

ANNEXURE-A6

Himachal Pradesh State Electricity Board Limited



(A State Govt. Undertaking)

Registered Office: Vidyut Bhawan, HPSEBL, Shimla-171004.

CIN No.: U40109HP2009SGC031255,

GST No.:HPSEBL 02 AACCH4894EHZB

Phone No.: 0177-2838901, 2838695

Email address: seinterstate@gmail.com, website: www.hpseb.com

No.: HPSEBL/CE (Sys. Op.)/IS-231(b)/Vol.XXIII/2018 -8395-9 > Dated 19-11-18

**The Chief Engineer (Commercial),
HPSEB Ltd., Vidyut Bhawan,
Shimla - 04.**

Subject: Baspa II HEP – Prior Intimation for consent to incur “Additional Capital Expenditure” during FY2018-19 and Multi Year Tariff (MYT) Control Period 2019-24.

Ref.: Vice President, JSW Hydro Energy Limited letter no. JSWHEL/BASPA/PPA /2018-9395 dated 29th October 2018.

Sir,

This is with reference to the Vice President, JSW Hydro Energy Limited letter dated 29th October 2018 vide which it is requested that HPSEBL may please provide the consent for considering actual additional Capitalization of Baspa-II HEP, for the year 2018-19 and proposed additional facilities and modifications required during MYT control period 2019-24, so that same can be approved through Hon'ble Himachal Pradesh Electricity Regulatory Commission within stipulated time frame.

In this context, it is intimated that subject matter pertains to your office and therefore, enclosed please find herewith the Vice President, JSW Hydro Energy Limited letter dated 29th October 2018 (Original copy enclosed) for necessary action at your end, please.

Yours faithfully

[Signature]

**Chief Engineer (System Operation),
HPSEBL, Vidyut Bhawan,
Shimla -171004.**

Encl: As above.

Copy of the above to the following for kind information, please:

1. The Vice President, M/s JSW Hydro Energy Ltd., Devdar Kunj, Ground Floor, Near Post Office, Chhota Shimla, Shimla, H.P. - 171002.
2. M/s JWS Hydro Energy Limited, Baspa-II HE Power Plant, Sholtau Colony, P.O. Tapri, District- Kinnaur H.P.- 172104.

Mr. Rawat Approval
Mr. Pranshu



[Signature]
**Chief Engineer (System Operation),
HPSEBL, Vidyut Bhawan,
Shimla -171004.**

22/11

cc: Mr. Beera Ti



JSWHEL/BASPA/PPA/2018- 9395
29th October 2018

059

JSW Hydro Energy Limited
(formerly Himachal Baspa Power Company Limited)
Baspa - II H.E. Project
Sholtu Colony, P. O. Tapri - 172104
District Kinnaur (Himachal Pradesh)
CIN. : U40101HP2014PLC000681
Phone : +91 9816507000, 9805002039
Fax : +91 1786 - 261258

To,

The Chief Engineer (System Operation),
HPSEB Limited,
Vidyut Bhawan,
Shimla- 171004 (HP).

Sub: Baspa-II HEP- Prior intimation for consent to incurr "Additional Capital Expenditure" during FY 2018-19 and Multi Year Tariff (MYT) Control Period 2019-24.

Dear Sir,

M/s JSW Hydro Energy Limited (formerly known as Himachal Baspa Power Company Limited) is a company incorporated under Company's Act 1956 and its mailing address is at JSW Hydro Energy Limited, Baspa-II H.E. Project, Sholtu Colony, P. O. Tapri, Sholtu, Kinnaur, Himachal Pradesh, India, 172104. This company is a "Generating Company" as defined under section 2(28) of the Electricity Act, 2003 and is operating 3x100 MW, Baspa-II HEP in the state of Himachal Pradesh. The Units of the generating station were synchronized one by one in a phased time bound manner and the plant was declared fully commercially operative on dated 08.06.2003.

The power purchase agreement (PPA) was signed initially between Jaiprakash Hydro-Power Limited (Now, JSW Hydro Energy Limited) and Himachal Pradesh State Electricity Board (HPSEB) on 4th June 1997. The entire quantum of power generated at Baspa-II HEP is being supplied to the Himachal Pradesh State Electricity Board Limited (HPSEBL, formerly known as HPSEB) through 400 kV Baspa-Jhakri Transmission lines since its date of commercial operation, i.e. 08.06.2003.

At Baspa-II HEP, Operation and Maintenance of power station is aimed at reducing failure rate by ensuring smooth operational levels of the power utility. This is done by adopting timely preventive maintenance schedule regarding all vital areas of the power project.

Since, the plant was commissioned in 2003 and equipment were installed, erected & commissioned during the period from 2000 to 2003, it is evident that the design & technology used was that prevailing during 1995 to 2000. Now, due to ageing of plant equipment, we are facing challenges in business continuation on account of reasons, which may be, grouped under following heads:

- (i) **Obsolescence** of then technology on which equipment was manufactured and hence unavailability of essential spares & services for the same in the market or with OEM (Original Equipment Manufacturer).



Part of O. P. Jindal Group

Corporate Office : JSW Centre,
Bandra Kurla Complex,
Bandra (East), Mumbai - 400 051 a g e
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- (ii) **Upgradation in Technology:** Availability of new, higher and user-friendly versions of software & equipment in market, which cannot be integrated with old equipment / system as such, but needs complete replacement / upgradation.
- (iii) System Modification.
- (iv) Change in Law.
- (v) Prudent Utility Practices compliance.

In view of above, for business continuation as per terms of PPA and maintaining Baspa-II HEP as "State of Art" project, we intend to combat obsolescence of various key system installed at Baspa-II HEP by upgrading them with latest available versions, in a phased manner over next six years including this year.

Various provisions mentioned in the PPA for seeking consent of additional capitalization for Baspa-II HEP are reproduced **as Verbatim**, below under the Heading A.

Similarly, various relevant sections of regulations of HPERC (under Heading B) and CERC (under Heading C) may also please be referred, which are also reproduced below. **These are those sections, under which CERC have already approved the relevant capex to respective Generators and have passed tariff orders.**

- A) PPA Article 2 Section 2.2.10, Article 7 Section 7.1, Article 3 Section 13.1((h), (i), (p)) and Article 20 Section 20.21((a), (b), (e) & (h))

Article 2, Section 2.2.100: Prudent Utility Practices:

Means those practices, method, techniques and standards as changed from time to time, that are generally accepted internally for use in electrical utility industries (taking into account conditions in India) and commonly used in prudent electrical utility engineering and operations to design, engineer, construct, test, operate and maintain equipment lawfully, safety, efficiently and economically as applicable to power station of size, service and type of the project and maintenance guidelines.

Article 7, Section 7.1:
Plant Operation and Maintenance:

Subject to the provision of this Agreement, the company shall operate and maintain, and if required, effect improvement (within the overall scope of project implementation) in the project in accordance with:-

- (i) Prudent Utility Practices.
- (ii) All applicable laws and directives.
- (iii) The manuals, instructions and manufacturer's guidelines supplied by construction contractors, manufacturers of equipment / suppliers etc.
- (iv) The grid technical parameters as described in Schedule VIII.
- (v) Despatch Instructions.



Article 13, Section 13.1((h), (i) & (p)):
Company Undertaking:

The Company hereby covenants to and agree the Board to:

(h) Operate and maintain the project in accordance with the dispatch instructions and Prudent Utility Practices

(i) Design, construct and complete the project in a good workman-like manner, only with materials and equipment that are new and of international Utility-grade quality, in a such a manner that the useful life of the project will be at least equal to the term of this Agreement and in accordance with

- (i) the plans and specifications prepared in accordance with this Agreement,
- (ii) all applicable laws rules, regulations, permits and licenses, and
- (iii) sound engineering and constructions, and Prudent Utility Practices;

(p) at the end of the term of this agreement, transfer the project in the good working condition to the Board as per provisions of this Agreement.

Article 20, Section 20.21((a), (b), (e) & (h)):
Change in Law:

(a) Definition of Law

For the purpose of this Agreement, "Law" means any act, rule regulation, notification directive order or instruction having the force of Law enacted or issued by any competent legislature, Government or Statutory Authority in India.

(b) Definition of change in Law

For the purpose of this Agreement, "Change in Law" means: -

- (i) any enactment and enforcement, "Change in Law" means: -
- (i) any amendment, alternation, modification or repeal of any existing law by a competent court, Tribunal or legislature in India which is contrary to the existing accepted interpretation thereof.

In each case coming into effect after the December 1993, and directly or indirectly affecting the parties to this Agreement in their performance of their obligation under this Agreement, and provision for which has not been made elsewhere in the Agreement.

(e) Additional facilities and modifications

Where any change in law coming into force after unit 3 commercial operation date requires the construction of any additional facilities and modifications of any existing facilities of the project, the company may incur such expenditure thereon as may be reasonably required to compile with such change in law and the amount of such expenditure shall be added to the capital cost subject



to approval by Board/SG/Authority. The Company shall provide the Board with as much prior notification of such additional modifications and their costs as is reasonably practicable. To the extent amount of any such expenditure shall have been funded with debt, the interest on debt and debt payment attributable thereto shall be reflected in the tariff, and to the extent the amount of any such expenditure shall have been funded with equity, the return on equity attributable thereto shall be reflected in the tariff. Benefits, if any, with regard to tariff, accrued due to change in law shall go towards reduction in tariff.

(h) Change in tariff due to change in law

If there is any change in tariff as per Section 20.21, due to change in law, then, the same would be got approved from the Board.

B) In HPERC, the provision under **Regulation 13 (2)** of Himachal Pradesh Electricity Regulatory Commission (**Notification No. HPERC/Gen/479**) of Terms and Conditions for Determination of Hydro Generation Tariff Regulation, 2007 applicable with effect from 1st April, 2011 (amended in 2013) is reproduced verbatim as under:

2) *The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check, -*

- (a) liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- (b) change in law;*
- (c) any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation:*

Provided that in any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalisation for determination of tariff w.e.f. 1.4.2011.

C) In CERC, the provision under Regulation 14 of Central Electricity Regulatory Commission (**Notification No. L-1/144/2013/CERC**) of (Terms and Conditions of Tariff) Regulations, 2014 applicable from 1.4.2014 to 31.3.2019 is reproduced verbatim as under:



14) Additional Capitalization and De-capitalization:

The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite-based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;

(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

In light of above submission, it is requested that HPSEBL may please provide the consent for considering actual additional Capitalization of Baspa-II HEP, for the year 2018-19 and proposed additional facilities and modifications required during MYT control period 2019-24, so that same can be approved through Hon'ble Himachal Pradesh Electricity Regulatory Commission within stipulated time frame.

The details of additional Capitalization during FY 2018-19 and proposed additional facilities and modifications required for Baspa-II HEP, during MYT Control Period 2019-24 are attached in **Annexure-A** for your ready reference and consent please.

Thanking you,

Yours sincerely,

For JSW Hydro Energy Limited



[Perveen Puri]

Vice President & Head of Plant

Enclosure: As above.

Copy to :

- The Chief Engineer (Commercial), HPSEB Limited, SDA Complex, Kasumpti, Shimla-171009.

JSW HYDRO ENERGY LIMITED
300 MW BASPA-II HEP

Details of Additional Facilities and Modification Required for Baspa-II HEP During Year 2018-19 & MYT Control Period 2019-24
PPA Reference Clauses: Article 2 Section 2.2.100, Article 7 Section 7.1, Article 3 Section 13.1((h), (i), (p)) and Article 20 Section 20.21((a), (b), (c) & (h)) and Additional Capitalization Provision in HPERC Hydro
Generation Tariff Regulation 2007 & CERC Tariff Regulation 2014

