less than 90% metering shall not be awarded any mark under this category.

Marks awarded = max marks x (Utility's % consumer metering- cut-off level of % consumer metering/(Max value of % consumer metering - cut-off level of % consumer metering)

Example:

Utility	**Metering %**
A	97
B	100
C	94

Utility B having highest percentage of consumer metering shall get full 7 marks and marks to other utilities shall be awarded on prorata basis as under:

Utility		**Marks awarded**
A	=	7 x (97-90) / (100-90) = 4.9
C	=	7 x (94-90) / (100-90) = 2.8

4. Reliability Maximum marks = 15

4.1 Marks shall be awarded for the following:

Sl. No.	Particulars	Max Marks
A	Average duration of an outage in respect of 11 kV feeder (in hours)	5
B	Average number of outages of 11 kV feeder in consideration year	5
C	Distribution transformer failure rate (annual percentage, number of distribution transformer failed during the year over the No. of DTs at the end of the consideration year	5

Full marks in each category shall be awarded to utility having the least outages/failure. Marks to other utilities shall be awarded on pro-rata basis as explained below:

a) Average duration of outage of 11 kV feeders

Marks awarded = Max marks x (Max Outage duration – Utility Outage duration)/ (Max Outage duration – Min Outage duration)

Example:

Utility	**Outage duration**
A	3.0 hrs
B	5.5 hrs
C	7.0 hrs

Utility A having minimum outage duration would get full 5 marks and other utilities would get marks on pro-rata basis as given below:

Utility	**Marks**
B	5 x (7.0 – 5.5)/ (7.0 – 3.0) = 1.875
C	5 x (7.0 – 7.0 / (7.0 – 3.0) = 0

b) Average No. of outages of 11 kV feeder in consideration year

Marks awarded = Max marks x (Max Average No. of outages – Utility's Average No. of outages)/(Max Average No. of outages – Min average No. of outages)

Example:

Utility	Average No. of outages
A	33.00
B	11.00
C	77.00

Utility B having minimum Average No. of outage would get full 5 marks and other utilities would get mark on pro-rata basis as given below:

Utility	**Marks**
A	5 x (77.00 – 33.00)/ (77.00– 11.00)
C	5 x (77.00 – 77.00)/ (77.00 – 11.00)

c) Distribution transformer failure rate (annual %)

Marks awarded = Max marks x (Max % DT failure rate – Utility's % DT failure rate)/(Max % DT failure rate – Min % DT failure rate)

Example:

Utility	**DT Failure (%)**
A	12.53
B	5.12
C	0.23

Utility C having minimum value of DT failure rate (%)would get full 5 marks and other utilities would get marks on pro-rata basis as given below:

Utility	**Marks**
A	5 x (12.53 – 12.53)/ (12.53– 0.23) = 0
B	5 x (12.53 – 5.12)/ (12.53– 0.23) = 3.01

5. Functional Performance **Maximum Marks=5**

(a) Open access

Implementation of open access in distribution system of the company in respect of consumer having a load of 1 MW and above (implemented for at least one consumer) will get 3 Marks.

(b) Consumer Indexing

GIS based consumer indexing completed in terms of percentage of consumers. Marks shall be awarded proportionate to % consumer indexing achieved. Utility having the maximum % consumer indexing will get a maximum of 2 marks. Marks to other utilities shall be awarded on pro-rata basis.

Marks awarded = Max marks x (Utility's consumer indexing,% - Min consumer indexing,%) / (Max consumer indexing,% - Min consumer indexing,%)

Example:

	Percentage of Consumer Indexing
Utility A	90.00
Utility B	85.00
Utility C	78.92

Utility A having Maximum % Consumer Indexing would get full marks and other utilities would get marks on pro-rata basis

Utility B would get 2 x (85.00 -78.92) / (90.00 – 78.92) = 1.10
Utility C would get 2 x (78.92 -78.92) / (90.00 – 78.92) = 0

ANNEXURE-II (1/6)

FORMAT FOR DATA REQUIREMENT (Consideration year 2007-08)

