

Application for
Approval of Capital Works to Be
Undertaken During
FY 2011-12 and Beyond
For
Suratgarh Super Thermal Power Station (SSTPS)

Submitted to

Rajasthan Electricity Regulatory Commission
Jaipur

By

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December- 2011

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Act	The Electricity Act, 2003
Application	This Petition for approval of capital works to be undertaken during FY 12 and beyond for Suratgarh Super Thermal Power Station of Rajasthan Rajya Vidyut Utpadan Nigam Limited, Jaipur
Auxiliary Consumption (Aux. Con.)	Auxiliary Consumption in relation to a period means the quantum of energy consumed by auxiliary equipment of the generating station and transformer losses within the generating station, and shall be expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station
Availability	Availability shall have the same meaning as defined in Section 1(7) of the RERC Tariff Regulations 2009.
Distribution Company / Discoms	Discoms or Distribution Company shall mean a company engaged primarily in the business of distribution & supply of electricity in its area of supply including Jaipur Vidyut Vitran Nigam Ltd. (JVVN), Ajmer Vidyut Vitran Nigam Ltd. (AVVN) and Jodhpur Vidyut Vitran Nigam Ltd. (JdVVN).
Gross Calorific Value (GCV)	Gross Calorific Value in relation to a thermal power generating station means the heat produced in kCal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be.
Regulation	The Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2009 notified by RERC on Jan-23, 2009
State	The State of Rajasthan.
Gross Station Heat Rate	Station Heat Rate (SHR) means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals.
Unit	Unit in relation to a generating station means electric generator, its prime mover and auxiliaries and in relation to a combined cycle thermal power generating station includes combustion turbine – generators, associated waste heat recovery boilers, connected steam turbine-generator and auxiliaries

ABT	Availability Based Tariff
ARR	Aggregate Revenue Requirement
Ajmer Discom	Ajmer Vidyut Vitran Nigam Limited
CERC	Central Electricity Regulatory Commission
FRP	Financial Restructuring Plan
FY	Financial Year
FY – 10	Financial Year 2009-2010
FY – 11	Financial Year 2010-2011
FY – 12	Financial Year 2011-2012
FY – 13	Financial Year 2012-13
FY – 14	Financial Year 2013-14
FY – 15	Financial Year 2014-15
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoI	Government of India
GoR	Government of Rajasthan
Jaipur Discom	Jaipur Vidyut Vitran Nigam Limited
Jodhpur Discom	Jodhpur Vidyut Vitran Nigam Limited
KWh	Kilo Watt Hour or Unit
MU	Million Units
MW	Megawatts
NRLDC	Northern Regional Load Despatch Centre
PLF	Plant Load Factor
PPA	Power Purchase Agreement
R&M	Repairs and Maintenance
RERC/ Commission	Rajasthan Electricity Regulatory Commission
RVUN	Rajasthan Rajya Vidyut Utpadan Nigam Limited
RVPN	Rajasthan Rajya Vidyut Prasaran Nigam Limited
Rs.	Indian Rupees
SHR	Station Heat Rate
Transfer Scheme	The Rajasthan Power Sector Reforms Transfer Scheme, 2000

A1: BACKGROUND

- 1.1 Rajasthan Rajya Vidyut Utpadan Nigam Ltd (RVUN) was incorporated under the Companies Act 1956, as one of the five successor companies of erstwhile Rajasthan State Electricity Board (RSEB) to take over the electricity generation business in the state of Rajasthan. The existing power stations and those under commissioning in the state sector were transferred to RVUN as per the Rajasthan Power Sector Reforms Transfer Scheme, 2000 notified by State Government provisionally on 19th July 2000 and finally on 18th January 2002.
- 1.2 RVUN is currently holding a portfolio of diverse profile of generation assets which comprises coal-fired stations, gas fired stations as well as hydel generating plants. Currently it has three coal-fired plants and Suratgarh is the largest coal based plant of RVUN with installed capacity of 1500 MW. The plant has six units of 250 MW each across four stages.
- 1.3 RVUN has entered into a long term power purchase agreement (PPA) in respect of existing and future power projects for period of 25 years with three Discoms on 28-9-2006 and subsequent amendments and supplementary PPAs with Discoms including SSTPS unit #1 to unit #6 having aggregate installed capacity of 1500 MW.

A2: INTRODUCTION

Suratgarh Super Thermal Power Station (SSTPS)

- 2.1 The oldest unit of Suratgarh Super Thermal Power Station (SSTPS) was commissioned in 1999 while the newest one has started its commercial operation only less than two years ago. In the table below we present the start of commercial operation of the units of SSTPS.

Unit Number	MW	Date of Commencement of Commercial Operation (CoD)
Unit 1	250 MW	1 st February, 1999
Unit 2	250 MW	1 st October, 2000
Unit 3	250 MW	15 th January, 2002
Unit 4	250 MW	31 st July 2002
Unit 5	250 MW	19 th August, 2003
Unit 6	250 MW	30 th December, 2009
TOTAL		6 X 250 MW= 1500 MW

- 2.2 SSTPS is one of the flagship assets of RVUN with consistent operating performance. Although in last three years its technical performance has been impacted due to some technical constraints. SSTPS has decided to take up some capital works in its existing units and plant areas for facilitating better plant performance at a sustainable basis. Moreover some capital work needs to be taken up to comply with some changes in existing laws of the land.

Year-wise Performance of SSTPS				
Year	2007-08	2008-09	2009-10	2010-11
PLF (%)	93.1	88.96	79.94	71.61

A3: ADDITIONAL CAPITAL WORKS IN SSTPS

Provisions relating to additional capital works

- 3.1 The provisions relating to additional capitalization after the date of commercial operation are given at regulation 19 of the RERC Tariff Regulations, 2009. The Regulation 19 (1) clause (f) provides that any additional works/ services, which have become necessary for efficient and successful operation of a generating station or a transmission or a distribution system but not included in the original capital cost may be considered. The regulation further provides that original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff.
- 3.2 The Suratgarh Thermal Power Station essentially require additional works/services as detailed in subsequent paras which were not included in the original capital cost of the project but require for its efficient and successful operation and accordingly submitting this petition for in-principal approval of the Hon'ble Commission.
- 3.3 As per Regulation 19 of RERC (Terms & Conditions of determination of tariff) Regulations, 2009 (RERC Tariff Regulations, 2009), RVUN intends to capitalize the works as mentioned before, which will have an impact in determination of tariff for power generated in the plant. In this context RVUN intends to seek in-principle approval from RERC for the capital works to be taken up. The projects will be financed as stipulated by existing RERC regulations.