Annexure-A

SL. NO.	DESCRIPTION OF ASSETS / WORKS	JUSTIFICATION	TENTATIVE COST (In Lacs)					TENTATIVE YEAR OF REPLACEMENT
			2018-19	2019-20	2020-21	2021-22	2022-23	
1	Upgrade of Excitation System for Unit-1, Unit-2, Unit-3	Obsolescence	92.00	-	119.60	131.56	Unit-2 Unit-1 Unit-3	2020-21 2021-22 2022-23
2	Implementation of RCMO / RCMO Enabled Electronic Governors for Unit-1, Unit-2 and Unit-3	Change In Law	52.70	57.97	63.77	-	Unit-3 Unit-2 Unit-1	2018-19 2019-20 2020-21
3	Installation of Carbon Dust Collection System (CDCS) for Unit-1, Unit-2, Unit-3	Prudent Utility Practices / Upgrade in Technology	39.10	43.01	47.31	-	Unit-1 Unit-2 Unit-3	2018-19 2019-20 2020-21
4	Procurement of High Pressure Unit Compressor (Two sets of High Compressors (Main and Standby) are common for Unit-1, Unit-2 and Unit-3)	Obsolescence	20.18	22.20	-	-	Compressor-1 Compressor-2	2018-19 2019-20
5	Procurement of Articulating Boom Lift, (Up to Height-13 Meter)	Prudent Utility Practices (New Asset)	15.74	-	-	-	Compressor-1	2018-19
6	Procurement of Bearing (Generator and Turbine Bearing) Oil Filtration Plant	Prudent Utility Practices	14.00	-	-	-	Compressor-1	2018-19
7	Procurement of Cooling Water AC pump (Vertical Turbine Pump)	Obsolescence	13.46	-	15.00	-	Compressor-1	2018-19 2019-20
8	(a) Upgrade of Position Sensors for Pelton Turbine Nozzles (Temposonic Sensor) for Unit-1 and Unit-3 (b) Upgrade of Position Sensors for Pelton Turbine Deflectors (Temposonic Sensor) for Unit-1, and Unit-3	Obsolescence	7.87	7.87	-	-	Unit-1 & Unit-3 Unit-1 & Unit-3	2018-19 2019-20
9	Upgrade of Alstom Make EPAC 3000 Series, Distance Protection Relays for 400 kV Outgoing Feeders	Obsolescence	4.78	5.28	-	-	Feeder-1 Feeder-2	2018-19 2019-20
10	Procurement of Dewatering Pumps (Submersible Type)	Prudent Utility Practices	2.12	-	-	-	Feeder-1	2018-19
11	Design, Supply, Installation and Commissioning of Night Glow Signage & Stainless Steel Hand Rail Inside Power House Complex	Prudent Utility Practices / Upgrade in Technology	2.00	8.00	3.00	-	First Lot Second Lot Third Lot	2018-19 2019-20 2020-21
12	Procurement of Welding Fume Extractor System	Prudent Utility Practices / Upgrade in Technology	1.45	-	-	-	First Lot	2018-19
13	Procurement of Uninterrupted Power Supply for Plant Auxiliaries	Obsolescence	1.24	-	-	-	First Lot	2018-19
14	Upgrade of Generator Protection System for Unit-1, Unit-2 & Unit-3	Obsolescence	42.00	51.00	56.00	-	Unit-2 Unit-1 Unit-3	2018-19 2019-20 2020-21
15	Upgrade of CCTV Surveillance System	Obsolescence	24.00	-	-	-	Unit-2	2018-19
16	Absolute Vibration Detection System for Turbine & Generator, Bearing & Housing	Prudent Utility Practices / Upgrade in Technology	20.00	20.00	20.00	-	Unit-1 Unit-2 Unit-3	2018-19 2019-20 2020-21
17	Upgrade of DCS System	Obsolescence	18.00	-	-	-	Unit-2	2018-19
18	Upgrade of Emulsifier System	Obsolescence	15.00	-	-	-	Unit-2	2018-19
19	Upgrade of HVAC System	Obsolescence	12.00	-	-	-	Unit-2	2018-19
20	Upgrade of Smoke and Fire Detection System	Obsolescence	10.00	-	-	-	Unit-2	2018-19
21	Upgrade of Public Address System	Obsolescence	8.00	-	-	-	Unit-2	2018-19
22	Upgrade of Power House Lift	Obsolescence	6.00	-	-	-	Unit-2	2018-19
Grand Total (Lacs)			274.51	291.46	141.08	190.60	207.56	-

29/10/18
29/10/18



ANNEXURE-12.1

12/25/2018

JSW Mail - Regarding price quotation for excitation system HMI screens.



Himanshu Puri <himanshu.puri@jsw.in>

Regarding price quotation for excitation system HMI screens.

Maudgii, Mirinal <Mirinal.Maudgii@volth.com>

To: Himanshu Puri <himanshu.puri@jsw.in>, "Dhara, Dibyendu" <Dibyendu.Dhara@volth.com>
 Cc: "Goyal, Sharad" <sharad.goyal@volth.com>, "Vidyarthi, Raj" <Raj.Vidyarthi@volth.com>, Ravindra Rana <ravindra.rana@jsw.in>, vikas gupta <vikas.gupta@jsw.in>, Dinesh Mahato <dinesh.mahato@jsw.in>

Thu, Apr 26, 2018 at 2:05 PM

Dear Sir

Sorry for the late reply as we were trying to find repairing options for SIMADYN.

We are not able to find any repair option or support for SIMADYN as it is obsolete, even repair is also not possible.

Replacement of SIMADYN with new HMI Solution is also not possible because there will be compatibility issue if we do so.

Moreover, to change or block the interlock/permisive to start:- This condition is coming from group alarm and lot many changes will have to be done to accomplish this condition which can jeopardize the safety of the system. When this system was developed, software was standardized with minimum changes accepted as it was a critical part of Power Unit.

If you have further queries, please let us know.

Thanks and Regards

Mirinal Maudgii

From: Himanshu Puri [mailto:himanshu.puri@jsw.in]

Sent: Thursday, April 26, 2018 12:45 PM

To: Dhara, Dibyendu <Dibyendu.Dhara@Volth.com>; Maudgii, Mirinal <Mirinal.Maudgii@volth.com>

Cc: Goyal, Sharad <sharad.goyal@Volth.com>; Vidyarthi, Raj <Raj.Vidyarthi@volth.com>; Ravindra Rana <ravindra.rana@jsw.in>; vikas gupta <vikas.gupta@jsw.in>; Dinesh Mahato <dinesh.mahato@jsw.in>

Subject: Re: Regarding price quotation for excitation system HMI screens.

Reminder...

Your early reply is kindly requested.

Best Regards,

Himanshu Puri | Manager (O&M Beepc-II) | JSW Energy Ltd.

HBPCl, Sholtu Colony, PO -Tapti, District, Kinneer - 172104 | Himachal Pradesh | India.

M +91 8894289618 |+91 1786 281698 Ext 217

On Wed, Apr 18, 2018 at 4:05 PM, Himanshu Puri <himanshu.puri@jsw.in> wrote:

<https://mail.google.com/mail/u/0/?ik=dcaad368e06&view=pt&search=aj&permmsgid=msg-f%3A1598797102798228745&dsqt=1&siml=msg-f%3A...> 1/4



12/25/2018

JSW Mail - Regarding price quotation for excitation system HMI screens.

Dear Mrinal,

As discussed and in reference to the trailing mails, you are requested to provide updates regarding supply of HMI / OP screens (3 Nos.) for existing Excitation system at Baspa-II HPS.

Moreover, in case of unavailability of required HMI / OP screens, kindly provide us with alternate or upgraded HMI / OP screen compatible to the existing system.

Secondly, as discussed we have **Two Nos.** of HMI / OP screens (1 for each Channel, Total Channels -2) installed in excitation system for **One unit**. In case of failure in any HMI / OP screen, a group alarm is initiated by excitation system which does not permit start permissive to the unit sequence from standstill. This discrepancy hinders us to operate the unit in case of failure of any one of HMI / OP screen. **Can we modify this logic, for making unit operational with availability of only one HMI screen. ? (If other HMI is faulty)**

Kindly treat the issue as most urgent, your early action will be highly regarded.

Best Regards,

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.

HBPCL, Sholtu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India.

M +91 8894289616 | +91 1786 261696 Ext 217



On Mon, Jan 29, 2018 at 10:33 AM, Himanshu Puri <himanshu.puri@jsw.in> wrote:

: Dear Mrinal Ji,

In reference to the trailing mails, Please provide updates regarding supply of excitation subsystem **OP/HMI** screens.

An early reply will be highly Appreciated.

Best Regards,

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.

HBPCL, Sholtu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India.

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On Fri, Nov 24, 2017 at 4:57 PM, Himanshu Puri <himanshu.puri@jsw.in> wrote:

: Dear Mrinal Ji,

As required, please find the attachments having required data.

Best Regards,

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.



12/26/2018

JSW Mail - Regarding price quotation for excitation system HMI screens.
 HBPCCL, Sholtu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India.
 M +91 8894289616 |+91 1786 261696 Ext 217



On Thu, Nov 23, 2017 at 11:15 AM, Mrinal Maudgil <Mrinal.Maudgil@volth.com> wrote:

Dear Sir

Kindly furnish following details so that we can finalize exact part numbers for the supply of new opto-isolators. it would be easier to give the inputs as per the following table w.r.t, their application. Please cover all type opto-isolators installed.

SSR	Input Voltage	Output/Load Voltage	Load Current
DI			
DO			

Regarding OP's, we are still trying to find alternate solution. Kindly give some more time.

Regarding Excitation System, we got Arrangement drawing and was very helpful.

For detailed evaluation and offer, kindly provide complete schematics.

Thanks and Regards

Mrinal

From: Himanshu Puri [mailto:himanshu.puri@jsw.in]

Sent: Wednesday, November 22, 2017 12:42 PM

To: Dhara, Dibyendu

Cc: Vidyarthi, Raj; Maudgil, Mrinal; Goyal, Sharad; Ravindra Rana; vikas gupta

Subject: Re: Regarding price quotation for excitation system HMI screens.

Dear Mr. Dibyendu,

In reference to the trailing mail, please provide updates regarding price quotation, availability and repairing of faulty OP's / HMI.

An early reply will be highly appreciated.

Best Regards,

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.

HBPCCL, Sholtu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India.

M +91 8894289616 |+91 1786 261696 Ext 217



On Tue, Nov 7, 2017 at 12:40 PM, Himanshu Puri <himanshu.puri@jsw.in> wrote:

Dear Mr. Dibyendu,

<https://mail.google.com/mail/u/0/?ik=dcad368e08&view=pt&search=all&permmsgid=msg-%3A1598787102796226746&dsq=1&impl=msg-%3A...> 3/4



12/25/2018

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JSW Mail - Regarding price quotation for excitation system HMI screens.

As discussed, we had failure of two HMI screens for Excitation system in a span of two hours (dated 04-Nov-17). The reason for failure is still unknown, as in the after checks we found correct supply voltage (i.e. 24 VDC), polarity and fuse (on HMI for power supply fault protection) was healthy. Further to our discussion, as agreed please provide your necessary feedback on our requirements briefed as below:-

- 1) Please provide price quotation for purchasing new HMI screens.
- 2) Minimum time required for supply of new screens.
- 3) Share your views for repairing the faulty screens at your plant (2 No.) (F.Nr-M3 103313 & F.Nr-M3 103297)

Technical details of Excitation system and associated HMI screens is given as below:-

Excitation: - **Make-Siemens**
Model-THYRIPOL,
SIMADYN D OP-2
8DD1870-OAGO

Photographs of faulty HMI screens is attached here in for your ready reference.

Also, I would request you to share your expertise with us, so as we can do some more investigation checks in analyzing the route cause of this equipment failure.

Best Regards,

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.

HBPCL, Shollu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India.

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 JSW Energy

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069

ANNEXURE-12.2

Our Ref: DMPCPCSESRN18SY0447/R6
Dated: 12.10.2018
Customer: A/c JSW Energy - HBPCCL
Project: Baspa - II, 1 x 100MW, 13.64KV

ABB

UNITROL[®] Excitation

Page 1 of 10

Static Excitation System

UNITROL[®] 6000

COMMERCIAL OFFER

Our Ref.: DMPCPCSESRN18SY0447/R5

Date: 12th Oct 2018.

Customer: A/c. JSW ENERGY - HBPCCL

Prepared By: ABB INDIA Ltd
Department DMPC-PC- Excitation
SY.No- 88/3 &88/4, Kaseba Hobli,
Basavanahalli Village, Nelamangala,
Bangalore Rural - 562 123

Doc No: UN6080 Commercial offer
Date: 12/10/2018

1



Our Ref: DMP/PC/SESRN18SY0447/R5
 Dated: 12.10.2018
 Customer : A/c-JSW Energy - HBFL
 Project : Baepa - II, 1 x 100MW, (3.84KV)

ABB

UNITROL[®] Excitation

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Doc No: UN0000 Commercial offer
 Date: 12/10/2018



Our Ref: DMPCCSESRN18SY0447/R6
 Dated: 12.10.2018
 Customer : A/c JSW Energy - HBPCL
 Project : Baspa -II, 1 x 100MW, 13.84KV



UNITROL® Excitation

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1 Commercial Terms and Conditions for Supply of Equipment

1.1 General

Our scope of supply and service covers Design, Engineering, Manufacturing, Testing and Supply of dual channel AVR as details given in our technical offer ref. DMPCCSESRN18SY0447/R2 on FOR basis. The contract shall be deemed to have been entered into upon receipt of our written acknowledgement-stating acceptance of the order. Any conditions stipulated by the customers who are in contradiction to our conditions of supply shall only be valid if expressly acknowledged by us in writing.

1.2 Prices

Price for supply of AVR as per our Technical offer referred above on FOR site basis. Prices include packing & forwarding charges. Freight and Insurance, charges are included in this price.

Sl No.	Particulars	Qty	Unit price In Indian Rupees, FOR Site	Total price In Indian Rupees(Including 18% GST), FOR Site
1. X	<u>Option -1:</u> Dual Channel UNITROL 6000 Microprocessor based SES Panel as per attached SLD – R1	1 No	Rs. 49,50,000/- (Rupees Forty Nine Lakhs Fifty Thousand Only)	Rs. 58,41,000/- (Rupees Fifty Eight Lakhs Forty One Thousand Only)
2. X	<u>Option -2:</u> Dual Channel UNITROL 6000 Microprocessor based SES Panel as per attached SLD – R2 ,	1 No	Rs. 53,20,000/- (Rupees Fifty Three Lakhs Twenty Thousand Only)	Rs.62,77,600/- (Rupees Sixty two Lakhs Seventy Seven Thousand Six Hundred Only)
3	<u>Option -3:</u> Dual Channel UNITROL 6000 Microprocessor based SES Panel as per attached SLD – R3	1 No	Rs. 55,20,000/- (Rupees Fifty Five Lakhs Twenty Thousand Only)	Rs. 65,13,600/- (Rupees Sixty Five Lakhs Thirteen Thousand Six Hundred Only)
4.	<u>Mandatory Spare list :</u>			

Doc No: UN6080 Commercial offer
 Date: 12/10/2018



Our Ref: DMPCFCSESRM18SY0447/R5
 Date: 12.10.2018
 Customer: Ajo JSW Energy - HBPCL
 Project: Basso - II, 1 x 100MW, 13.64KV