1. DATA FOR AT&C LOSSES

Sl.No.	Item	Unit	2006-07	2007-08
1.	Self generation	MU		
2.	Purchased from CPSU	MU		
3.	Purchased from other utilities	MU		
4.	Total input (UI_T) (1 +2 +3)	MU		
5.	Units traded with other utilities(U_T)	MU		
6.	Units available with Distribution company for distribution to consumers (item 4 – item 5)(U_I)	MU		
7.	Units Billed by the distribution company to the consumers (U_B)	MU		
8.	Amount billed by the distribution company to the consumers (A_B)	Rs.crore		
9.	Amount realized by the distribution company from the consumers (A_R)	Rs.crore		
10.	Collection efficiency (CE = 100*A_R/A_B)	%		
11.	Units realized (U_R) = {U_B x CE(%)}/100	MU		
12.	AT&C losses (U_I - U_R)	MU		
	AT&C losses {1-(U_R/U_I)}*100	%		

Note : The amount at Sl.No.8 shall not include meter rent, wheeling and other charges and subsidy receivable from State Governments etc.

ANNEXURE-II(2/6)

B. FINANCIAL TURN AROUND

Sl.No.	Item	Unit	Consideration year
1.	Energy Input	MU	
2	**Total Revenue earned**	**Rs.crore**	
2.1	Tariff income	Rs.crore	
2.2	Non-tariff Income	Rs.crore	
2.3	Other Income	Rs.crore	
3.	**Total Expenditure**	**Rs.crore**	
3.1	Employees Cost	Rs.crore	
3.2	A & G Expenses	Rs.crore	
3.3	Repair & Maintenance Expenses	Rs.crore	
3.4	Depreciation	Rs.crore	
3.5	ROE	Rs.crore	
3.6	Interest	Rs.crore	
3.7	Power Purchase cost	Rs.crore	

ANNEXURE-II(3/6)

C. METERING (As on 31st March)

Sl.No.	Item	Unit	2007-08
1	Total No. of DTs	No.	
2	No. of DTs metered	No.	
3	Total No. of consumers including Agricultural consumers	No.	
4	No. of consumers metered (including Agricultural consumers but excluding those consumers who are exempted by the appropriate regulatory commission)	No.	

ANNEXURE-II(4/6)

D. RELIABILITY

Sl.No.	Item	Unit	Consideration year
1.	Total No. of 11 kV feeders **(As on 31st March)**	No	
2.	Total No. of outages of 11 kV feeders (in 2007-08)	No	
3.	Summation of duration of outages of all the 11 kV feeders	Hrs	
4.	Total No. of distribution transformers (DT) **(As on 31st March)**	No.	
5.	No. of distribution transformers failed (during 2007-08)	No.	

E. Open Access **ANNEXURE-II(5/6)**

Sl No	Items	Unit	At the end of March every year.
1	Open Access regulation notified by SERC (indelicate date of notification)		
2	No. of consumers availing open access in distribution system for (consumers having load of 1 MW and above)*	Quantum of load (MW)	No. of consumers

* Break up of quantum of load wise No. of consumers to be furnished.

F. **Geographical Information system (GIS)** **ANNEXURE-II(6/6)**

Sl No	Item	
1	Total No. of consumers served by the company (as on 31st March)	
2	Total No. of consumers indexed under GIS mapping (as on 31st March)	

Performance Award Scheme for Rural Distribution Franchisees (RDFs)

1.0 Preamble

The electricity distribution sector has been identified as a key area for the improvement of economy of the whole country. In the 10th plan and beyond it had been decided to provide access to electricity to all the households in the country. This Award scheme is intended to promote, encourage and recognise the efforts of the **RURAL DISTRIBUTION FRANCHISEEs (RDFs)** in improving the efficiency of electricity distribution and revenue management in rural areas.

This scheme has been *formulated* in which the awards are proposed to be given every year to three best performing RDFs *in the country* operating in the rural areas on the basis of predefined specific criteria.