Capital Cost of Projects

- 3.4 SSTPS has identified twenty three different proposals for taking up during FY 2011-12 and beyond. Details of the proposals which have been approved to take up capital works are provided as below. The projects are classified according to respective enabling regulation numbers as issued by RERC. The total investments envisaged under each regulation in the table while the detailed description in subsequent paragraphs.

Regulation	Estimated cost incl. IDC
RERC regulation clause No. 19(1)(b)- On works within the original scope of work, deferred for execution	0.61

Regulation	Estimated cost incl. IDC
RERC regulation clause No. 19(1)(d)- Change of Law	0.50
RERC regulation clause No. 19(1)(e)- Procurement of initial spares included in the original project costs	70.51
RERC regulation clause No. 19(1)(f)- Any additional works/ services, which have become necessary for efficient and successful operation	153.21
Total	224.84

Funds tie-up for proposals

- 3.5 The Petitioner wish to submit that the proposals for additional capital works shall be financed through normative debt/equity ratio of 70:30 specified under RERC Tariff Regulations, 2009. The resources for the proposals of additional capital expenditure programme proposed under regulation 19 of RERC Tariff Regulations, 2009 shall be arranged on receipt of in-principal approved by the Hon'ble Commission in respect of sanctioned projects within normative levels.

Description of proposals for additional capital works

- 3.6 The proposals for additional capital expenditure in SSTPS are briefly discussed hereunder under following heads:
1. Brief Description of Proposals
 2. Problem faced in existing system & justification of proposal
 3. Benefits arising after up-gradation
 4. Estimated total cost of Project
 5. Time of Execution/ Completion
- 3.7 Brief profile of each project for additional capital work is attached at Annexure-A.

Interest during Construction (IDC)

- 3.8 The incidence of Interest during Construction (IDC) for each of the project has been worked out on the basis of following assumptions:

Financing Plan	
Debt	80%
Equity	20%
Quarterly compounded interest rate	3.5%
Drawdown	Quarterly
Phasing of expenditure within financial year	Expenditure spread across uniformly
IDC applicable	On average Drawdown for the quarter
Project execution time	IDC considered on individual case to

	case basis. Generally IDC not computed for projects wherever project execution time is less than three months.
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3.9 Project-wise IDC for each Additional Capital expenditure work on quarterly basis has been shown against respective project.

Adjustment /write-off for existing asset

3.10 The cost of existing asset as appearing in the books of accounts of SSTPS Project shall be adjusted / appropriately written-off on completion of R&M works, or replacement of existing asset as the case may be as per normal accounting practice. The Petitioner at this stage is not in position to provide the exact implication on the cost of existing asset consequent to scheme of R&M/replacement etc. of existing asset.

A4: DETAILS OF PROPOSALS

4.1 Proposal No. 1: Laying 300 NB, GI Line for Potable Water (Drinking water) from plant to colony pump house.

a. Brief Description of Proposals

The existing MS pipeline is not suitable for potable drinking water and unable to handle the increased discharge & pressure requirement resulting in frequent leakages and proposed to be replaced with GI Pipeline. The proposal for additional capital expenditure towards supply and erection of 300 NB, GI Line for Potable Water (Drinking water) from plant to colony pump house. (Approx. length of pipe line is 6 Kms.). 300NB, MS line was laid during the year 1997-98 for potable water from plant to colony pump house.

b. Problem faced in existing system & justification of proposal

- For Potable Water (Drinking Water), GI pipe line is essential due to health concerns of the residents.
- The Existing MS pipe line gets damaged frequently.
- To meet the additional requirement of water for increased number of residents.

c. Benefits arising after up-gradation

- Reliability of the system would improve
- Presently MS pipe being used is not recommended for potable water.
- Laying additional GI pipeline will meet the increased water requirement and quality of drinking water to township would improve.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	350	175	175	-	-
Debt Amount	280	140	140	-	-
Equity Amount	70	35	35	-	-
IDC	9.80	2.45	7.35	0.00	0.00
Project Cost with IDC	359.80	177.45	182.35	0.00	0.00

Estimated cost of works to be undertaken is Rs. 3.598 Crores.

e. Time of Execution/ Completion

Implementation time is about 10-12 months from commencement during 2011-12 to 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	2	1	1		

4.2 Proposal No. 2: Valve-less Auto-wash Gravity (VAG) Filter & Automatic Self Cleaning Filter (ASCF) for Unit 1 & 2 and Unit No. 3 & 4 of SSTPS, Suratgarh, Rajasthan. (SIDE STREAM FILTRATION)

a. Brief Description of Proposals

The atmospheric air around the cooling Tower has a heavy presence of suspended particle load including air impurities, coal dust & fly ash. During the counter flow of these atmospheric air & water in the CT, the suspended matters get added into the cooling water. Part of the suspended particle load, which are heavier settles down in the CT Basin in the form of sludge. The balance suspended matter is carried along with the cooling water into the CW fore bay & circulating system. Moreover, the coal dust in the surrounding air also settles in the CW fore bay due to wind direction. These suspended particles have a strong tendency to settle on the condenser tubes depending on their settling velocity. The settling causes a heat insulating layer affecting the heat transfer efficiency of the Heat Exchangers. Also, the organic content in the suspended matter supports the growth of Microbiological Growth leading to further reduction in heat transfer efficiency and increase the chances of microbiologically induced corrosion (MIC).

b. Justification of proposal

- No man power for operation/ maintenance.
- No Power cost.
- No Maintenance.
- No Pumps.
- Filter does not require any standby unit.
- No Electricity, Compressed Air or Pressurised Water.
- No Chemicals are required.
- Reduction in chemicals for dosing in foray i.e. Chlorine & Sulphuric Acid.