UNITROL Excitation

Page 4 of 10

a) CCM	1No.	Rs. 3,13,328/- (Rupees Three Lakhs Thirteen Thousand Three Hundred and Twenty Eight only)	Rs. 3,69,727/- (Rupees Three Lakhs Sixty Nine Thousand Seven Hundred and Twenty Seven Only)
b) CIO	1No.	Rs. 3,42,000/- (Rupees Three Lakhs Forty Two Thousand only)	Rs. 4,03,560/- (Rupees Four Lakhs Three Thousand Five Hundred and Sixty Only)
c) Input Coupling Unit (ICU)	1No.	Rs. 61,750/- (Rupees Sixty One Thousand Seven Hundred and Fifty only)	Rs. 72,865/- (Rupees Seventy Two Thousand Eight Hundred and Sixty Five Only)
d) Gate Interface Driver	1No.	Rs. 1,25,000/- (Rupees One Lakhs Twenty Five Thousand Only)	Rs. 1,47,500/- (Rupees One Lakhs Forty Seven Thousand Five Hundred Only)
e) Crowbar triggering card	1No.	Rs. 1,80,500/- (Rupees One Lakhs Eighty Five Thousand Five Hundred Only)	Rs. 2,12,990/- (Rupees Two Lakhs Twelve Thousand Nine Hundred and Ninety Only)
* f) Plin 51	1No.	Rs. 2,06,000/- (Rupees Two Lakhs Six Thousand Only)	Rs. 2,43,080/- (Rupees Two Lakhs Forty Three Thousand Eighty Only)
g) Power Supply	1No.	Rs. 17,726/- (Rupees Seventeen Thousand Seven Hundred and Twenty Six only)	Rs. 20,916 /- (Rupees Twenty Thousand Nine Hundred and Sixteen Only)
h) Loose Thyristor & Fuses	2Set	Rs. 1,28,000/- (Rupees One Lakhs Twenty Eight Thousand Only)	Rs. 1,51,040/- (Rupees One Lakhs Fifty One Thousand Forty Only)

Doc No: UNR080 Commercial offer
 Date: 12/10/2018



Our Ref: DMPFCPCSEBRN18SY0447/RS
 Dated: 12.10.2018
 Customer : A/c JSW Energy - HRFCL
 Project : Baspa - II, 1 x 100MW, 13.64KV



UNITROL[®] Excitation

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9.	95 Sq. mm Copper AC Power Cable for Dynamic Braking <i>(30 meters)</i>	Per / Mtr.	Rs.1,900/- (Rupees One Thousand Nine Hundred Only)	Rs.2,242/- (Rupees Two Thousand Two Hundred and Forty Two Only)
10.	Training Charges (To & Fro, Accommodation are to be borne by Customer)	2 Days	Rs.1,00,000 /- (Rupees One Lakh Only)	Rs.1,18,000 /- (Rupees One Lakh Eighteen Thousand Only)

If there is any delay from your side in giving dispatch clearance, we shall be entitled for increase in the price due to

- Storage of equipment @ 0.5 % of order value per month and
- Interest charges @ 1.5 % of order value per month or part thereof.

In addition, an appropriate price adjustment shall apply in case:

- the delivery time has been subsequently extended due to reasons stated in clauses related to delivery time (1.7) and force majeure (1.14);
- the nature or the scopes of the agreed supplies or services have changed;
- the material or the execution has undergone changes because any documents furnished by you are not in conformity with the actual circumstances or are incomplete.

1.3 Taxes and Duties

The quoted prices are exclusive of all GST taxes, levies such as GST, central/ local GST tax, octroy, works contract tax (if any), service tax etc. Taxes as applicable prevailing at the time of dispatch or imposed by any statutory authorities subsequently or paid by us/ our suppliers, shall be paid by you extra at actual. Further all taxes, duties, levies such as excise duty, central/ local sales tax, octroi, service tax etc on equipments/ parts sold in transit or dispatched to you from our suppliers/ sub-suppliers works shall be reimbursed by you at actuals.

The documentary proof in this respect will be in the form of certificate/s from us to the effect that our suppliers/ sub-suppliers or we have to pay or have paid such taxes or levies. Any liability arising consequent to coming into force new law/ amendments pertaining to GST tax/ levies/ shall be fully borne by the customer.

You shall furnish necessary declaration forms, wherever applicable.

Further you shall bear any and all GST taxes & duties, fees, levies and the like, which are levied out of or in connection with the contract, or shall refund them to us against adequate evidence in case we have to pay them on your behalf.

Notwithstanding the above, any works contract liability shall be to your account and shall be paid without demur and recourse.

C form and/ or any other concessional Sales Tax forms as may be applicable under Sales Tax Rules shall be furnished by you against our Invoices.

Doc No: UN6080 Commercial offer
 Date: 12/10/2018

6



Our Ref: DMPCPCSESRN18SY0447/R5
 Dated: 12.10.2018
 Customer : A/c JSW Energy - HPPCL
 Project : Baspa -II, 1 x 100MW, 13.6kV



UNITROL[®] Excitation

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	i) Control Fuses	3No,s	Rs. 288/- (Rupees Two Hundred and Eighty Eight Only)	Rs. 339/- (Rupees Three Hundred and Thirty Nine Only)
	J) Plug type Aux relays	2No,s	Rs. 408/- (Rupees Four Hundred Eight Only)	Rs. 481/- (Rupees Four Hundred Eighty One Only)
	k) HMI - SCP	1No.	Rs. 27,000/- (Rupees Twenty Seven Thousand Only)	Rs. 31,860/- (Rupees Thirty One Thousand Eight Hundred Sixty Only)
	l) Field Breaker	1No.	Rs. 6,00,000/- (Rupees Six Lakhs Only)	Rs. 7,08,000/- (Rupees Seven Lakhs Eight Thousand Only)
5.	One Number Laptop with Software	1 No	Rs. 3,50,000/- (Rupees Three Lakhs Fifty Thousand only)	Rs. 4,13,000/- (Rupees Four Lakhs Thirteen Thousand only)
6.	Commissioning Charges. : (To & Fro charges, accomadation and local conveyances are to be borne by Customer)	1 No	Rs.1,50,000/- (Rupees One Lakhs Fifty Thousand only)	Rs. 1,77,000/- (Rupees One Lakhs Seventy Seven Thousand Only)
7.	Dismantling & Erection & Charges. : (To & Fro charges, accomadation and local conveyances are to be borne by Customer)	1No.	Rs.2,50,000/- (Rupees Two Lakhs Fifty Thousand only)	Rs.2,95,000/- (Rupees Two Lakhs Ninety Five Thousand Only)
8.	Excitation system Integration with Existing PLC/SCADA.	1No.	Rs.99,000/- (Rupees Ninety Nine Thousand Only)	Rs.1,16,820/- (Rupees One Lakhs Sixteen Thousand Eight Hundred and Twenty Only)

Doc No: UN6080 Commercial offer
 Date: 12/10/2018



Qui Ref: GMP0PCSESRN18SY0447/RS
Dated: 12.10.2018
Customer: Ac JSW Energy - HBPCCL
Project: Bospa - II, 1 x 100MW, 13.94KV



UNITROL Excitation

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Road permits if applicable are to be provided by you.

1.4 Freight

The quoted prices are including of freight charges.

1.5 Insurance

The quoted prices are including of transit insurance.

1.6 Terms of Payment

30 % Advance along with the P.O & Balance against Proforma Invoice in prior to dispatch.

1.7 Delivery

The delivery time shall start as soon as the contract is entered into, all official formalities such as, but not limited to, payments due as per the contract have been made, and the main technical points are settled. The delivery time shall be deemed to have been observed and complied with as soon as we send you notice informing that the supplies are ready for inspection/ despatch.

We agree to deliver the dual channel SES System within 12 to 14 weeks from the date of drawing approvals.

The above delivery period is given in all good faith and is subject to our/ our sub-suppliers usual force majeure conditions.

In case any changes are made in the specifications during/ after the approval of drawings which involves re-submission of drawings and approval, delivery period will be extended automatically by such time as may be intimated by us at that time. Consequently any price implication due to this extended delivery will be intimated to you. Further, the time required for inspection formalities if any and arranging delivery are excluded from the quoted delivery period

All risks and title shall pass and vest with you upon shipment of the equipment including part shipments. The sale of equipment shall be concluded upon such shipment in terms hereof. During erection & commissioning, the ownership of goods/ equipment shall remain with you.

1.8 Inspection / Testing

If required and specifically agreed to, the inspection shall be limited to final visual inspection of one finished piece, each of the items ordered.

Routine tests are carried out according to our standard practice as an essential internal process of quality assurance and could be witnessed by your representative, if agreed to at the time of order. Any requests for tests outside our standard practice will be subject to prior mutual agreement and at extra charges, provided facilities are available.

In either case, your inspection personnel shall have the authority, and issue inspection certificate and dispatch clearance on the spot upon completion of inspection.

Doc No: UN6086 Commercial offer
Date: 12/10/2018





If your inspector fails to turn up on the notified date, inspection is automatically deemed to have been waived and we shall be free to dispatch the equipment.

Only such routine tests/certificates as per our/ suppliers'/ sub-suppliers'/ subcontractors' standard practice will be forwarded to you. Any requests falling outside this purview will be subject to prior mutual agreement.

1.9 Dispatch Information

You shall give clear dispatch information indicating the destination, CST/LST registration no., Road permit wherever applicable in the order itself.

1.10 Warranty

1. We shall repair or replace at our option, free of cost, on ex - works basis the whole or any portion of material/ equipment which under normal and proper use and maintenance proves defective in material and/ or parts of Equipments subject to normal wear and tear.

The warranty contained herein shall be void at our discretion, in the event of breach of the contractual terms and conditions, including non-payment of consideration or commissioning/ servicing of the Rectifier system by a person or agency not authorised by us.

1.11 Equipment Performance

The equipment offered will perform satisfactorily within the guaranteed environmental/ power supply conditions as mentioned in the offer. The equipment may malfunction due to the site conditions beyond the specified limits and we shall not be liable for any damage caused by the same.

For safe and optimum use of the equipment supplied, you shall strictly follow the instructions given in the operation and maintenance manual. We shall not be responsible for damages, injuries or losses suffered or caused due to, directly or indirectly, non-compliance with the operation and maintenance manual and other related instructions.

1.12 Cancellation/ suspension of order

In case of cancellation/ suspension of order by you, we shall be compensated to the extent of 20% of the order value + cost of any material or equipment already procured by us by the date of suspension/ cancellation of order + any of our liability towards our suppliers/ contractors.

1.13 Force Majeure

All information submitted along with this offer shall be held by the purchaser in confidence. Purchaser shall not disclose to third parties nor reuse any information in connection or association with equipment other than that delivered by us hereunder without the written consent of us.





All the information's in respect of software, programmes, know-how, techniques and other forms of proprietary information that will be supplied as a part of the contract through any acceptable media, whether documented or not, shall remain the sole and exclusive property of us or the respective owner of such intellectual property. The purchaser has the right to use this information but is forbidden to make any unauthorised copies, by any means, or in any manner violate, breach or infringe any and all of the said intellectual property rights.

1.14 Arbitration

All disputes arising in connection with this Agreement / Purchaser Order shall be finally settled and governed by the provisions of Arbitration and Conciliation Act, 1996. The arbitration panel shall consist of three arbitrators, one to be appointed by each Party and the third arbitrator shall be appointed by the two appointed arbitrators. The third arbitrator shall serve as a chairman. The award of the arbitral tribunal shall be final and binding on both Parties. The place of arbitration shall be Bangalore (or any metro city in India). The proceedings shall be conducted in English language.

1.15 Consequential Losses:

ABB shall in no event be liable for loss of profit, loss of revenues, loss of use, loss of production, costs of capital or costs connected with interruption of operation, loss of anticipated savings or for any special, indirect or consequential damage or loss of any nature whatsoever.

1.16 Limitation of Liability

Notwithstanding anything contained in this AGREEMENT, its Appendices or orders to the contrary, with respect to any and all claims arising out of the performance or non-performance of obligations under this AGREEMENT or purchase orders, whether arising in contract, tort, warranty, strict liability or otherwise, ABB's liability shall not exceed in the aggregate 100% of the This order value or payments received whatever is lower.

1.17 Validity

Our offer is valid for your acceptance till 30 days from the date of this commercial offer unless previously withdrawn. Order for any part quantities / items shall be subject to our acceptance.

1.18 Goods and Service Taxes (GST)

Since taxes rates are revised as per the GST Structure, the same will be applicable going forward for all the transactions. Any increased cost of works/supplies of tax will be applicable to the customer's account. ABB shall be indemnified for any such increased cost.



Our Ref: DMPCFCSESRM18SY0447/R6
Dated: 12.10.2018
Customer : A/c JSW Energy - HBPL
Project : Baspa - II , 1 x 100MW, 13.84KV

ABBUNITROL[®] Excitation

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In case any clarification is required please feel free to contact us.

Thanking you,

Yours Truly,

For ABB India Limited,

A. Prithiviraj Singh

Sales & Marketing,

Mob: 09632979800, Ph: 080 2294 6827 Fax: 080 2294 6560.

Mail ID: prithiviraj.singh@in.abb.com

Doc No: UN6080 Commercial offer

Date: 12/10/2018

10



ANNEXURE-12.3

JSW Hydro Energy Ltd.,
Baspa - II H. E. Project,
Siholu Colony, P. O. Tapri - 172104,
District Kinnaur (Himachal Pradesh)

15-09-2018

Minutes Of Meeting

Between M/s ABB India Ltd. and M/s JSW Hydro Energy Ltd. at Baspa HPS site
Regarding

Upgradation of Existing Excitation System in Unit-2Following were present

M/s JSW Hydro Energy Ltd. (JSW HEL)
Ravindra Rana
Himanshu Puri

M/s ABB India Ltd. (ABB IL)

Yasir Kazmi

Yasir
15/09/2018

Preamble Details

M/s ABB India Ltd. Engineer visited Baspa-II site on 14th & 15th September 2018, for technical discussions on existing Excitation System upgradation at 3x100 MW Baspa-II HPS.