2.0 Background

2.1 Rajiv Gandhi Grameen Vidyutikaran Yojna (RGGVY)

Central Government has launched a scheme "Rajiv Gandhi Grameen Vidyutikaran Yojna of Rural Electricity Infrastructure and Household Electrification" on 4th April, 2005 for the attainment of the National Common Minimum Programme (NCMP) goal for providing access to electricity to all households in the country in five years. RGGVY is being continued in 11th plan (2007-12) also. In order to ensure revenue sustainability of the scheme, maintain the infrastructure being created and to provide uninterrupted quality power, deployment of rural distribution franchisees has been made mandatory under the scheme for management of rural distribution. RDF could be Non-Governmental Organisations (NGOs), Users Association, Cooperative or individual entrepreneurs. The Panchayat institutions will be associated as they have an important role of overseeing in advisory capacity, the delivery of services by the rural distribution franchisees according to their identified responsibilities. The rural distribution franchisees arrangement could be for system beyond and including feeders from sub-station or from and including Distribution Transformer(s).

The State Governments can also consider *assigning* the responsibility of rural distribution franchisees to the Panchayat institutions if these have developed in the state to the extent that they can undertake contractual obligations. Rural distribution Franchisees are appointed following a transparent process on the basis of clearly laid down criteria.

All the states have agreed to deploy rural distribution franchisee for distribution management, which is one of the clause in the Quadripartite/Tripartite Agreements, signed by all the states. REC has circulated rural distribution franchisee guidelines to all the State Governments/State Power Utilities covering various models of rural distribution franchisees to be selected by respective power utility in line with the decision of concerned State Government. These guidelines also cover the major issues e.g. responsibilities, obligations and rights, qualifications, selection process, tariff determination, business plan of rural distribution franchisees and involvement of Panchayat etc. States can also take help from REC/Power CPSUs in the formulation of the rural distribution franchisee agreement. The rural distribution franchisee should be in position by the time the village is electrified.

2.2 Revenue sustainability

Based on the consumer mix and the prevailing consumer tariff and likely *demand*, the Bulk Supply Tariff (BST) for the rural distribution franchisee would be determined after ensuring commercial viability of the rural distribution franchisee. Wherever feasible, bidding may be attempted for determining the BST. This Bulk Supply Tariff would be fully factored into the submissions of the State Utilities to the State Electricity Regulatory Commissions (SERCs) for their revenue requirements and tariff determination. The State Government under the Electricity Act, 2003 is required to provide the requisite revenue subsidies to the State Utilities if it would like tariff for any category of consumers to be lower *than* the tariff determined by the SERC. While administering the scheme, prior commitments may be taken from the State Government regarding revenue sustainability and providing for subsidy upfront.

3.0. Nature of Award

Three best performing rural distribution franchisees in the country will be awarded every year with shields (Gold, Silver and Bronze *respectively*) in recognition of their performance to improve electricity distribution *in their jurisdiction.*

Their performance would be judged on the basis of the evaluation criteria as laid down in **Annexure-I**. These parameters would be reviewed from time to time based on the progress made by the rural distribution franchisees in respect of improvement of their electricity distribution system and revenue management to make it viable and revenue sustainable. The criteria would be valid till it is modified by *Central Electricity Authority* (CEA).

4.0 Eligibility

The eligibility criteria are as follows:

4.1 Only rural distribution franchisee for the villages which have been declared electrified as per the definition of the village electrification shall qualify for this award scheme.

4.2 All the rural distribution franchisees in villages of the country irrespective of whether the villages have been electrified under RGGVY or any other scheme shall be eligible under this award scheme.

4.3 Rural distribution franchisees that have provided metered service connections to *80%* or more consumers in the consideration year shall be eligible under this scheme.

4.4 Rural distribution franchisee *achieving 80% or more revenue* collection of billed amount *in* the consideration year shall be eligible under this scheme.

4.5 Rural distribution franchisees that are operating as franchisee for the *complete financial* year (March to next April) shall be eligible under this award scheme.