c. Benefits arising after up-gradation

- Improvement in heat transfer efficiency of Condensers, Plate Heat Exchangers, and Heat Exchangers etc. resulting in improvement in Power Generation and saving of coal.
- Installation of Automatic Self Cleaning Filter (ASCF) will reduce the dirt load in the entire circuit of CW system and on the heat exchanger & other Operating system.
- Installation of VAG filter in the side stream line of the CW system will reduce the dirt load. The combination of the above 2 systems will ensure removal of dirt load on the heat exchanger and shall result in increase in the water recirculation capacity.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	1600	-	1200	400	-
Debt Amount	1280	-	960	320	-
Equity Amount	320	-	240	80	-
IDC	89.60	0.00	50.40	39.20	0.00
Project Cost with IDC	1689.60	0.00	1250.40	439.20	0.00

Estimated cost of works to be undertaken is Rs. 16.896 Crores.

e. Time of Execution/ Completion

Implementation time is about 18 months from commencement and expected to be commissioned in FY 2013-14.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	12		9	3	

4.3 Proposal No. 3: Modification in ACW system of Unit # 1 & 2

a. Brief Description of Proposals

Presently common ACW pipeline for Unit 1 & 2 is being used resulting in low pressure of auxiliary cooling water at PHE inlet of UNit-2 due to which Cold Gas (Hydrogen) temperature during April-August remains more than the permissible limit. Again, during the period the Units are forced to run at reduced load i.e. 230 MW and B & TG area experience high temperature of auxiliary cooling water (ACW).

b. Problem faced in existing system & justification of proposal

Partial Generation Loss is observed during summer months due to under performance of existing ACW system. The system capacity is required to be enhanced with the installation of additional pumps so as to overcome restrictions on full load generation due to high cooling water temperature and system constraints.

c. Benefits arising after up-gradation

- Full Load on Unit will be achieved thus resulting in increased generation will be achieved during summer months (April to August).

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	200	-	200	-	-
Debt Amount	160	-	160	-	-
Equity Amount	40	-	40	-	-
IDC	2.80	0.00	2.80	0.00	0.00
Project Cost with IDC	202.80	0.00	202.80	0.00	0.00

Estimated cost of works to be undertaken is Rs. 2.028 Crores.

e. Time of Execution/ Completion

Implementation time is about 12 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	3		3		

4.4 **Proposal No. 4: Augmentation of DMCCW system of Unit # 1 & 2**

a. Brief Description of Proposals

Presently PHEs, DMCCW Pumps & motors installed in Units 1 & 2 are not able to cater to the cooling requirement of Hydrogen Gas used for Generator cooling, resulting in running of Units at reduced load i.e 230 MW during summer months (Apr-Aug) and requires augmentation of the DMCCW system.

b. Problem faced in existing system & justification of proposal

Partial Generation Loss is observed during summer months due to under performance of existing ACW system. The system capacity is required to be enhanced with the installation of additional pumps so as to overcome restrictions on full load generation due to high cooling DM water temperature and system constraints.

c. Benefits arising after up-gradation

- Full Load on Unit of 250 MW will be achieved.
- Adequate cooling of DMCCW water for TG aux.
- Full load on Units will be achieved in summer season (during Apr-Aug).

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	1000	-	1000	-	-
Debt Amount	800	-	800	-	-
Equity Amount	200	-	200	-	-
IDC	28.00	0.00	28.00	0.00	0.00
Project Cost with IDC	1028.00	0.00	1028.00	0.00	0.00

Estimated cost of works to be undertaken is Rs. 10.28 Crores.

e. Time of Execution/ Completion

Implementation time is about 14 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	5		5		

4.5 **Proposal No. 5: Blow down system for Cooling Tower of Unit # 2,3, 4 & 5.**

a. Brief Description of Proposals

Provision of blow down is not available in U # 2, 3, 4 & 5

b. Problem faced in existing system & justification of proposal

Improvement in quality of circulating cooling water shall result in abatement of scale formation in condenser tubes & coolers of auxiliaries which in turn would enable running of units & auxiliaries on rated parameters and hence increased power generation due to improvement in condenser vacuum.

c. Benefits arising after up-gradation

- Blow down will improve the quality of circulating cooling water and hence reduced deposition of scales in condenser tubes & coolers thereby ensuring smooth operation of auxiliary equipments.
- Reduction in partial loss due to low vacuum on account of scale formation in condenser tubes.
- Increased power generation (15-20 MW per Unit) due to improvement in condenser vacuum

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	300	-	300	-	-
Debt Amount	240	-	240	-	-
Equity Amount	60	-	60	-	-
IDC	4.20	0.00	4.20	0.00	0.00
Project Cost with IDC	304.20	0.00	304.20	0.00	0.00

Estimated cost of works to be undertaken is Rs. 3.042 Crores.

e. Time of Execution/ Completion

Implementation time is about 12 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	3		3		

4.6 Proposal No. 6: Installation of Energy meters at MCC outgoing feeders (LT/HT).

a. Brief Description of Proposals

Electrical energy consumption of Equipments is not being monitored.

b. Problem faced in existing system & justification of proposal

- Specific Energy Consumption of auxiliaries shall become available for initiating specific measures for achieving reduction in auxiliary consumption.
- Change in Energy consumption patterns of equipments would be helpful in anticipating operational problems and scheduling preventive maintenance.

c. Benefits arising after up-gradation

- Specific energy conservation measures can be initiated and problems of the equipment may also be anticipated.
- Monitoring & identification of equipments having high specific energy consumption would become possible
- Better forecasting of possible failure of equipments can be made and preventive maintenance plan could be chalked out.