Activities Undertaken:-

During his visit, following works / activities were carried out:

1. M/s ABB IL representative, agreed to customize their proposed Excitation Panel dimensions (i.e. 3600 x 800 x 2115 mm) to match existing Excitation Panel dimensions (i.e. 2100 x 1200 x 2000 mm).
2. M/s ABB IL representative, agreed to change the orientation of their proposed standard Excitations System Panels as per the existing scheme at site. Moreover, inter panel arrangement of equipment's will also be rearranged for easy accommodation of existing power and control cables into new proposed retrofitted Excitation Panels.
3. Dynamic Braking scheme provided in the submitted SLD, needs to be corrected / modified. (Please refer comment-A in attached Annexure-1.)
4. Mandatory spares included in the commercial offer are not sufficient for maintaining un-interrupted operational integrity, in the event of any critical equipment failure. Therefore, M/s JSW HEL asked M/s ABB IL to INCLUDE critical equipment's into mandatory spares commercial offer.
5. For interfacing new proposed Excitation System signals over soft link (i.e. Profibus), existing PLC system needs to be upgraded / modified. M/s JSW HEL asked M/s ABB IL to include this required upgradation of PLC / SCADA System in their Scope of work and in the commercial offer accordingly.
6. M/s JSW HEL also asked to include complete erection and retrofitting of proposed Excitation system in M/s ABB IL's Scope of work.
7. M/s ABB IL agreed that no extra cables in excitation system are required while retrofitting their proposed Excitation System with existing one. Further, in view of above, if any extra cable requirement arises at later stage, then the same will be in scope of M/s ABB IL.

Yasir
15/9/2018

Yasir
15/9/18

Pg-1 of 2



JSW Hydro Energy Ltd.,
Baspa - II H. E. Project,
Sholvi Colony, P. O. Tapri - 172104,
District Kinnaur (Himachal Pradesh)

8. Comments & corrections required in proposed Excitation System single line diagram (SLD) are attached herein as Annexure-1.
9. M/s ABB agreed to resubmit its technical and commercial offer based on above discussion by 22.09.2018.
10. The scope of work was agreed to be built in the offer as below: -

"Design, manufacturing, supply, storage, transportation, transit insurance, dismantling of existing excitation system, erection of supplied excitation system, testing and commissioning.

Scope of work also includes integration of variable's between their proposed Excitation System and unit PLC / SCADA over soft link (i.e. Profibus) by arranging resources themselves."

Agreed
15/9/2018

Yashvir
15/9/18





Revision	Issued	05/2016	VN
Checked			
Released		05/2016	VN

Doc No: JSWS24074 EOC-F (Rev. 1)

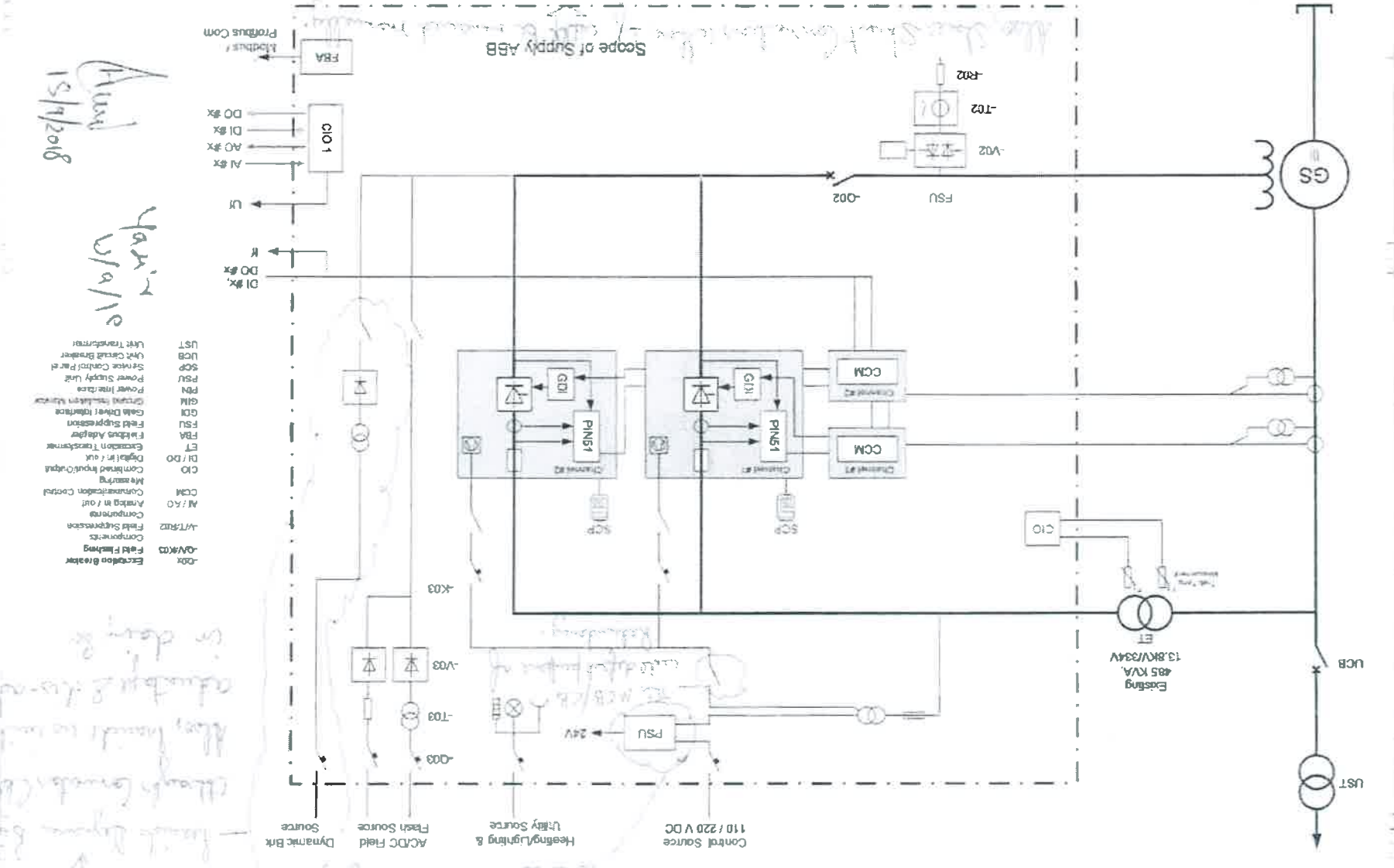
Project: JSW Baspa 1 x 100 MW

Single Line Diagram A61-O/D511-D1250

ABB WPG-E

FOR TENDER ONLY

UMNTR0L 6000



- D0X Exception Breaker
- QAN/K03 Field Flashing Components
- T/R/RTZ Field Suppression Components
- M/A/O Analog in / out
- CCM Communication Control
- Measuring
- CIO Combined Input/Output
- DI / DO Digital in / out
- ET Excitation Transducer
- FBA Fieldbus Adapter
- FPU Field Suppression
- GM Cable Driver Interface
- GIM Cable Driver Interface
- Power Interface
- FPU Power Supply Unit
- SCP Control Panel
- UCB Circuit Breaker
- UST Left Transformer

Handwritten notes:
 - "Yarim" (Yarim)
 - "15/11/2016" (15/11/2016)
 - "Anand" (Anand)



JSW Hydro Energy Limited,
Baspa - II H. E. Project,
Sholtu Colony, P. O. Tapri - 172104,
District Kinnaur (Himachal Pradesh)

Date: 22-12-2018

Minutes Of Meeting

**Between M/s ABB India Limited and M/s JSW Hydro Energy Limited
at
3x100 MW Baspa-II HEP**

Following were present

M/s JSW Hydro Energy Limited

Mr. Ravindra Singh Rana
Mr. Himanshu Puri
Mr. Diwakar Mainduli
Mr. Dinesh Prasad Mahato

[Signature]
22/12/18
[Signature]

M/s ABB India Limited

Mr. Dinesh.C.Pattar

[Signature]

Background

Mr. Dinesh. C. Patter (Design Engineer) from M/s ABB India limited visited on 22nd Dec'18 for checking the existing Excitation panel layout, prior to designing for retrofitting of new ABB make Excitation system.

Activities Undertaken

M/s ABB India limited representative reached Baspa-II site on 22.12.2018 (Afternoon) and concluded his site survey on 22.12.2018 (Evening). During his visit the activities undertaken are briefed as below: -

1. Existing Excitation system dimensional checks were carried out.
2. Cable layout survey for the existing scheme was conducted, to match the existing cable layout with the proposed ABB make Excitation system.
3. Equipment layout in the existing Excitation scheme was checked.
4. M/s JSW HEL told M/s ABB representative that existing panel dimensions, layout, color/shade must match to the existing scheme. Further, equipment layout inside new proposed Excitation system shall match to the existing cabling layout. M/s ABB repetitive confirmed that proposed system will be matched to existing excitation system in these respects.
5. M/s JSW HEL informed M/s ABB representative that proposed Excitation system schematic has not been submitted to client as yet and is required at immediate basis. M/s ABB representative confirmed that required schematics will be submitted by 28.12.2018 Positively.



12/24/2018

JSW Mail - Fwd: Baspa-II_Regarding MTS Analog card for Deflector and Needle.



Dinesh Mahato <dinesh.mahato@jsw.in>

Fwd: Baspa-II_Regarding MTS Analog card for Deflector and Needle.

1 message

Durvash Kumar <durvesh.kumar@jsw.in>
To: vikas gupta <vikas.gupta@jsw.in>
Cc: Dinesh Mahato <dinesh.mahato@jsw.in>

Fri, Dec 21, 2018 at 10:04 PM

Dear Sir,

Please look at the mail in which obsolescence of analog cards was confirmed by MTS.

*Best Regards,***Durvash Kumar** | Plant Engineer (O&M Baspa II-HEP) | JSW Hydro Energy Ltd.

Sholtu Colony, P.O. Tapri, District Kinnaur, H.P. – 172104 | India

M +91 9816654323 | +91 1786 261696

E-mail : durvesh.kumar@jsw.in | Website : www.jsw.in



----- Forwarded message -----

From: abhijeet <abhijeet.gargatti@servocontrolsindia.com>
Date: Thu, Jul 28, 2016 at 5:14 PM
Subject: RE: Baspa-II_Regarding MTS Analog card for Deflector and Needle.
To: Durvash Kumar <durvesh.kumar@jsw.in>
Cc: <sales@servocontrolsindia.com>, <scdelhi@servocontrolsindia.com>

Dear Sir,

This is with reference to telecom discussion had with yourself concerned to your enquiry for AK288 card. We would like to inform you that these card are obsolete and no more in production.

You can go for direct sensor of R-series where you will get the direct analog output. Please find the attached catalogue of R-series Analog for your ready reference.

Kindly please go through attached catalogue and if you have any further question please revert back to us.

Accordingly please give me the model code of existing sensor so that we can work out and give the equivalent for the same.



12/24/2018

JSW Mail - Fwd: Baspa-II_Regarding MTS Analog card for Deflector and Needle.

Awaiting for your valuable feedback.

Thanking you.

Best Regards

Abhijeet V.Gargatti

(Manager-Sales)

Servocontrols

Survey No.683, Industrial Estate,

Udyambag, Belgaum – 590008.Karnataka, India.

M: (0)9448395732

Ph: +91-831-2407501/02/03, 2481734, 4202251.

Fax: +91-831-2484496.

Email: sales@servocontrolsindia.com



Closing The Loop

From: Durvesh Kumar [mailto:durvesh.kumar@jsw.in]

Sent: Tuesday, July 19, 2016 4:13 PM

To: abhijeet.gargatti@servocontrolsindia.com

Subject: Baspa-II_Regarding MTS Analog card for Deflector and Needle.

Dear Sir,

As per our telecom, kindly provide commercial offer for MTS Analog card of deflector of Max. Stroke: 95mm

Our need is:

AK 288-CO-1-145 for Deflector and AK 288-CO-1-235 FOR Needle.



12/24/2018

JSW Mail - Fwd: Baspa-II_Regarding MTS Analog card for Deflector and Needle.

Regards,

Durvesh Kumar

Plant Engineer

Himachal Baspa Power Co. Ltd.

Baspa-II (300 MW)

P. O. Tapri, Distt.- Kinnaur

Office: +91 9816805265

Mobile: +91 9816654323

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 **R- Analog.pdf**
593K



**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 178/GT/2015

Coram:

**Shri Gireesh. B. Pradhan, Chairperson
Shri A.K.Singhal, Member
Shri A.S. Bakshi, Member
Dr. M. K. Iyer, Member**

Date of Order : 29.3.2017

In the matter of

Determination of tariff of Tehri Hydroelectric Power Project (HPP), Stage-I (1000 MW) for the period 2014-19

And in the matter of

THDC India Ltd
Bhagirath Puram,
Rishikesh-249001
Uttarakhand

Vs

.....Petitioner

1. Punjab State Power Corporation Limited,
The Mall,
Patiala – 147001 (Punjab)
2. Haryana Power Utilities,
Shakti Bhawan, Sector 6,
Panchkula – 134 109 (Haryana)
3. Haryana Power Utilities,
Shakti Bhawan, Sector 6,
Panchkula – 134 109 (Haryana)
4. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14 Ashok Marg,
Lucknow – 226001 (UP)
5. BSES Rajdhani Power Ltd.,
BSES Bhawan, Nehru Place,
Behind Nehru Place Bus Terminal,
New Delhi-110019
6. BSES Yamuna Power Ltd.,
3rd Floor, Shakti Kiran Building,



Karkardooma, Near Court,
New Delhi-110092

7. TATA Power Delhi Distribution Ltd.,
33 KV Grid Sub-Station Building,
Hudson Lane, Kingsway Camp,
Delhi-110009

8. Engineering Deptt.,
Chandigarh Administration,
1st Floor, UT Secretariat,
Sector 9-D, Chandigarh-160009

9. Uttarakhand Power Corporation Ltd.,
Urja Bhawan, Kanwali Road,
Dehradun-248001 (UK)

10. HPSEB Limited,
Vidyut Bhawan, Shimla-171004

11. Jaipur Vidyut Vitran Nigam Ltd.,
Vidyut Bhawan,
Janpath,
Jyotinagar, Jaipur-302005 (Rajasthan)

12. Ajmer Vidyut Vitran Nigam Ltd.,
Old Power House,
Hatthi Bhatta, Jaipur road,
Ajmer-305001 (Rajasthan)

13. Jodhpur Vidyut Vitran Nigam Ltd.,
New Power House, Industrial Area
Jodhpur-342003 (Rajasthan)

14. Power Development Department,
Govt. of J&K, Civil Secretariat,
Jammu - 180001 (J&K)

...Respondents

Parties present:

For Petitioner: Ms. Anushree Bardhan, Advocate, THDC
Ms. Poorva Saigal, Advocate, THDC
Shri Ajay K. Mathur, THDC
Shri J.K. Hatwal, THDC
Shri Manoj Kumar Tyagi, THDC
Shri H. Chakrabarty, THDC
Shri Sarosh M. Siddiqui, THDC

For Respondents: Shri Alok Shankar, Advocate, TPDDL
Ms. Shimpy Mishra, TPDDL
Shri B.L. Sharma, JVVNL
Shri Tarun Ahuja, JVVNL



ORDER

This petition has been filed by the petitioner THDC, for determination of tariff of Tehri Hydroelectric Power Project, Stage-I (4x250 MW) (the generating station) for the period from 1.4.2014 to 31.3.2019 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ("the 2014 Tariff Regulations").