5.0 Evaluation Criteria

5.1 The scheme being introduced for the first time the evaluation criteria has been kept as simple as possible based on the following parameters:

Sl. No.	Particulars	Maximum Marks
1	Type of Activity undertaken by RDF	18
2	*Metered* service connections (metered connection as percentage of total service connections)	12

3	Revenue Management	70
	Total	**100**

5.2 In case partial data is received from any rural distribution franchisee through their distribution licensee no marks shall be assigned to the parameter for which full data is not received.

5.3 These parameters have been further sub-divided in *to* various factors as detailed in **Annexure-I.** The assessment shall be made on the basis of performance related *parameters indicated in evaluation criteria at* **Annexure-I.**

6.0 Data Requirement/Submission and Evaluation

*6.1 It shall be responsibility of the appropriate distribution licensees or State Electricity Boards/Electricity Departments to obtain the data from the RDFs in the proforma given at **Annexure-II**, analyse the same as per the criteria laid down in **Annexure-I** and identify the best three RDFs in their area of supply/jurisdiction .*

*6.2 The statement of marks as per **Annexure-III** is to be submitted to CEA (by a specified date) by Distribution licensees/SEBs/Electricity Departments in respect of the best three RDFs for each licensee along with complete set of proposal of best three RDFs and data as indicated in **Annexure-II.***

6.3 All the proposals (after completion of steps 6.1 and 6.2) thus received from Distribution licensees/SEBs/Electricity Departments by CEA would be evaluated in CEA for deciding the best three RDFs at country level. In case of tie between two or (among) more RDFs, other things being equal, the RDF handling a larger number of consumers would be ranked higher.

7.0 Time Schedule for Submission of Data

The year for which award is being considered shall be hereafter called consideration year. Last date for submission of data for consideration year shall be 31st August every year, unless extended.

8.0 Nodal Division

All correspondence pertaining to the scheme shall be made in electronic form as well as in hard copy form to:

Chief Engineer (DP&D)
Central Electricity Authority
6th Floor (North wing), Sewa Bhawan, R.K. Puram-I
New Delhi-110606
Tel.No.011-26102793(O), 011-29943257(R) , Mobile No.9868913762
Email: cedpdcea@yahoo.co.in

Evaluation Criteria for Performance Award Scheme for Rural Distribution Franchisees (RDFs)

1.0 Bench Mark Parameters for the Award Scheme

1.1 Rural distribution franchisees that have provided metered service connections to 80% or more consumers in the consideration year shall be eligible under this scheme.

1.2 Rural distribution franchisees *achieving 80% or more revenue collection of billed amount* in the consideration year shall be eligible under this scheme.

2. Type of Rural Distribution Franchisee: (Maximum marks = 18)

2.1 *Depending upon the activities covered by Rural Distribution Franchisee a total of 18 marks have been distributed as indicated in **Table** below:*

Table: Activities Covered by Rural Distribution Franchisees

Sl. No.	Type of activity covered by Rural Distribution Franchisee	Maximum Marks
1.	Procurement of power through Bulk Supply Tariff arrangement based on transparent process of bidding	2
2.	System augmentation	2
3.	Maintenance of assets (sub-station, lines etc)	2
4.	Meter installation and service connections	2
5.	Meter reading	2
6.	Preparation of bills	2
7.	Disbursement of bills	2
8.	Revenue collection	2
9.	Consumer Complaints (fuse off call etc)	2
	Total	**18**

Example: Let a RDF who has under taken the meter reading, preparation of bills, disbursement of bills and revenue collection (i.e. four out of 9 activities listed in 2.1) shall be awarded 8 marks.