- As per energy Conservation Act, the designated consumers have to undertake Energy Auditing mandatorily.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	200	-	200	-	-
Debt Amount	160	-	160	-	-
Equity Amount	40	-	40	-	-
IDC	0.00	0.00	0.00	0.00	0.00
Project Cost with IDC	200.00	0.00	200.00	0.00	0.00

Estimated cost of works to be undertaken is Rs. 2 Crores.

e. Time of Execution/ Completion

Implementation time is about 12 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	1		1		

As project execution time is short IDC is not envisaged

4.7 Proposal No. 7: Design, Engineering, Erection, testing, commissioning (E.T.C.) along with supply of material for AC VVVF (variable voltage variable frequency) drive based passenger cum goods elevator at Boiler Unit-2, SSTPS, Suratgarh

a. Brief Description of Proposals

In absence of goods elevator in Boiler, difficulties are faced during maintenance/routine check-ups in movement of men & heavy material up to boiler height of 62 M resulting in delay in equipment maintenance & hence loss of generation.

b. Problem faced in existing system & justification of proposal

- The absence of lift in boiler area unit # 2 places abundant burden on the efficiency of the man power, not only during shutdown period but during routine maintenance also.
- The site inspection of the furnace, bunkers, boiler drum, and various steam lines becomes tiring exercise for the working operation/maintenance engineers as well for the manpower due to absence of the elevator in the boiler area. Thus affecting the system very adversely. Similarly during the forced /planned shutdown of the boiler, the time consumed for the restoration of the system increases due to the absence of the elevator.
- The staircase provided around the furnace (up to 62 m ht.) becomes slippery due to unpredictable leakages of coal and ash. As a result, frequent vertical movement for boiler site inspection/maintenance becomes a rigorous toil.
- The necessity of this lift is also felt by the Boiler maintenance Engineers

c. Benefits arising after up-gradation

- Shall reduce the outage period of the boiler equipments by at least 10 %(approximated).

- Shall increase the efficiency of the man power engaged in Boiler operation/ maintenance. Thus shall increase overall performance of the plant.
- Presence of Boiler lift will ease day to day maintenance, monitoring, overhauling of boiler area equipments, furnace bunker floor, etc. It will reduce the break down period of boiler by better monitoring as well shall reduce the outage period of the unit during annual shut down /break downs caused by the boiler equipment.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	60	-	60	-	-
Debt Amount	48	-	48	-	-
Equity Amount	12	-	12	-	-
IDC	0.84	0.00	0.84	0.00	0.00
Project Cost with IDC	60.84	0.00	60.84	0.00	0.00

Estimated cost of works to be undertaken is Rs. 0.6084 Crores.

e. Time of Execution/ Completion

Implementation time is about 30 weeks from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	2		2		

4.8 Proposal No. 8: Purchase of one no. Generator Rotor as Initial Spare to be used for STPS Units 1-5

a. Brief Description of Proposals

In the absence of availability of spare Generator Rotor, in case of any major rotor electrical / mechanical fault in Unit 1 to 5, the revival of unit may take a long time and considerable loss of generation.

b. Problem faced in existing system & justification of proposal

- In the event of fault in Generator Rotor in any of the Units 1-5, availability of spare rotor shall be beneficial in limiting the downtime of Unit.
- Availability of spare Generator Rotor shall enhance reliability and availability of power. Such critical parts are not kept readily available with BHEL and are delivered against order only.
- The manufacturing cycle time of Generator Rotor is more than one year

c. Benefits arising after up-gradation

- Availability of Spare Generator Rotor shall limit the outage of Unit on account of major Electrical / Mechanical fault in Rotor resulting in increased availability of machine & hence generation.
- Several Stator winding Faults have been noticed in recent years and therefore rotor faults may also occur.
- Long duration outage on account of Fault in the Generator Rotor in any of the Units 1-5 of STPS shall be avoided.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
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Project Cost	2050	200	600	600	650
Debt Amount	1640	160	480	480	520
Equity Amount	410	40	120	120	130
IDC	375.20	2.80	56.00	123.20	193.20
Project Cost with IDC	2425.20	202.80	656.00	723.20	843.20

Estimated cost of works to be undertaken is Rs. 24.252 Crores.

e. Time of Execution/ Completion

Implementation time is about 39 months from commencement and the entire procurement process is expected to be completed in FY 2014-15.

4.9 Proposal No. 9: Replacement of LR Beams, defective collecting electrodes & proper alignment of ESP fields of Unit #1 (250 MW).

a. Brief Description of Proposals

LR beams have been compressed at columns due to which the collecting frame have been lowered down causing improper rapping of collecting electrodes which has decreased the efficiency of ESPs.

b. Problem faced in existing system & justification of proposal

For enhancement of ESP life & to keep stack emission within permissible limit of 150 mg/Nm³

c. Benefits arising after up-gradation

- Overall ESP efficiency will be increased resulting in benefit to RVUNL.
- Efficiency of ESP will be increased and therefore Stack Emission will improve.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	500	-	500	-	-
Debt Amount	400	-	400	-	-
Equity Amount	100	-	100	-	-
IDC	7.00	0.00	7.00	0.00	0.00
Project Cost with IDC	507.00	0.00	507.00	0.00	0.00

Estimated cost of works to be undertaken is Rs. 5.07 Crores.

e. Time of Execution/ Completion

Delivery time is about 12 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	2		2		

4.10 Proposal No. 10: Providing Dense Phase Conveying system from existing intermediate Silo System of ESP Unit # I, II, III, IV, V & VI to outside the Plant Side Boundary near gate No. 3 at a distance of 1500 Meters. (Approx.) including providing of dense phase system in remaining ESP Fields, installation of Weigh Bridge & construction of roads.

a. Brief Description of Proposals

The Trucks/Bulkers for Ash Transportation are entering inside the plant premises which should not be allowed due to Plant safety & security purpose and the delivery of Ash should be made outside the plant premises. Fly Ash of unit no. # I to IV ESP fields no. III to VII Hoppers and Unit No# 5 ESP Fields No. V to VII is not being utilized for Dry ash delivery purpose and the same is being evacuated through wet system causing auxiliary energy consumption.

b. Problem faced in existing system & justification of proposal

- The maintenance of environment and roads will reduce as compared to present expenditure.
- The Safety and security of the Plant will increase which cannot be defined in terms of money.
- The utilization of Dry Fly Ash will increase because of increase in quality and quantity of Dry Fly Ash.
- Saving of Auxiliary energy consumption because electrical energy consumption is more in Wet Ash Disposal System as compared to Dense phase System.