2. The generating station located in the State of Uttarakhand is a storage type hydro power generating station, providing peaking power and is designed to produce annual energy generation of 2797 MU. The Tehri Hydro Power Complex comprises of the generating station (1000 MW), Tehri Pumped Storage Generating station (1000 MW) and downstream power station at Koteshwar (400 MW). The entire Tehri Power Complex is scheduled to have an aggregate capacity of 2400 MW. The generating station comprises of four units with a capacity of 250 MW each. The dates of commercial operation of these units of the generating station are as under:

Unit-I	22.9.2006
Unit-II	9.11.2006
Unit-III	30.3.2007
Unit- IV / Generating station	9.7.2007

3. The Commission vide order dated 27.1.2015 determined the tariff of the generating station for the period 2009-14. Thereafter, the Commission vide order 20.3.2017 in Petition No. 172/GT/2015 had revised the annual fixed charges of the generating station for the period 2009-14 as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	47507.18	49247.30	49295.63	50089.37	53109.13
Interest on Loan	41464.65	38238.32	34532.51	30943.53	27946.07
Depreciation	35930.58	36107.51	36334.31	36589.25	36734.02
O&M Expenses	19509.92	20625.88	21805.68	23052.97	24371.60
Interest on Working Capital	3579.15	3607.68	3595.20	3604.64	3674.08
Total	147991.48	147826.70	145563.33	144279.76	145834.90

(₹ in lakh)



4. The petitioner vide affidavit dated 27.6.2015 has sought approval of tariff for the period 2014-19 period in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the period 2014-19 are as under:

Capital Cost

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	709380.52	710777.19	714133.04	717431.66	720874.48
Add: Additional capital expenditure	1430.90	3385.67	3795.00	3557.50	4315.50
Less: De Capitalization	34.20	29.82	496.38	114.68	346.04
Closing Capital Cost	710777.22	714133.04	717431.66	720874.48	724843.94
Average Capital Cost	710078.87	712455.12	715782.35	719153.07	722859.21

Annual Fixed Charges

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	37329.53	37461.77	37627.59	37769.97	37930.31
Interest on Loan	24293.60	20188.32	15945.24	11700.43	7429.75
Return on Equity	53354.95	53613.46	53613.46	64490.29	64490.29
Interest on Working Capital	4103.77	4115.02	4124.36	4390.33	4413.06
O&M Expenses	26378.24	28129.75	29997.57	31989.41	34113.50
Total	145460.09	143508.32	141308.21	150340.41	148376.90

5. In compliance with the directions of the Commission, the petitioner has filed additional information and has served copies on the respondents. The respondents, UPPCL and BRPL have filed replies in the matter and the petitioner has filed rejoinder to the said replies. The Commission after hearing the parties reserved order in the petition on 22.9.2015. It is noticed that the petitioner vide affidavit dated 16.9.2016 has revised the actual additional capital expenditure and de-capitalization of 2014-15 but has not submitted any detailed justification for the same. Accordingly, the same has not been considered in this order. However, the said affidavit shall be considered at the time of truing up of tariff subject to the petitioner submitting reasons/justifications for actual capital expenditure and de-capitalization for the said year. Based on the submissions of the parties, and the documents available on record, we now proceed to examine the claim of the petitioner, as discussed in the subsequent paragraphs.



Capital Cost as on 1.4.2014

6. Clause 3 of Regulation 9 of the 2014 Tariff Regulations provides as under:

“The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;*
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and*
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”*

7. The annual fixed charges claimed by the petitioner are based on opening capital cost of ₹709380.52 lakh as on 1.4.2014, as against ₹ 704121.77 lakh as on 31.3.2014 admitted by the Commission vide order dated 20.3.2017 in Petition No. 172/GT/2015. Accordingly, the capital cost of ₹ 704121.77 lakh has been considered as opening capital cost as on 1.4.2014.

Additional Capital Expenditure

8. Clause (3) of Regulation 7 of the 2014 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted up to 31.3.2014 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2014-15 to 2018-19. Regulation 14 of the 2014 Tariff Regulations, provides as under:

“14. Additional Capitalisation and De-capitalisation:

“14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
- (ii) Change in law or compliance of any existing law;*
- (iii) Any expenses to be incurred on account of need for higher security and safety of the generating station as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*



- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;
- (vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;
- (viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient generating station operation;
- (ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and
- (x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:
 Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:
 Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:
 Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.”

9. The year-wise break-up of the projected additional capital expenditure claimed for the period 2014-19 is summarized as under:

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Proposed additional capital expenditure on gross basis.	1430.90	3385.67	3795.00	3557.50	4315.50	16484.57
Proposed de-capitalization	34.20	29.82	496.38	114.68	346.04	1021.12
Net proposed additional capital expenditure	1396.70	3355.85	3298.62	3442.82	3969.46	15463.45



10. The respondent, BRPL has submitted that the additional capital expenditure claimed by the petitioner for the period 2014-19 under Regulation 14(3)(iii), cannot be permitted as the petitioner has not submitted any documents to substantiate the expenditure for security of generating station under Regulation 14(3)(vii) and (viii). It has also submitted that in respect of expenditure claimed, the petitioner has failed to submit any technical justification supported by documentary evidence. It has further submitted that the works claimed under Regulation 14(3)(ix) are only applicable to the transmission companies and not the generating stations. Accordingly the respondent has prayed that the Commission may reject the claims made under Regulation 14(3)(x) as the same is applicable to coal based generating stations.
11. The respondent, UPPCL has submitted that the capitalization of assets may be allowed only when the same is being put to use and when it gives benefit to the beneficiaries. It has further submitted that the petitioner's claims of additional capital expenditure with regard to the minor assets are not admissible under any provision of the 2014 Tariff Regulations and accordingly, may be disallowed.
12. In response, the petitioner vide affidavit dated 18.11.2015, has revised the provisions of the Regulations under which the claims for additional capital expenditure has been made during the period 2014-19. The petitioner has further submitted that the assets/items claimed shall be put to use independently of the year mentioned against them.
13. Accordingly, the petitioner has submitted that:
- a) The expenditure has been considered in various years for construction of Type-II and Type-III quarters in Koti Colony and the final electrification is proposed in 2018-19 but the building shall be put to use year-wise with temporary electrification in phased manner as shown.



- b) It has submitted that the hospital building shall be put to use in 2016-17 after completing construction work and installation of LAN with temporary electrification and the final electrification is proposed to be done in 2017-18.
- c) The battery banks commissioned during the year 2002-03 have undergone physical deformation, corrosion of positive straps and decomposition of lead plates during the operation as a result of which the performance is deteriorating. Further, since the DC supply system plays a vital role in uninterrupted temporary electrification, the final electrification is proposed to be done in 2018-19.

14. We have considered the submissions of parties. Accordingly, we proceed to examine the claims of the petitioner for the period 2014-19 on prudence check and allow the same as detailed below:

2014-15

(₹ in lakh)

Sl. N.	Claimed	Approved	Regulation	Justification	Remarks on admissibility
1	SUPPLY ERECTION OF 2T CAPACITY AUXILIARY HOIST FOR DRAFT TUBE 10.00	10.00	14(3)viii	One no. additional winch to be installed for proper, safe and efficient maintenance and operation of HM equipment in Dam & Power House and as per ORT.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
2	SUPPLY ERECTION OF 10T CAPACITY AUXILIARY HOIST FOR DRAFT TUBE 30.00	30.00	14(3)viii	One no. additional winch to be installed for proper, safe and efficient maintenance and operation of HM equipment in Dam & Power House and as per ORT.	
3	INTERNAL ELECTRIFICATION OF SERVER AND DRIVER ROOM 3.00	0.00	14(3)viii	In most of the areas of B. Puram colony, power supply is	Since the



Sl. N.	Claimed	Approved	Regulation	Justification	Remarks on admissibility
				distributed through LT overhead lines. At various locations, the lines are running close to the buildings due to space constraint. Moreover, due to continuous raming of monkeys, the lines are getting tripped frequently and some time damaging the electrical equipments. Hence, the LT overhead lines are required to be replaced by aerial bunched cables considering safety aspect. The unauthorised tapping of electricity can also be prevented.	expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.
4	49.43	49.43	14(3)iii	As per IB requirement Six No's High Mast has been installed in DAM Area.	Since the Masts have been installed based on IB requirements and considered necessary for the safety of the plant, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
5	3.00	0.00	14(3)viii	To save electricity, it has been decided to replace the existing electrical facility/appliances by energy saving appliances/ equipment with a target as 35% annually. The plan and action is	The expenditure towards procurement of these assets is in the nature of minor assets, hence the same is not allowed.



Sl. N.	Claimed	Approved	Regulation	Justification	Remarks on admissibility
6	3.53	0.00	14(3)viii	Internal electrification work of oil filtration plant at mokri	The expenditure towards procurement of these assets is in the nature of minor assets, hence the same is not allowed.
7	87.29	0.00	14(3)viii	DOCK system at Reservoir	Since the petitioner has not submitted any justification for the expenditure, the same is disallowed.
8	242.87	0.00	14(3)viii	ROAD AND CULVETS	Being a small size machine could work inside gallery for their cleanliness and could work at the place where loader cannot work due to space constraint.
9	14.69	14.69	14(3)viii	PROCUREMENT OF JCB 135 ROBOT SKID STEER LOADER	As the expenditure is considered necessary for the efficient operation of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations
10	71.31	0.00	14(3)viii	PROCUREMENT OF SURVEY BOAT	The procurement of this asset has been allowed earlier. Hence, this being a repetitive requirement and would be considered at the time of truing up subject to submission of relevant documents for the consideration of the Commission.
11	54.03	54.03	14(3)viii	PROCUREMENT OF TWO TWIN ENGINE PATROLLING BOAT	Since the expenditure is necessary for the safety and security of the plant, the expenditure is allowed.
12	162.00	162.00	14(3)viii	PROCUREMENT AND INSTALLATION OF STRONG MOTION ACCELOGRAPH	As the expenditure incurred by the petitioner is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations.



Sl. N.	Claimed	Approved	Regulation	Justification	Remarks on admissibility
13	OFC TO PH,HOSPITAL, KOTI 60.00	60.00	14(3)viii	is necessary to construct new residences in lieu of old and damaged residences. Laying the OFC cable from B. Puram to Power House, Koti colony and new building of Hospital in B. Puram as at present radio device is used.	
14	CCTV 150.00	44.35	14(3)viii	Upgradation/ Enhancement of existing CCTV system.	Since, the expenditure claimed is necessary for the safety and security of the generating station, the same has been allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The gross value of the old assets has been de-capitalized as 105.65 lakh, 5.24 lakh, 9.78 lakh respectively under assumed deletions.
15	WI -FI DEVICES 7.50	2.26	14(3)viii	Wi-fi devices for internet connection at different locations viz Power House, Guest House and office etc.	
16	Unified Threat Management (UTM) 14.00	4.22	14(3)viii	UTM device installed at B.Puram office for cyber security.	
17	WIRELESS FOR CISF 20.00	5.91	14(3)iii	Replacement of old wireless system with new wireless system for CISF.	Since the wireless sets are considered necessary for the safety of the plant, the same has been allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The gross value of the old asset has been de-capitalized as 14.09 lakh under assumed deletions.
18	MISC WORKS 78.36	0.00	14(3)viii	Expenses on various works for Rehabilitation	Since no proper justification has been submitted by the petitioner, the expenditure is not allowed.