3. Metered Service Connections: (Maximum marks = 12)

As per the Electricity Act, 2003 all the consumers are to be metered, unless exempted by the Appropriate State Electricity Regulatory Commission. Cut-off level of metered service connections is 80% or more. Rural distribution franchisees having metered service connections below 80% at the end of consideration year shall not be considered for award. The marks for metered service connections shall be awarded based on the *percentage of* metered service connections *to total number of service connections* achieved *at* the end of consideration year over and above the cut-off level on pro-rata basis as per the following **example:**

Marks obtained = Maximum marks x (% metering achieved by RDF – 80%)/(% Max metering achieved by RDF - 80%)

Rural distribution franchisees (RDFs)	Metered service connections (%)
A	90
B	100
C	95
D	50
E	0

Franchisee B having highest percentage of metered service connections shall get full *marks* (*12)*. Franchisee D and E shall not be eligible for the award. Marks of other franchisees shall be awarded on pro-rata basis as under:

Rural distribution franchisees (RDFs)	Marks obtained (Out of 12)
A	12 x (90-80) / (100-80) = 6.0
C	12 x (95-80) / (100-80) = 9.0

4. Revenue Management: **(Maximum marks = 70)**

The following criteria shall be applicable:

a) revenue collection as a percentage of the billed amount for the consideration year (50 marks); and

b) Improvement in percentage revenue collection over previous year (20 marks).

4.1 Revenue Collection in the *Consideration* Year (%): (Maximum marks = 50)

Rural distribution franchisee with *100% (say)* of revenue collection as a *percentage of the* billed amount for the *consideration* year would be awarded full marks (50). Rest *of the RDFs would be given marks* on pro-rata basis as explained below:

Rural distribution franchisees (RDFs)	Revenue collection as a *percentage of the* billed amount for the *consideration* year (%)
A	100
B	90
C	95

Rural Distribution franchisee A shall get full marks (50). Marks of other franchisees shall be awarded on pro-rata basis as under:

Rural distribution franchisees (RDFs)	Marks obtained (Out of 50)
B	50 x (90-80)/(100-80) = 25
C	50 x (95-80)/(100-80) = 37.5

4.2 Improvement in percentage Revenue Collection Over Previous Year: (Maximum marks = 20)

Marks distribution shall be as follows:

i. Rural distribution franchisees having revenue collection of 95% or more in the consideration year shall get full marks *(i.e. 20)* even if they have maintained or shown *an* improvement in revenue collection percentage as compared to previous year.

ii. Rural distribution franchisee having revenue collection 80% or more and *less than* 95% in the consideration year must show improvement in consideration year over the previous year. These franchisees shall be awarded 15 marks in case of improvement.

iii. RDFs that have not done any operations in the year *just preceding the* consideration year shall get 10 marks.

iv. RDFs showing reduction (in *percentage of revenue collection to the billed amount in the corresponding year)* as compared to previous year will get zero mark.

Annexure-II(1)

Parameters for Performance Award Scheme for Rural Distribution Franchisees (RDFs)
(To be submitted to Distribution licensee/SEB/Electricity Department by the franchisees)

***Consideration* year**:----------

Sl. No.	Particulars	Remark/Response
1	Name of the village, district and state	
2	Name of the franchisee	
3	Village declared electrified	Yes/No
4	Date of commencement of franchisee operation	
5	Type of Activity covered by Rural Distribution Franchisee	
5.1	Procurement of power through Bulk Supply Tariff (BST) arrangement based on transparent process of bidding	Yes/No
5.2	System augmentation	Yes/No
5.3	Maintenance of assets (sub-station, lines etc)	Yes/No
5.4	Meter installation and service connections	Yes/No
5.5	Meter reading	Yes/No
5.6	Preparation of bills	Yes/No
5.7	Disbursement of *bills*	Yes/No
5.8	Revenue collection	Yes/No
5.9	Consumer Complaints (fuse off call etc)	Yes/No
6	Total input energy in franchisee area in consideration year (Million Units)	
7	Total input energy in franchisee area in previous year (Million Units)	

Annexure-II(2)