c. Benefits arising after up-gradation

- The Fly Ash Quality will improve this will help in recovery of expenditure incurred on the renovation of the Plant.
- The Pollution inside plant will be reduced drastically which will increase the life of various machineries / equipments of Plant.
- Shifting of fly ash collection silos outside the plant premises is required due to security aspects.
- There will not be any entry of Ash transportation trucks inside the plants so this will help in safety and security of the Plant. It will avoid the entry of unwanted persons in plant premises.
- The Ash of the remaining Hoppers will be utilized and the quality and fineness of Ash will increase this will help in gain at the time when fly ash will be sold after call of Tender from the Year-2014 onwards.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	8000	-	3000	5000	-
Debt Amount	6400	-	2400	4000	-
Equity Amount	1600	-	600	1000	-
IDC	392.00	0.00	84.00	308.00	0.00
Project Cost with IDC	8392.00	0.00	3084.00	5308.00	0.00

Estimated cost of works to be undertaken is Rs. 83.92 Crores.

e. Time of Execution/ Completion

Implementation time is about 22 months from commencement and expected to be completed in FY 2013-14.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	12		6	6	

4.11 Proposal No. 11: Purchase of LP Turbine Rotor as Insurance Spare

a. Brief Description of Proposals

LP Rotor Blade is eroding due to age and it also failed due to shearing from roots as happened thrice in U#6.

b. Problem faced in existing system & justification of proposal

- LPT Blade Failure/capital Overhauls result in long duration outage of Unit and consequent loss of generation to the State.
- The outage period can be drastically reduced with the availability of Spare LP Rotor site which would ensure increased availability of machines as well as reliability.
- LPT Rotors are not kept readily available with BHEL and are delivered against order only. The manufacturing cycle time of LPT Rotor is more than one year

c. Benefits arising after up-gradation

- Prolonged outage of unit can be avoided.
- During Capital Overhaul or in case of LPT Blade failure long outage of unit can be avoided thereby leading to availability of power and savings.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	3900	390	1170	1170	1170
Debt Amount	3120	312	936	936	936
Equity Amount	780	78	234	234	234
IDC	726.18	5.46	109.20	240.24	371.28
Project Cost with IDC	4626.18	395.46	1279.20	1410.24	1541.28

Estimated cost of works to be undertaken is Rs. 46.2618 Crores.

e. Time of Execution/ Completion

Implementation time is about 39 months from commencement and expected to be completed in FY 2014-15.

4.12 Proposal No. 12: SO_x, NO_x & CO Analyser for Unit # 2, 3 & 4 at STPS, Suratgarh

a. Brief Description of Proposals

The existing in situ type flue gas measuring system of U# 2, 3 & 4 are out of order. This system uses CODEL 4000 analysers, which have become obsolete as per the supplier M/s Forbes Marshall Pvt. Ltd.

b. Problem faced in existing system & justification of proposal

These systems are required for monitoring the content of these in flue gases to ensure operational measures so as to limit their formation and prevent damage to equipments as well as environment.

c. Benefits arising after up-gradation

- Sox, Nox & CO of two nos. of units may be measured by using a single central unit.
- Monitoring of SO_x, NO_x & CO parameters of flue gases is important from operational aspect as well as Environmental concerns. The measured values would be helpful in initiating corrective measures.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	60	60	-	-	-
Debt Amount	48	48	-	-	-
Equity Amount	12	12	-	-	-
IDC	0.84	0.84	0.00	0.00	0.00
Project Cost with IDC	60.84	60.84	0.00	0.00	0.00

Estimated cost of works to be undertaken is Rs. 0.6084 Crores.

e. Time of Execution/ Completion

Implementation time is about 6 months from commencement and expected to be completed in FY 2011-12.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	2	2			

4.13 Proposal No. 13: Requirement of RSPM (PM 2.5), Benzene, Ozone & Ammonia analysers for Ambient Air Quality Monitoring at STPS, Suratgarh.

a. Brief Description of Proposals

As per Gazette Notification dated 18-11-2009 additional parameters have been prescribed for monitoring Ambient Air Quality.

b. Problem faced in existing system & justification of proposal

The existing PM10, Sox, Nox and Co Analysers are of M/s Environment S.A. (India) Pvt. Ltd. and running successfully. The AMC has also been awarded to the firm. Since Nox analyser is in our Mobile van therefore the channel of ammonia will be add on in this existing analyser

c. Benefits arising after up-gradation

Compliance with the Govt. of India Notification dated 18-11-2009.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	50	50	-	-	-
Debt Amount	40	40	-	-	-
Equity Amount	10	10	-	-	-
IDC	0.00	0.00	0.00	0.00	0.00
Project Cost with IDC	50.00	50.00	0.00	0.00	0.00

Estimated cost of works to be undertaken is Rs. 0.5 Crores.

e. Time of Execution/ Completion

Implementation time is about 6 months from commencement and expected to be completed in FY 2011-12.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	2	2			

As project execution time is short IDC is not envisaged

4.14 **Proposal No. 14: Up-gradation of MMI system of STPS Unit # 2**

a. Brief Description of Proposals

The system is frequently hanging-up at the time of tripping of Unit. It occurs when events occur in rapid sequence & are required to record for analysis / investigation. Online uploading of Data in EPROM is not possible.

b. Problem faced in existing system & justification of proposal

- The existing system is not user friendly.
- The processor cards PRO5 a have now become obsolete having certain limitation.
- Remote simulation facilities not available in the existing processor. By upgrading it to HMI, SK06 kit and diagnostic station would not be required for simulation process and to read and change the internal parameters

c. Benefits arising after up-gradation

- Proper recording of sequence of events would be beneficial in cause analysis of tripping and measures for prevention of further tripping on similar reason.
- In HMI system SK06 kit and diagnostic station would not required separately.
- The problems related to the frequent hanging up of the system and online uploading of data in EPROM will be solved by upgradation from MMI to HMI.
- The facility of remote simulation would also become available.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	250	-	250	-	-
Debt Amount	200	-	200	-	-
Equity Amount	50	-	50	-	-
IDC	0.00	0.00	0.00	0.00	0.00
Project Cost with IDC	250.00	0.00	250.00	0.00	0.00

Estimated cost of works to be undertaken is Rs. 2.5 Crores.