Sl. N.	Claimed	Approved	Regulation	Justification	Remarks on admissibility
19	50.00	50.00	14(3)viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The gross value of the old asset has been de-capitalized as 84.52 lakh under assumed deletions.
20	8.00	8.00	14(3)viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of goods / materials.	
21	120.00	120.00	14(3)viii	Provision has been kept for purchase of new equipment that will replace old equipment to maintain the various roads of the project, dragging work and other development works at various locations of the project site.	
22	10.00	10.00	14(3) iii	As per statutory requirements of IB	Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. However, the petitioner is directed to submit the details regarding the recommendation at the time of truing up of tariff.
23	5.00	5.00	14(3)iii	As per statutory requirements of IB	The expenditure towards procurement of these assets is for the benefit of the employees of the project, hence the
24	2.00	2.00	14(3)viii	As per requirement, provision has been kept for purchase of new items to replace with old items /	



Sl. N.	Claimed	Approved	Regulation	Justification	Remarks on admissibility
				additional requirements.	same is allowed.
25	10.00	10.00	14(3) iii	As per statutory requirements	Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. However, the petitioner is directed to submit the details regarding the recommendation at the time of truing up of tariff.
26	61.89	0.00	14-3(viii)	Misc. Equipments	Since no justification has been submitted by the petitioner, the expenditure is disallowed.
27	23.00	0.00	14(3)viii	Additional devices are required for taking up unit maintenance as a parallel activity for economic reasons.	The expenditure towards procurement of these assets is in the nature of tools and tackles/ minor assets, hence the same is not allowed.
28	8.00	0.00	14(3)viii	Additional CTs are required for modified protection system of SST.	As, the expenditure towards procurement of these assets is in the nature of spare assets, the same is not allowed.
29	47.00	47.00	14(3) iii	To meet out the IB requirement.	Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
30	25.00	25.00	14(3)viii	To facilitate RGMO/ FGMO testing in Tehri Unit as a pilot project under the directives of MoP, Gol.	As the expenditure claimed is necessary for efficient operation of the generating station, the same is allowed under



Sl. N.	Claimed	Approved	Regulation	Justification	Remarks on admissibility
	1430.90	713.90			Regulation 14(3)(ii) of the 2014 Tariff Regulations.
TOTAL					

2015-16

(₹ in lakh)

Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
1	37.00	37.00	14(3)viii	One no. additional winch to be installed for proper, safe and efficient maintenance and operation of HM equipment in Dam & Power House and as per ORT.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
2	18.00	18.00	14(3)viii	It was intimated by BCM Deptt. that CISF barrack shall be constructed at B. Puram for which electrification work is required. As such work is under progress by civil & electrical Deptt.	
3	18.00	18.00	14(3)viii	In most of the areas of B. Puram colony, power supply is distributed through LT overhead lines. At various locations, the lines are running close to the buildings due to space constraint. Moreover, due to continuous raming of monkeys, the lines are getting tripped frequently and some time damaging the electrical equipments. Hence, the LT overhead lines are required to be replaced by arial bunched cables considering safety	As the expenditure incurred by the petitioner is for the benefit of employees working in the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations.



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
4	ENERGY SAVING TUBE FIXTURES 4.00	0.00	14(3)viii	aspect. The unauthorised tapping of electricity can also be prevented. To save electricity, it has been decided to replace the existing electrical facility/appliances by energy saving appliances/ equipment with a target as 35% annually. The plan and action is under process.	The expenditure towards procurement of these assets is in the nature of minor assets and hence the same is not allowed.
5	DG SETS 20.00	20.00	14(3)viii	Various building are being constructed/ proposed to be constructed by civil Deptt.. Whereever, it is essential to install DG set as per requirement, then it will be procured. Presently one no. is proposed for new hospital building. Also one no. is proposed for CISF control room as per the requirement.	As the expenditure incurred by the petitioner is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations.
6	HYDRAULIC LIFTER ON TRUCK 8.00	0.00	14(3)vii	There are around 650 nos of street light including the road upto spillway . Therefore, it is required for day to day maintenance work within desired time and safety.	Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.
7	ENERGY SAVING CELLING FANS 5.00	0.00	14(3)viii	To save electricity, it has been decided to replace the existing electrical facility/appliances by energy saving appliances/ equipment with a target as 35% annually. The plan and action is under process.	The expenditure towards procurement of these assets is in the nature of minor assets and hence same is not allowed.
8	TRANSFORMER OIL TEST KIT 2.00	0.00	14(3)viii	There are three nos 5 MVA power	



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
				transformers installed at 33/11 KV sub station for feeding power supply to Power Plant auxiliaries, spillways, colony, water supply. Also 20 nos distribution transformers are installed at different locations of colonies, water supply and other places. For testing of transformer oil as per schedule, one oil test kit is very much essential to be kept as the earlier one is very old and sometimes not functioning properly. Hence, may cause non-operational at any time.	
9	15.00	15.00	14(3) viii	Renovation of multipurpose hall is required for proper functioning of it. Tehri HPP is in a remote place and multipurpose hall is being used to facilitate various functions of employees.	As the expenditure incurred by the petitioner is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations.
10	20.00	20.00	14(3) viii	Eco proofing of multipurpose hall is required for proper functioning of Multipurpose hall. Multipurpose hall is only place for various official functions .	
11	142.89	0.00	14(3) viii	In BCM and RCM Deptt. various small works may come at any moment. It is not possible to foresee these works at this moment. So a provision is being made for some	Since the petitioner has not submitted any justification for the expenditure, the same is not allowed.



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
12	100.00	100.00	14(3) viii	miscellaneous works on lump sum basis. This expenditure is essential to provide accommodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it is necessary to construct new residences in lieu of old and damaged residences. Modification of T2A Qtrs is required for proper functioning and use of these residences.	As the expenditure incurred by the petitioner is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations.
13	10.00	10.00	14(3) viii	Construction of Protection wall near CISF check post to protect the Dam area & land slide occurring for hill side of Dam East.	
14	100.00	100.00	14(3) viii	These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes.	
15	250.00	0.00	14(3) viii	These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes.	The petitioner has not submitted any justification/clarification on for the expenditure incurred for these works. Hence, the same shall be considered at the time of true-up of tariff subject to the when these works being completed.
16	200.00	0.00	14(3) viii	These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes.	
17	105.00	0.00	14(3) viii	These planned works shall provide additional strength	



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
18	605.00	0.00	14(3) viii	to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes. These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes.	
19	50.00	50.00	14(3) viii	Installation of seismological equipment for monitoring of local seismicity/ micro earthquake activities around Tehri and Uttarkashi Region.	
20	34.00	34.00	14(3) viii	Providing fresh air in AGRBR Gallery for proper working & activities going day to day.	Considering the fact that the assets will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
21	30.00	30.00	14(3) viii	For chanelising the seepage water from crest of gallery and their aesthetic view.	
22	272.50	272.50	14(3) viii	For the establishment of metrological stations and flood forecasting systems.	
23	225.00	225.00	14(3) viii	For the monitoring of local seismicity/ micro earthquake activities around Tehri Region.	
24	11.68	11.68	14(3) viii	To provide LAN connection in office at Adit-3 as presently no LAN	



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
25	403.00	135.64	14(3) viii	Existing exchange purchased in 1996 is of absolute technology therefore, new exchange with ADSL and cabling to be replaced.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletion considered is 267.36 lakh.
26	64.20	0.00	14(3) viii	Expenses on various works for Rehabilitation	Since no justification has been submitted by the petitioner, the expenditure is disallowed.
27	5.00	1.68	14(3) viii	Provision has been kept for purchase of new pump and motor that will replace old pump and motor in use of drinking water supply for project colony.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions are considered at 3.32 lakh.
28	50.00	50.00	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The de-capitalization for vehicles have been provided by the petitioner. However, the petitioner is directed to submit the item wise details of decapitalizations at the time of truing up.
29	20.00	20.00	14(3) iii	Provision has been kept for purchase of new vehicle that will replace old	Considering the requirements as per IB recommendations, the expenditure is



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
30	40.00	40.00	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of student and shift staff.	allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
31	16.00	16.00	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of goods/ materials.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
32	8.00	8.00	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of goods / materials.	The de-capitalization for vehicles have been provided by the petitioner. However, the petitioner is directed to submit the item wise details of decapitalizations at the time of truing up.
33	50.00	50.00	14(3) viii	Provision has been kept for purchase of new equipment that will replace old equipment in use of loading and unloading of materials .	
34	40.00	40.00	14(3) iii	As per statutory requirements	Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
35	30.00	30.00	14(3) iii	As per statutory requirements.	The expenditure claimed is allowed under Regulation 14(3)(viii) of 2009 Tariff Regulations as the expenditure is for the benefit of employees of the project. The assumed deletions have been considered as 6.63 lakh.
36	10.00	3.37	14(3) viii	As per requirement, provision has been kept for purchase of new items to replace with old items / additional requirements.	
37	5.00	5.00	14(3) iii	As per statutory requirements	Considering the requirements as per



Sl. N.		Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
38	MAIN GENEARTING EQUIPMENTS	81.40	81.40	14(3) viii	Liability for Main Generating Equipment	IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. The expenditure is in the form of liability and hence allowed and hence allowed The expenditure towards procurement of these assets is in the nature of tools & tackles/ minor assets and hence the same is not allowed.
39	CT ANALYSER	20.00	0.00	14(3) viii	For frequent qualitative testing of various CTs installed in Power House.	Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
40	INSTALLATION OF HIGH MAST	3.00	3.00	14(3)iii	To meet out IB requirement	The submissions have been considered. In our view, the expenditure towards floor prevention works are recurring in nature and shall be met from the O&M expenses allowed to the generating station. Hence, expenditure is not allowed. The petitioner is at liberty to approach the Commission with relevant details/justifications at the time of truing up of tariff.
41	FLOOD PREVENTIVE SCHEME	210.00	210.00	14(3)iii	Flood preventive scheme is required to be installed in Tehri HEP under the directives of CEA.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions are
42	SC VALVES	27.00	9.09	14(3) viii	The old SC valves of Russian make are obsolete and shall be replaced by indigenised valves.	



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
43	20.00	0.00	14(3) viii	For maintaining operational parameters of GT oil.	Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.
	3385.67	1664.36			
					considered as 17.91 lakh

2016-17

Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
1	40.00	40.00	14(3)viii	One no. additional winch to be installed for proper, safe and efficient maintenance and operation of HM equipment in Dam & Power House ans as per ORT.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
2	75.00	75.00	14(3)viii	It was intimated by BCM Deptt. that HPP office building shall be constructed near adit-3 for which electrification work is required.	
3	64.00	64.00	14(3)viii	Modular furniture at Dam & Planning Deptt. was installed and the same is to be carried out by Electrical Deptt.	
4	13.50	13.50	14(3)viii	This work is required to be carried out as per OHSAS requirement as also safety point of view.	Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.
5	23.00	0.00	14(3)viii	The 33/11 KV sub station is the main sub station feeding power supply to power plant auxiliaries.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same
6	55.00	55.00	14(3) viii		



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
				spillways, water supply, colonies and construction works. The control room of sub station building has come under settlement zone for which damages has been occurred on the walls and floor of the building. Due to said reason some of the 11 KV breaker trolleys has been found damaged and the breaker panels has started mal functioning. If this continues the whole witchboard may cause non-operational resulting complete power failure. As per the rsuggestion of technical team the control room building can be sifted to near by building after confirmation by Geology Deptt. For the time being, BCM Deptt. was instructed to take immediate precautionary measures of the building to avoid further damages.	is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
7	ENERGY SAVING TUBE FIXTURES	3.00	14(3) viii	To save electricity, it has been decided to replace the existing electrical facility/appliances by energy saving appliances/ equipment with a target as 35% annually. The plan and action is under process.	The expenditure towards procurement of these assets is in the nature of minor assets and hence the same is not allowed.
8	ENERGY SAVING CELLING FANS	5.00	14(3) viii		



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
9	10.00	0.00	14(3) viii	There are three nos. 5MVA power transformers installed at 33/11 kV sub station for feeding power supply to power plant auxiliaries, spillways, colonies, water supply and construction works. Also 20 nos. distribution transformers are installed at different locations of colonies, water supply and other places. For filtration of transformer oil as per schedule, one oil filtration machine is very much essential to be kept as the earlier one is very old and sometimes not functioning properly, hence may cause non operational at any time.	Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed.
10	360.00	360.00	14(3) viii	Const. of office for Tehri HPP is required for proper functioning and controlling of Tehri HPP project near power house site.	As the expenditure is for the benefit of employees of the project, which will facilitate for the efficient and successful operation of the plant, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations
11	450.00	450.00	14(3) viii	New hospital building is required in B. puram as existing hospital is functioning from a temporary building and to take care of the staff posted at Tehri Project a permanent hospital is needed.	
12	300.00	300.00	14(3) viii	This expenditure is essential to provide	



Sl. N.		Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
13	ADDITIONAL WORK AT TYPE-IV, DUPLEX, FIELD HOSTEL	15.00	0.00	14(3) viii	accomodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it is necessary to construct new residences in liue of old and damaged residences.. Additional works are required for proper functioning of these residences. This expenditure is essential to increaese the efficiency of employees as well as generating station.	Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.
14	CHANNELISATION OF NALA BETWEEN CISF BARRACK TO CISF FIRE RESIDENCE AT B.PURAM	150.00	150.00	14(3) viii	It is mandatory requirement for safety of project.	The expenditure is claimed towards safety and security of station. Hence the same is allowed under Regulation 14(3)(iii)
15	PROTECTION WORK OF B.PURAM TO ZERO BRIDGE ROAD AT CH 7.1 KM RIGHT BANK NEAR ZERO BRIDGE	200.00	0.00	14(3) viii	To protect the B. Puram Zero bridge road for transportation of heavy equipments of the project.	Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.
16	TREATMENT OF 2 NOS OF DRAFTTUBE WITH CHEMICAL GROUTING &EPOXY MORTAR	200.00	0.00		These planned works shall provide additional strength to various structures of Tehri HPP and required for efficient operation of HPP units. However, the works are subject to finalisation of design schemes.	The petitioner has not submitted any justification/clarific ation for the expenditure incurred for these works. Hence, the same shall be considered at the time of truing-up of tariff subject to the when these works being completed.
17	CONSOLIDATION GROUTING OF MGS-3	440.00	0.00	14(3) viii		
18	SLOPE STABILITY MEASURES FOR INTAKE STRUCTURE & BEHTOGI NALAH	500.00	0.00			
19	HOSPITAL BUILDING LAN	12.00	12.00	14(3) viii	To provide LAN connection in new	The expenditure claimed is allowed



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
20	LAN 2.00	0.00	14(3) viii	Hospital building. To provide LAN connection in new built rooms in Administrative building..	under Regulation 14(3)(viii) of 2014 Tariff Regulations as the expenditure is for the benefit of employees of the project. The expenditure towards procurement of these assets is in the nature of minor assets, hence the same is not allowed.
21	MISC WORKS 12.50	0.00	14(3) viii	Expenses on various works for Rehabilitation	Since no justification has been submitted by the petitioner, the expenditure is disallowed.
22	PROCUREMENT OF PUMP AND MOTOR SET 6.00	2.22	14(3) viii	Provision has been kept for purchase of new pump and motor that will replace old pump in use of drinking water supply for project colony.	The expenditure claimed is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations as the expenditure is for the benefit of employees of the project. The petitioner has provided de-capitalisation value of Amulance and school vehicle.
23	PROCUREMENT OF INSPECTION VEHICLE 40.00	40.00	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff.	The assumed deletions of ₹3.78 lakh for Pump & motor set and ₹3.15 lakh for motor cycle has been considered respectively.
24	PROCUREMENT OF MOTOR CYCLE 5.00	1.85	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of CISF personal and staff.	
25	PROCUREMENT OF AMBULANCE 15.00	15.00	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of patient and medical staff.	