Sl. No.	Particulars	
1	Total No. of consumers at the end of consideration year	
2	No. of metered service connections at the end of consideration year	
3	Metered consumer as percentage of total consumers at the end of consideration year (**100*Item 2/Item 1)**	
4	Total No. of consumers at the end of previous year	
5	No. of metered service connections at the end of previous year	
6	Metered consumer as percentage of total consumers at the end of previous year (**100*Item 4/ Item 5)**	
8	Total amount billed in consideration *year* (Rs Lac)	
9	Total amount collected in consideration year (Rs Lac)	
10	Revenue collection as a *percentage of the* billed amount for the *consideration* year (**100*Item 8/Item 9)**	
11	Total amount billed in the year just prior to consideration *year* (Rs Lac)	
12	Total amount collected in the year just prior to consideration *year* (Rs Lac)	
13	Revenue collection as a *percentage of the* billed amount in the year just prior to consideration *year* (**100*Item 11/Item 12)**	
14	Percentage point improvement (in revenue collection as a *percentage of the* billed amount) in consideration year compared to the year just prior to consideration *year* **(Item 10-Item 13)**	

Annexure-III

Statement of marks in respect of the best three Rural Distribution Franchisees (RDFs) for Performance Award Scheme for consideration Year 2007-08
(To be submitted by Each Distribution Licensee/SEB/ED to CEA)

Name of Distribution Licensee/SEB/ED

Sl. No.	Particulars	Response and marks awarded in respect of RDF			Remark
		Ranked I	Ranked II	Ranked III	
1	Name of the village, district and state				
2	Name of the franchisee				
3	Village declared electrified				
4	Date of commencement of franchisee operation				
4.1	Area covered by RDF (Sq km)				
4.2	Whether the area covered by RDF is plain, hilly or a difficult terrain				
5	**Type of Activity covered by Rural Distribution Franchisee (marks 18,** 2 marks for each of the activities from 5.1 to 5.2)				
5.1	Procurement of power through Bulk Supply Tariff (BST) arrangement based on transparent process of bidding				
5.2	System augmentation				
5.3	Maintenance of assets (sub-station, lines etc)				
5.4	Meter installation and service connections				
5.5	Meter reading				
5.6	Preparation of bills				
5.7	Disbursement of *bills*				
5.8	Revenue collection				
5.9	Consumer Complaints (fuse off call etc)				
6	Total input energy in franchisee area in consideration year (Million Units)				
7	Total input energy in franchisee area in previous year (Million Units)				
8	**Metering of Service connections**				
8.1	Total No. of consumers at the end of consideration year				
8.2	No. of metered service connections at the end of consideration year				
8.3	Metered consumer as percentage of				

	total consumers at the end of consideration year (**100*Item 2/Item 1) (marks 12)**				
8.4	Total No. of consumers at the end of previous year				
8.5	No. of metered service connections at the end of previous year				
8.6	Metered consumer as percentage of total consumers at the end of previous year (**100*Item 4/ Item 5)**				
9	**Revenue Management**				
9.1	Total amount billed in consideration *year* (Rs Lac)				
9.2	Total amount collected in consideration year (Rs Lac)				
9.3	Revenue collection as a *percentage of the* billed amount for the *consideration* year (**100*Item 8/Item 9) (marks 50)**				
9.4	Total amount billed in the year just prior to consideration *year* (Rs Lac)				
9.5	Total amount collected in the year just prior to consideration *year* (Rs Lac)				
9.6	Revenue collection as a *percentage of the* billed amount in the year just prior to consideration *year* (**100*Item 11/Item 12)**				
9.7	Percentage point improvement (in revenue collection as a *percentage of the* billed amount) in consideration year compared to the year just prior to consideration *year* **(Item 10-Item 13) (marks 20)**				
10	**Total marks (100)**				

Note:

a) A brief write indicating the highlights of operation, management, maintenance practice, other innovation etc may be submitted in respect of the RDFs ranked I, II and III. Salient points of the village served, type of load, consumer categories, type of irrigation, climatic conditions, water table, usual hours of power supply, historical and geographical importance of the area may also be furnished along with the evaluation sheet in respect of RDFs ranked I, II and III.

b) Total number of Rural Distribution Franchisees (RDFs) operating as on date and number of RDFs who have submitted the proposal in each Distribution Licensee/SEB/ED may also be submitted.