e. Time of Execution/ Completion

Implementation time is about 9 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	1		1		

As project execution time is short IDC is not envisaged

4.15 **Proposal No. 15: Fencing of MMH Stations, Intake System Area & construction of boundary wall on land strip along road side from Colony to Plant Gate No. 1**

a. Brief Description of Proposals

Physical limits of possession are not available. This encourages encroachment & difficulty in development of Green Belt.

b. Problem faced in existing system & justification of proposal

Fencing of the area will result in actual possession of the land and prevent encroachment thereby and ensuring safety and security of machinery as residents & taking up other construction and developmental works

c. Benefits arising after up-gradation

- Prevention of encroachment of land and litigations related to land disputes.
- Ensuring safety & security of plant & machinery as well as of residents.
- Green belt development.
- Prevention of encroachment, development of green belt & avoidance to litigations.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	255	-	255	-	-
Debt Amount	204	-	204	-	-
Equity Amount	51	-	51	-	-
IDC	10.71	0.00	10.71	0.00	0.00
Project Cost with IDC	265.71	0.00	265.71	0.00	0.00

Estimated cost of works to be undertaken is Rs. 2.6571 Crores.

e. Time of Execution/ Completion

Implementation time is about 12 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	8		8		

4.16 Proposal No. 16: Extension of DAV school building / facilities in STPS Township to run the Sr. Sec Classes.**a. Brief Description of Proposals**

Existing infrastructure/building (Rooms /Labs) is sufficient for meeting out the requirement for running up to class X only while Hindi Medium has been upgraded to Class XII.

b. Problem faced in existing system & justification of proposal

Fifteen additional rooms & Labs are essentially required for running different streams of science & arts for class XI & XII. It would benefit students from the Township as well as nearby areas who have to otherwise go to Suratgarh town. The expansion would also serve Corporate Social Responsibility Obligations

c. Benefits arising after up-gradation

- Education facility for the children residing in STPS Township as well as nearby areas who have to otherwise go to Suratgarh town (28 Km approx.)

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	200	-	200	-	-
Debt Amount	160	-	160	-	-

Equity Amount	40	-	40	-	-
IDC	8.40	0.00	8.40	0.00	0.00
Project Cost with IDC	208.40	0.00	208.40	0.00	0.00

Estimated cost of works to be undertaken is Rs. 2.084 Crores.

e. Time of Execution/ Completion

Implementation time is about 12 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	8		8		

4.17 Proposal No. 17: Construction of Bye-Pass Road

a. Brief Description of Proposals

Construction of Bye-Pass Road for diversion of heavy vehicular movement. This would avoid sharp turns through the Rayanwali village poses threat to the safety of people residing along the road.

b. Problem faced in existing system & justification of proposal

Diversion of heavy vehicular traffic currently passing through the village is necessary in the wake of objections raised by villagers citing safety concerns.

c. Benefits arising after up-gradation

The heavy vehicular traffic would be diverted through the Bye-Pass road thereby relieving the road passing through the village for light vehicle movement and ensuring safety of the residents & other users.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	428	100	328	-	-
Debt Amount	342.4	80	262.4	-	-
Equity Amount	85.6	20	65.6	-	-
IDC	16.18	1.40	14.78	0.00	0.00
Project Cost with IDC	444.18	101.40	342.78	0.00	0.00

Estimated cost of works to be undertaken is Rs. 4.4418 Crores.

e. Time of Execution/ Completion

Implementation time is about 12 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	8	2	6		

4.18 Proposal No. 18: Widening & strengthening of road from Rayanwali to T-point (4 KM)

a. Brief Description of Proposals

Existing width of 5.5 M is insufficient to cater to increased movement of heavy ash bulkers & other heavy goods vehicles. Heavy vehicular movement also poses threat to the safety of movement of people & small passenger vehicles.

b. Problem faced in existing system & justification of proposal

- Existing width of 5.5 M is unable to cater to increased movement of heavy ash bulkers & other heavy goods vehicles.
- The road performs an arterial function for movement of people and vehicles of STPS town ship and nearby villages to NH-15

c. Benefits arising after up-gradation

Ease of movement for heavy vehicles and ensuring safety of people as well as light passenger vehicles

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	250	50	200	-	-
Debt Amount	200	40	160	-	-
Equity Amount	50	10	40	-	-
IDC	9.10	0.70	8.40	0.00	0.00
Project Cost with IDC	259.10	50.70	208.40	0.00	0.00

Estimated cost of works to be undertaken is Rs. 2.591 Crores.

e. Time of Execution/ Completion

Implementation time is about 12 months from commencement and expected to be completed in FY 2012-13.

Implementation Assumption	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	8	2	6		

4.19 Proposal No. 19: Civil Miscellaneous Works like construction of Site Offices for XENs / AENs & JENs at various locations, Site Stores/Operator Cabins at various locations in Units 1 to 6, Canteens at CHP & Main Plant Area, , barracks for Ex-servicemen & shed for Hydraulic Excavator & Dozer in CHP area

a. Brief Description of Proposals

System operation / Equipment condition monitoring is affected due to non-availability of site offices / operator cabins. Ex-servicemen deployed as vehicle drivers & security personnel are also facing accommodation problem. Only one staff canteen is currently catering to the whole plant and several locations are quite distant apart.

b. Problem faced in existing system & justification of proposal

- Proper monitoring and system operation shall be beneficial in limiting equipment outages.
- Availability of proper accommodation for ex-service men who are facing difficulties due to current make-shift arrangements.
- Availability of canteen facility to workers in different areas who will not have to leave work place for long time for meals/refreshments.
- Availability of parking & maintenance area for Dozers & Excavators which are currently parked in open spaces.

c. Benefits arising after up-gradation

- Proper monitoring and system operation.
- Availability of proper accommodation for ex-service men.