Sl. N.		Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
26	PROCUREMENT OF SCHOOLBUS /STAFF BUS	80.00	80.00	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of student and shift staff.	
27	I.B.RECOMMENDATION	40.00	40.00	14(3) iii	As per statutory requirements	Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
28	FIRE FIGHTING	5.00	5.00	14(3)iii	As per statutory requirements.	
29	HOSPITAL	16.00	5.92	14(3) viii	As per requirement, provision has been kept for purchase of new items to replace with old items / additional requirements.	As the expenditure is for the benefit of employees of the project, which will facilitate for the efficient and successful operation of the plant, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. Assumed deletions are considered at 10.08 lakh.
30	CISF BARRACK	10.00	10.00	14(3) iii	As per statutory requirements	Considering the fact that the expenditure incurred is as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
31	WINCH AND RUNNER INSPECTION PLATFORM	2.00	0.00	14(3) viii	Additional devices are required for taking up unit maintenance as a parallel activity for economic reasons.	Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed.
32	PROCUREMENT OF OPERATING SYSEM	180.00	0.00	14(3) viii	The old operating system are getting faulty frequently	



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
33	60.00	0.00	14(3) iii	due to non-availability of spares as it became obsolete. Flood preventive scheme is required to be installed in Tehri HEP under the directives of CEA.	The submissions have been considered. In our view, the expenditure towards floor prevention works are recurring in nature and shall be met from the O&M expenses allowed to the generating station. Hence, expenditure is not allowed.
34	35.00	0.00	14(3) viii	To ensure smooth O&M of GIS equipments. All parallel indigenous arrangements required to reduce the full dependency on old compressors of Russian make. Annual Maintenance of the existing compressor for operational worthiness simultaneous to the operation of machine involves an element of risk as healthiness of compressor is an absolute requirement at the plant for operation of machines. Also, management of spares from Russia is a issue which need to be addressed.	Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed.
35	81.00	0.00	14(3) viii		
36	10.00	3.70	14(3) viii	The old SC valves of Russian make are obsolete and shall be replaced by indigenised	Considering the fact that the asset will facilitate the successful and efficient operation



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
37	230.00	230.00	14(3) viii	Old cells are getting damaged and will necessitate replacement.	of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The petitioner has provided de-capitalisation value of 220 V cell and ACB for BJT & DC panels. The assumed deletions are 6.30 lakh for SC valves.
38	50.00	50.00	14(3) viii	The old ACB in BJT and associated DC pannels required to be replaced due to obsolete technology.	
	3795.00	2003.18		TOTAL	

2017-18

(₹ in lakh)

Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
1	90.00	90.00	14(3) viii	It is proposed by BCM department for construction of Hospital building at B.puram. Hence electrification work is proposed to be carried out.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
2	90.00	90.00	14(3) viii	It is proposed by BCM department for construction of club building at B.puram. Hence electrification work is proposed to be carried out.	
3	500.00	500.00	14(3) viii	It is mandatory requirement for safety of the project.	
4	175.00	0.00	14(3) viii	It is required for proper functioning of Administrative Block.	Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed.



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
5	450.00	450.00	14(3) viii	Construction of club building is required to perform various functions with which a provision of indoor games for employees. Tehri HPP is in a remote place and there is no any other specific place available for this purpose. This expenditure is essential to increase the efficiency of employees as well as generating station.	The expenditure claimed is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations as the same is considered necessary for the benefit of employees of the project and in turn will facilitate for the efficient and successful operation of the plant.
6	400.00	400.00	14(3) viii	This expenditure is essential to provide accommodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it is necessary to construct new residences in lieu of old and damaged residences.	
7	300000	300000	14(3) viii	It is mandatory requirement for safety of the project.	
8	250.00	0.00	14(3) viii	AS per suggestion of technical team of GM(Civil-Design), GM (O&MS) & GM (Tehri Complex).	Since no justification has been submitted by the petitioner, the expenditure is disallowed.



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
9	200.00	0.00			
10	200.00		14(3) viii	These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes.	The petitioner has not submitted any justification/clarification for the expenditure incurred for these works. Hence, the same shall be considered at the time of truing-up of tariff subject to the when these works being completed.
11	225.00		14(3) viii	For the monitoring of local seismicity/micro earthquake activities around Tehri Region.	Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed.
12	12.50	0.00	14(3) viii	Expenses on various works for Rehabilitation	Since no justification has been submitted by the petitioner, the expenditure is disallowed.
13	50.00	2.10	14(3) viii	Construction is required to replace old tank of drinking water supply of project colony. Provision has been kept in year 2017-18 for looking into the condition of present tank.	The expenditure claimed is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations as the expenditure is considered necessary for the benefit of employees of the project. The assumed deletions considered is ₹47.90 lakh.
14	30.00	30.00	14(3) viii	Fabrication is required to replace old tank of drinking water supply of project colony. Provision has been kept in year 2017-18 for looking into the condition of present tank.	



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
15	10.00	4.01	14(3) viii	Provision has been kept for purchase of new pump and motor that will replace old pump in use of drinking water supply for project colony.	The expenditure claimed is allowed under Regulation 14(3)(viii) of 2009 Tariff Regulations as the expenditure is considered necessary for the benefit of employees of the project. The assumed deletions are considered at ₹5.99 lakh
16	40.00	16.05	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions considered is ₹23.95 lakh.
17	80.00	32.10	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of student and shift staff.	
18	16.00	6.42	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of goods/ materials.	As the expenditure is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. The assumed deletions are considered at 47.90 lakh, 9.58 lakh, 17.96 lakh and 11.97 lakh for school bus, transport vehicles, water tanker and mini truck respectively.
19	30.00	12.04	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of drinking water.	
20	20.00	8.03	14(3) viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of	



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
21	150.00	60.19	14(3) viii	Provision has been kept for purchase of new equipment that will replace old equipment to maintain the various roads of the project, dragging work and other development works at various locations of the project site.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions considered is 89.81 lakh and 59.87 lakh for wheel loader and excavator respectively
22	100.00	40.13	14(3) viii		
23	20.00	20.00	14(3) iii	As per statutory requirements	Considering the fact that the expenditure incurred is as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
24	5.00	5.00	14(3)iii	As per statutory requirements.	
25	16.00	6.42	14(3) viii	As per requirement, provision has been kept for purchase of new items to replace with old items / additional requirements.	As the expenditure is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. The assumed deletions are 9.58 lakh
26	5.00	5.00	14(3) iii	As per statutory requirements	Considering the fact that the expenditure incurred is as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
27	20.00	0.00	14(3) viii	The old operating system are getting faulty frequently due to non- availability of spares as it became obsolete.	Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.
28	30.00	0.00	14(3)iii	Flood preventive scheme is required to be installed in Tehri HEP under the directives of CEA.	As the expenditure towards floor prevention works are recurring in nature, the same shall be met from the O&M expenses allowed to the generating station. Hence, expenditure is not allowed. However, the petitioner is at liberty to approach the Commission with detailed justifications and directives of CEA for the same at the time of truing up of tariff.
29	5.00	0.00	14(3) viii	To ensure smooth O&M of GIS equipments. All parallel indigeneous arrangements required to reduce the full dependency on old compressors of Russian make. Annual Maintenance of the existing compressor for operational worthiness	
30	10.00	0.00	14(3) viii	simultaneous to the operation of machine involves an element of risk as healthiness of compressor is an absolute requirement at the plant for operation of machines. Also, mamagement of spares from Russia is a issue which need to be addressed.	Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.



Sl. N.	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
31	3.00	1.20	14(3) viii	The old SC valves of Russian make are obsolete and shall be replaced by indigenised valves.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The petitioner has provided de-capitalisation value of 48 V cell. The assumed deletions for SC valves are considered at ₹1.80 lakh
32	25.00	25.00	14(3) viii	Old cells are getting damaged and will necessitate replacement.	
	3557.50	2103.69		TOTAL	

2018-19

(₹ in lakh)

Sr	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
1	80.00	80.00	14(3)viii	It is proposed by BCM department for construction of CISF office building. Hence electrification work is proposed to be carried out.	As the expenditure is considered necessary for the benefit of employees of the project which in turn will facilitate efficient and successful operation of the plant, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations.
2	115.00	115.00	14(3)viii	Various new buildings are constructed by Civil department time to time as per requirement. Hence electrification work for these buildings is required to be carried out.	
3	55.00	55.00	14(3)viii	It is proposed by BCM department for construction of	



Sr	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
				CISF family quarters. Hence electrification work is proposed to be carried out.	
4	450.00	450.00	14(3)viii	It is proposed by BCM department for construction of Type-I and II and III residences at Koti colony. Hence electrification work is proposed to be carried out.	
5	400.00	400.00	14(3)viii	This expenditure is essential to provide accommodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it is necessary to construct new residences in lieu of old and damaged residences.	
6	700.00	700.00	14(3)viii	Rate of subsidence is closely being monitored by D & D department before taking decision for remedial measure for treatment of subsidence. Due to which delay is occurred in preparation of drawings by D&D Department.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
7	500.00	500.00	14(3)viii	These planned works shall provide additional strength to the various structures	



Sr	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
8	1200.00	1200.00	14(3)viii	of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes. Stabilisation is required for proper safe guard of ungated shaft spillway area because of erosion and sliding of hill slope.	
9	12.50	0.00	14(3)viii	Expenses on various works for Rehabilitation	Since no justification has been submitted by the petitioner, the expenditure is disallowed.
10	12.00	5.17	14(3)viii	Provision has been kept for purchase of new pump and motor that will replace old pump and motor in use of drinking water supply for project colony.	The expenditure claimed is allowed under Regulation 14(3)(viii) of 2009 Tariff Regulations as the expenditure is considered necessary for the benefit of employees of the project. The assumed deletions are considered at 6.83 lakh
11	40.00	17.25	14(3)viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions are considered at 22.75 lakh.
12	6.00	2.59	14(3)viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of CISF personal and staff.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff



Sr	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
13	15.00	6.47	14(3)viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of patient and medical staff.	Regulations. Assumed deletions are considered at 3.41 lakh.
14	80.00	34.50	14(3)viii	Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of student and shift staff.	The expenditure claimed is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations as the expenditure is considered necessary for the benefit of employees of the project. The assumed deletions are considered at 8.53 lakh and 45.50 lakh
15	40.00	17.25	14(3)viii	Provision has been kept for purchase of new equipment that will replace old equipment in use of loading and unloading of materials .	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
16	150.00	144.88	14(3)viii	Provision has been kept for purchase of new equipment that will replace old equipment to maintain the various roads of the project, dragging work and other development works at various locations of the project site.	The assumed deletions are considered at 22.75 lakh and 5.12 lakh for crane and wheel dozer respectively.
17	20.00	20.00	14(3) iii	As per statutory requirements	Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
18	5.00	5.00	14(3)iii	As per statutory requirements.	
19	16.00	6.90	14(3)viii	As per requirement.	As the expenditure is considered necessary



Sr	Claimed	Approved	Regulation	Submission of the petitioner	Remarks on admissibility
20	CISF BARRACK 10.00	10.00	14(3) iii	provision has been kept for purchase of new items to replace with old items / additional requirements.	for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. The assumed deletions are considered at 9.10 lakh
21	COMPRESSOR 9.00	0.00	14(3)viii	All parallel indigeneous arrangements required to reduce the full dependency on old compressors of Russian make. Annual Maintenance of the existing compressor for operational worthiness simultaneous to the operation of machine involves an element of risk as healthiness of compressor is an absolute requirement at the plant for operation of machines. Also, mamagement of spares from Russia is a issue which need to be addressed.	Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed.
22	1.5MVA DG SET 400.00	400.00	14(3)viii	The existing DG sets of 01 MVA are old and will necessitate replacement to cater the additional demand.	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
	TOTAL	4315.50			
		4170.00			



15. It is observed that in case of the replacements of assets, though the petitioner has projected de-capitalization against buildings, vehicles, DG set and other miscellaneous assets, the petitioner has not furnished the asset wise de-capitalization as applicable in case of replacement of assets. Accordingly, in this order, the Commission has considered overall de-capitalization as submitted by the petitioner. In respect of the assets wherein the petitioner has not submitted the gross value of replaced assets like procurement of pumps sets, cranes, wheel loader, CCTV etc, the gross value of old assets from COD of the generating station till date of de-capitalization of the said assets has been arrived at after applying the de-escalation rate of 5% per annum. The petitioner is directed to submit the de-capitalized value of each assets which have been replaced during the period 2014-19 at the time of truing up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations.

Assumed Deletions

16. As per consistent methodology adopted by the Commission, expenditure on replacement of assets, if found justified is allowed for the purpose of tariff provided that the capitalization of the said asset is followed by the de-capitalization of the original value of the old asset. However, in certain cases where de-capitalization is affected in books during the following years, to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of tariff is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed deletion".