- Availability of canteen facility to workers in different areas.
- Availability of parking & maintenance area for Dozers & Excavators

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	355	55	300	-	-
Debt Amount	284	44	240	-	-
Equity Amount	71	11	60	-	-
IDC	12.25	0.77	11.48	0.00	0.00
Project Cost with IDC	367.25	55.77	311.48	0.00	0.00

Total estimated cost of the project is Rs. 3.6725 Crores.

e. Time of Execution/ Completion

Implementation time is about 9 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	7	2	5		

4.20 Proposal No. 20: Proposal No. 20: Construction of road on the inside along the boundary of the power station and pedestrian over-bridge crossing across railway tracks on road to Gate # 3.

a. Brief Description of Proposals

Difficulty is experienced during patrolling of power plant along the boundary due to bad condition of the existing path. Green belt development along the boundary is also getting affected. Plant Security personnel also face problems in reaching to watch towers and conducting rapid movement in case of security breach. Workmen residing outside Gate # 3 have to move across the railway tracks for reaching plant site which poses a threat to their lives due to movement of coal rakes.

b. Problem faced in existing system & justification of proposal

- Effective patrolling with ease of movement of vehicles as Power plant is a vital installation falling in sensitive area.
- Ensuring rapid arrival of security personnel at the point of security breach.
- Green belt development through proper accessibility to the areas under development.
- Ensuring safety of the workmen moving across the railway tracks.

c. Benefits arising after up-gradation

- Ease of movement of vehicles for patrolling.
- Effective patrolling and rapid reach of security personnel at the point of security breach.
- Green belt development through proper accessibility to the areas under development.
- Safety of the work force moving across the railway tracks for reaching work site shall be ensured.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	565	200	365	-	-

Debt Amount	452	160	292	-	-
Equity Amount	113	40	73	-	-
IDC	24.22	2.80	21.42	0.00	0.00
Project Cost with IDC	589.22	202.80	386.42	0.00	0.00

Total estimated cost of the project is Rs. 5.8922 Crores.

e. Time of Execution/ Completion

Implementation time is about 9 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	7	2	5		

4.21 Proposal No. 21: Up-gradation of Work-Shop.

a. Brief Description of Proposals

Machining of jobs exceeding 3000 mm in length & 700 mm diameter is not possible on existing Lathe Machines. Works like shaft straightening, pulling/pressing gear on shaft have to be outsourced leading to increased downtime of equipments. Facility for crimping & cutting of hydraulic hoses used in a variety of hydraulic equipments is not available.

b. Problem faced in existing system & justification of proposal

- Emergency machining of large jobs shall also be taken up which are currently executed through external agencies involving high cost & increased outage of equipments.
- Installation of machines would be beneficial in increased reliability and availability of equipments ensuring higher generation and efficiency.
- Work shall be executed in the supervision /direction of the end user thereby eliminating the possibility of mismatch and enhanced downtime.

c. Benefits arising after up-gradation

- Reduction in outage of plant machinery.
- Increased savings, reliability & availability of machines.
- Development of in-house expertise to take up emergency works of other power stations also.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	120	-	60	60	-
Debt Amount	96	-	48	48	-
Equity Amount	24	-	12	12	-
IDC	3.36	0.00	0.84	2.52	0.00
Project Cost with IDC	123.36	0.00	60.84	62.52	0.00

Total estimated cost of the project is Rs. 1.2336 Crores.

e. Time of Execution/ Completion

Implementation time is about 22 months from commencement and expected to be completed in FY 2013-14.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	6		3	3	

4.22 **Proposal No. 22: Installation of IP Camera Surveillance System for Coal Yard of Stage-I & II of CHP.**

a. Brief Description of Proposals

Difficulties are faced in management /supervision of coal feeding. Fire pockets /proper levelling of coal piles are done on manual assessment. Non availability of online monitoring system of the coal stock yard poses operational limitations to the personnel.

b. Problem faced in existing system & justification of proposal

- Proper monitoring of stacker-reclaimer system and better coal stacking reclaiming/feeding management
- On time extinguishing of coal fires and better assessment of stacking & levelling activities
- Optimization of running hours of Bull Dozers
- Reduction in the operational hours of the conveyor systems
- Ensuring proper blending of imported coal with raw coal

c. Benefits arising after up-gradation

- Better coal stacking / reclaiming/feeding management.
- Timely extinguishing of coal fires and better assessment of levelling activities
- Optimization of running hours of Bull Dozers
- Reduction in the operational hours of the conveyor systems

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	40	30	10	-	-
Debt Amount	32	24	8	-	-
Equity Amount	8	6	2	-	-
IDC	0.00	0.00	0.00	0.00	0.00
Project Cost with IDC	40.00	30.00	10.00	0.00	0.00

Total estimated cost of the project is Rs. 0.4 Crores.

e. Time of Execution/ Completion

Implementation time is about 8 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	2	1	1		

As project execution time is short IDC is not envisaged

4.23 **Proposal No. 23: Installation of Belt Watch System on 52 Nos. of conveyors in Coal Handling Plant, STPS.**

a. Brief Description of Proposals

All the pull cord switches of conveyor are connected in series so whenever any fault appears in the system a long time is required to locate the fault which hampers the coal feeding & hence increases the unloading time.

b. Problem faced in existing system & justification of proposal

This system will minimise the fault attending time and hence will reduce the coal unloading time.

c. Benefits arising after up-gradation

- This system will minimise the fault attending time and hence will reduce the coal unloading time hence reduce the auxiliary power consumption of the system.
- This system will minimise the fault attending time and hence will reduce the coal unloading time.

d. Estimated cost of Project

Cost Details	Rs Lakh	2011-12	2012-13	2013-14	2014-15
Project Cost	30	20	10	-	-
Debt Amount	24	16	8	-	-
Equity Amount	6	4	2	-	-
IDC	0.00	0.00	0.00	0.00	0.00
Project Cost with IDC	30.00	20.00	10.00	0.00	0.00

Total estimated cost of the project is Rs. 0.3 Crores.

e. Time of Execution/ Completion

Implementation time is about 8 months from commencement and expected to be completed in FY 2012-13.

Execution Details	Months	2011-12	2012-13	2013-14	2014-15
Project Execution Time	2	1	1		

As project execution time is short IDC is not envisaged

A5: ABSTRACT OF ADDITIONAL CAPITAL EXPENDITURE PROPOSALS

S No	Description of Proposal	Estimated Total Cost including IDC (Rs Cr)	2011-2012	2012-13	2013-14	2014-15	Time schedule for implementation
1	Supply and Erection of 300 NB, GI Line for Potable Water (Drinking water) from plant to colony pump house. (Approx. length of pipe line is 6 Kms).	3.60	1.77	1.82	0.00	0.00	10-12 months, 2011-12 to 2012-13
2	Valveless Autowash Gravity (VAG) Filter & Automatic Self Cleaning Filter (ASCF) for Unit 1 & 2 and Unit No. 3 & 4 of SSTPS, Suratgarh, Rajasthan.	16.90	0.00	12.50	4.39	0.00	18 months, 2013-14

S No	Description of Proposal	Estimated Total Cost including IDC (Rs Cr)	2011-2012	2012-13	2013-14	2014-15	Time schedule for implementation
	(SIDE STREAM FILTRATION)						
3	Modification in ACW system of Unit # 1 & 2	2.03	0.00	2.03	0.00	0.00	12 months, Winter, 2012-13
4	Augmentation of DMCCW system of Unit # 1 & 2	10.28	0.00	10.28	0.00	0.00	14 months, 2012-13
5	Blow down system for Cooling Tower of Unit # 2,3, 4 & 5.	3.04	0.00	3.04	0.00	0.00	12 months, 2012-13
6	Installation of Energy meters at MCC outgoing feeders (LT/HT).	2.00	0.00	2.00	0.00	0.00	1 year, 2012-13
7	Design, Engineering, Erection, testing, commissioning (E.T.C.) along with supply of material for AC VVVF (variable voltage variable frequency) drive based passenger cum goods elevator at Boiler Unit-2, SSTPS, Suratgarh	0.61	0.00	0.61	0.00	0.00	30 weeks, 2012-13
8	Purchase of one no. Generator Rotor as Initial Spare to be used for STPS Units 1-5	24.25	2.03	6.56	7.23	8.43	39 months, 2011-12 to 2014-15
9	Replacement of LR Beams, defective collecting electrodes & proper alignment of ESP fields of Unit #1 (250 MW) which are defective for more than two years.	5.07	0.00	5.07	0.00	0.00	12 months, 2012-13
10	Providing Dense Phase Conveying system from existing intermediate Silo System of ESP Unit # I,II,III,IV,V & VI to outside the Plant Side Boundary near gate No. 3 at a distance of 1500 Meters. (Approx.) including providing of dense phase system in remaining ESP Fields, installation of Weigh Bridge & construction of roads.	83.92	0.00	30.84	53.08	0.00	22 months, 2012-13 & 2013-14
11	Purchase of LP Turbine Rotor as Insurance Spare	46.26	3.95	12.79	14.10	15.41	39 months, 2011-12 to 2014-15

S No	Description of Proposal	Estimated Total Cost including IDC (Rs Cr)	2011-2012	2012-13	2013-14	2014-15	Time schedule for implementation
12	Sox, Nox & CO Analyser for Unit # 2, 3 & 4 at STPS, Suratgarh	0.61	0.61	0.00	0.00	0.00	6 months, 2011-12
13	Requirement of RSPM (PM 2.5), Benzene, Ozone & Ammonia analysers for Ambient Air Quality Monitoring at STPS, Suratgarh.	0.50	0.50	0.00	0.00	0.00	6 months, 2011-12
14	Upgradation of MMI system of STPS Unit # 2	2.50	0.00	2.50	0.00	0.00	9 months, 2012-13
15	Fencing of MMH Stations, Intake System Area & construction of boundary wall on land strip along road side from Colony to Plant Gate No. 1	2.66	0.00	2.66	0.00	0.00	12 months, 2012-13
16	Extension of DAV school building / facilities in STPS Township to run the Sr. Sec Classes	2.08	0.00	2.08	0.00	0.00	12 months, 2011-12 & 2012-13
17	Construction of Bye-Pass Road/ Rayanwali By-pass Road	4.44	1.01	3.43	0.00	0.00	12 months, 2011-12 & 2012-13
18	Widening & strengthening of road from Rayanwali to T-point (4 KM)	2.59	0.51	2.08	0.00	0.00	12 months, 2011-12 & 2012-13
19	Civil Miscellaneous Works like construction of Site Offices for XENs / AENs & JENs at various locations, Site Stores/Operator Cabins at various locations in Units 1 to 6, Canteens at CHP & Main Plant Area, barracks for Ex-servicemen & shed for Hydraulic Excavator & Dozer in CHP area	3.67	0.56	3.11	0.00	0.00	9 months, 2011-12 & 2012-13
20	Construction of road on the inside along the boundary of the power station and pedestrian overbridge crossing across railway tracks on road to Gate # 3.	5.89	2.03	3.86	0.00	0.00	9 months, 2011-12 & 2012-13
21	Up-gradation of Work-Shop.	1.23	0.00	0.61	0.63	0.00	22 months, 2012-13 & 2013-14
22	Installation of IP Camera Surveillance System for Coal	0.40	0.30	0.10	0.00	0.00	8 months, 2011-12 & 2012-13

S No	Description of Proposal	Estimated Total Cost including IDC (Rs Cr)	2011-2012	2012-13	2013-14	2014-15	Time schedule for implementation
	Yard of Stage-I & II of CHP.						
23	Installation of Belt Watch System on 52 Nos. of conveyors in Coal Handling Plant, STPS.	0.30	0.20	0.10	0.00	0.00	8 months, 2011-12 & 2012-13
	Total cost Including IDC	224.84	13.47	108.09	79.43	23.84	

A6: RESPONDENTS

- 6.1 All the three Discom's (i.e JVNL/AVNL/ Jd.VNL) Jaipur/ Ajmer/ Jodhpur are respondents for the above petition.

A7: PRAYER

RVUN humbly requests the Hon'ble Commission to:-

Accord in principal clearance for undertaking of 23 proposals for additional capital works in Suratgarh Super Thermal Power Station (SSTPS) during FY 2011-12 and beyond as per Annexure-a ;

And pass such other further orders as are deemed fit and proper in the facts and circumstances of the case.

(S. K. Rajpurawala)
Chief Accounts Officer (W&M)

(R. K. Gaur)
Chief Engineer (PPC&F)