17. The Commission has considered assumed deletions for the period 2014-19 towards de-capitalization by the petitioner on account of Sale of Assets/Assets written off/ new assets purchased during the year, replacement and deemed deletion. The petitioner has projected the



procurement of pumps sets, cranes, wheel loader, CCTV etc and replacing the old assets during the period 2014-19. Accordingly, the assumed deletions considered are as below:

	2009-10	2010-11	2011-12	2012-13	2013-14
Assumed deletions	219.27	295.22	23.32	326.31	124.00

De-capitalization

18. It is observed that the petitioner has claimed projected de-capitalization for the period 2014-19 and has submitted that the de-capitalization statement has been prepared on assumption basis and the actual position of de-capitalization would be known only after the finalization of audited accounts in the respective year and shall be submitted during the truing up of tariff on the basis of audited accounts. The details of the de-capitalization are as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
	34.20	(-)29.82	496.38	114.68	346.04

19. Based on the above, the net additional capital expenditure allowed for the period 2014-19 is summarized as under:

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Additional capital expenditure	933.17	1959.58	2026.50	2430.00	4294.00	11643.25
Less: Assumed deletions	219.27	295.22	23.32	326.31	124.00	988.12
Net additional capital expenditure	713.90	1664.36	2003.18	2103.69	4170.00	10655.13
Less: De-capitalisation	34.20	29.82	496.38	114.68	346.04	1021.12
Total	679.70	1634.54	1506.80	1989.01	3823.96	9634.01

20. Accordingly, the capital cost in respect of the generating station for the period 2014-19 is allowed as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	704121.77	704801.47	706436.01	707942.81	709931.82
Add: Additional capital expenditure allowed	679.70	1634.54	1506.80	1989.01	3823.96
Closing Capital Cost as on 31 st March of the year	704801.47	706436.01	707942.81	709931.82	713755.78

Debt : Equity Ratio

21. Regulation 19 of the 2014 Tariff Regulations provides as under:

(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

(i) where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:

(ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

(iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt-equity ratio.

Explanation - *The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

(2) The generating Company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt:equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt:equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.



22. As stated, the Commission in order dated 16.4.2013 in Petition No. 250/GT/2010 had approved the annual fixed charges of the generating station considering the revised debt equity ratio of 60.70:39.30 (from 62.78:37.22) as on the COD of the generating station based on order dated 7.1.2014 in Petition No.7/IRP/2013. The relevant portion of the order is extracted as under:

"11. We have considered the submissions of the parties. We have decided in this order that the debt equity ratio of 60.70:39.30 as on COD would be applicable for apportioning the capital cost between debt and equity as on the COD. It follows as a natural corollary that any expenditure incurred after COD shall be considered as additional capital expenditure. As regards the servicing of the additional capital expenditure through debt or equity, we are of the view that the entire amount of additional capitalization should be treated as loan so as to bring overall debt equity ratio closer to the debt equity of 70:30 during the period 2004-09. This is in line with the methodology adopted in respect of tariff orders pertaining to some of the hydro generating stations of NHPC for the period 2004-09. We order accordingly."

23. In line with the decision of the Commission in the said order, the entire amount of admitted additional capital expenditure has been considered as loan.

Return on Equity

24. Regulation 24 of the 2014 Tariff Regulations provides as under:

"24. Return on Equity: (1) *Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*

(2) *Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*

Provided that:

- i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*
- ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:*
- iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power*



Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

- iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

25. Regulation 25 of the 2014 Tariff Regulations provides as under:

“Tax on Return on Equity

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

26. The respondent, UPPCL has submitted that the petitioner has not furnished the details of calculation towards the computation of Return on Equity as per the Tariff Regulations 2014. It has further submitted that the effective tax rate is to be computed in accordance with Regulation 25.



27. In line with the decision of the Commission in the order dated 16.4.2013 in Petition No. 250/GT/2010, the entire amount of admitted additional capital expenditure has been considered as loan and the equity as nil. The Base rate of ROE has been grossed up with the MAT rate for the year 2013-14. Accordingly, in terms of the above regulations, Return on Equity has been computed as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Notional Equity- Opening	254402.82	254402.82	254402.82	254402.82	254402.82
Addition of Equity due to additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Normative Equity-Closing	254402.82	254402.82	254402.82	254402.82	254402.82
Average Normative Equity	254402.82	254402.82	254402.82	254402.82	254402.82
Return on Equity (Base Rate)	16.500%	16.500%	16.500%	16.500%	16.500%
Tax Rate for the year	20.961%	21.342%	21.342%	21.342%	21.342%
Rate of Return on Equity (Pre Tax)	20.876%	20.977%	20.977%	20.977%	20.977%
Return on Equity	53109.13	53366.08	53366.08	53366.08	53366.08

(₹ in lakh)

28. The petitioner is however directed to furnish on affidavit the effective tax rates along with the Tax Audit Report for the period 2015-19 at the time of revision of tariff based on truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

Interest on Loan

29. Regulation 26 of the 2014 Tariff Regulations provides as under:

“26. Interest on loan capital: (1) *The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

(2) *The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

(3) *The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.*



(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such refinancing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

30. Interest on loan has been worked out as under:

(a) The gross normative loan of ₹449718.95 lakh as on 1.4.2014 has been considered.

(b) Cumulative repayment of loan of ₹235562.63 lakh as on 31.3.2014 as considered in order dated 20.3.2017 in Petition No.172/GT/2015 has been considered as on 1.4.2014.

(c) Accordingly, the net normative opening loan as on 1.4.2014 works out to ₹214156.32 lakh.



- (d) Addition to normative loan on account of the admitted additional capital expenditure has been considered on year to year basis.
- (e) Depreciation allowed for the period has been considered as repayment of normative loan during the respective year for the period 2014-19.
- (f) In line with the provisions of the regulations, the weighted average rate of interest has been calculated by applying the actual loan portfolio existing as on 1.4.2014 along with subsequent additions during the period 2014-19, if any, for the generating station. In case of loans carrying floating rate of interest the rate of interest as furnished by the petitioner has been considered for the purpose of tariff.

31. Necessary calculation for interest on loan is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan	449718.95	450398.65	452033.19	453539.99	455529.00
Cumulative repayment of loan upto previous year	235562.63	272491.45	309437.70	346459.27	383535.04
Net Loan Opening	214156.32	177907.20	142595.49	107080.72	71993.96
Addition due to additional capital expenditure	679.70	1634.54	1506.80	1989.01	3823.96
Repayment of loan during the year	36928.82	36946.25	37021.57	37075.77	37181.36
Net Loan Closing	177907.20	142595.49	107080.72	71993.96	38636.56
Average Loan	196031.76	160251.35	124838.10	89537.34	55315.26
Weighted Average Rate of Interest of loan	12.3799%	12.5199%	12.5492%	12.5500%	12.5500%
Interest on Loan	24268.44	20063.32	15666.14	11236.94	6942.07

Depreciation

32. Regulation 27 of the 2014 Tariff Regulations provides as under:

“27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.



Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Generating station:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.



O&M Expenses

35. Regulation 29 (3) (b) of the 2014 Tariff Regulations provides as under:

"(b) for hydro generating stations of Satluj Jal Vidyut Nigam Limited (SJVNL) and Tehri Development Corporation Limited (THDC), the O&M expenses shall be approved as per the following methodology:

i. The operation and maintenance expenses shall be derived on the basis of actual operation and maintenance expenses for the years 2008-09 to 2012-13, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission.

ii. The normalised operation and maintenance expenses after prudence check, for the years 2008-09 to 2012-13, shall be escalated at the rate of 6.04% to arrive at the normalized operation and maintenance expenses at the 2012-13 price level respectively and then averaged to arrive at normalized average operation and maintenance expenses for the 2008-09 to 2012-13 at 2012-13 price level. The average normalized operation and maintenance expenses for the 2008-09 to 2012-13 shall be escalated at the rate of 6.04% to arrive at the operation and maintenance expenses for year 2013-14 and thereafter escalated at the rate of 6.64% p.a., to arrive at the O&M expenses for the period FY 2014-15 to FY 2018-19."

36. The O & M expenses claimed by the petitioner are as under:

	(₹ in lakh)		
	2014-15	2015-16	2016-17
	26378.24	28129.75	29997.57
			31989.41
			34113.50

37. The petitioner has furnished the actual O&M expenses for the period from 2008-09 to 2012-13 based on the audited balance sheets of the said period. On prudence check of the actual O&M expenditure for the year 2008-09 to 2012-13, the expenses of following nature have been excluded for arriving at the allowable O&M expenses:

(a) Productivity linked incentive and performance related pay: The productivity linked incentive and performance related pay made to the employees of the generating station and corporate centre/service centre has not been allowed as the same has to be borne from the "incentive" earned by the petitioner by way of better performance of the generating station in terms of the provisions of the 2014 Tariff Regulations.

(a) Losses Written Off & Loss on Sale/discarding of asset: As per the provisions of the 2014 Tariff Regulations, the petitioner is entitled to recover 90% of the asset value as depreciation. The subsequent profit/loss on sale of un-serviceable assets is to the account of the petitioner and not considered for the purpose of tariff.

(b) **Corporate Social Responsibility & Expenditure on gifts:** Expenditure is not allowed as the petitioner is required to bear such expenses from its own profits/ resources.

(c) **Survey and Investigation Expenditure:** Expenditure pertains to under construction projects of the petitioner and is not likely to be encountered/continued during 2014-19 for the generating station.

(d) **Deferred Revenue Expenditure Written Off:** In view of uncertainty regarding the extent and re-occurrence of such expenses, the same is not considered.

38. Based on the above discussions, the total O&M expenses (net) considered for the generating station for the period 2008-09 to 2012-13, for the purpose of working out the O&M expenses for 2014-19 is as summarized as under:

(A)	Breakup of O&M expenses	(₹ in lakh)				
		2008-09	2009-10	2010-11	2011-12	2012-13
1	Consumption of Stores and spares					
2	Repair and Maintenance					
2.1	For Dam, Intake, WCS, De-Silting Chamber		222.05	1324.82	338.54	505.03
2.2	For Power House & all other works	2039.28	2063.04	2699.46	1697.45	2146.37
	Sub-Total (Repair & Maintenance)	2039.28	2285.10	4024.28	2035.99	2651.40
3	Insurance	442.98	377.97	362.19	574.16	857.56
4	Security	716.45	834.73	899.55	1041.01	1226.86
5	Administrative Expenses					
5.1	Rent	29.93	43.74	127.89	81.69	100.47
5.2	Electricity Chuges	1146.70	647.65	750.84	758.62	618.29
5.3	Travelling and Conveyance	294.05	228.46	247.69	224.98	267.46
5.4	Cummunication	32.53	51.07	44.09	60.91	65.63
5.5	Advertising	85.63	138.55	126.67	38.28	55.01
5.6	Donations					
5.7	Entertainment	10.57	0.91	0.50	0.18	0.32
	Sub-Total (Administrative Expenses)	1599.41	1110.39	1297.68	1164.66	1107.17
6	Employee Cost					
6.1	Salaries, Wages and Allowances	7352.29	6236.37	9647.27	8752.60	8292.47
6.2	Staff Welfare Expenses	237.40	259.35	152.02	134.96	206.93
6.3	Productivity linked Incentive					
6.4	Expenditure on VRS					
6.5	Ex-gratia					
6.6	Performance Related Pay (PRP)					
	Sub Total (Employee cost)	7589.69	6495.72	9799.29	8887.56	8499.39
7	Loss of stores					
8	Provisions					
9	Corporate Office expenses allocation	1664.14	1766.58	4227.78	3854.32	5110.88
10	Other expenses (Specify Items)					
11	Total (1 to 10)	14051.95	12870.49	20610.77	17557.69	19453.26
12	Less : Revenues/Recoveries, if any					
13	Net Expenses	14051.95	12870.49	20610.77	17557.69	19453.26



39. The normalised operation and maintenance expenses after prudence check, for the period from 2008-09 to 2012-13 have been escalated at the rate of 6.04% to arrive at the normalized operation and maintenance expenses at the 2012-13 price level and then averaged to arrive at normalized average operation and maintenance expenses for the 2008-09 to 2012-13 at 2012-13 price level. The average normalized operation and maintenance expenses at 2012-13 price level have been escalated at the rate of 6.04% to arrive at the operation and maintenance expenses for year 2013-14 and thereafter escalated at the rate of 6.64% p.a., to arrive at the O&M expenses for the period 2014-19. The computations are as under:

(₹ in lakh)					
2008-09					
2008-09	14051.95	6.04%	848.74	14900.69	31.03.2010
2009-10	14900.69	6.04%	900.00	15800.69	31.03.2011
2010-11	15800.69	6.04%	954.36	16755.05	31.03.2012
2011-12	16755.05	6.04%	1012.01	17767.06	31.03.2013
2009-10					
2009-10	12870.49	6.04%	777.38	13647.87	31.03.2011
2010-11	13647.87	6.04%	824.33	14472.20	31.03.2012
2011-12	14472.20	6.04%	874.12	15346.32	31.03.2013
2010-11					
2010-11	20610.77	6.04%	1244.89	21855.66	31.03.3012
2011-12	21855.66	6.04%	1320.08	23175.74	31.03.2013
2011-12					
2011-12	17557.69	6.04%	1060.48	18618.17	31.03.2013
2012-13					
2012-13	19453.26	0.00%	0.00	19453.26	31.03.2013
Total				94360.55	
Average at 2012-13				18872.11	
Escalation @6.04%				1139.88	
O&M at 2013-14				20011.99	

(₹ in lakh)					
Year	O&M at 2013-14 level	Escalation Rate	Escalation	O&M expenses	
2014-15	20011.99	6.64%	1328.80	21340.78	
2015-16	21340.78	6.64%	1417.03	22757.81	
2016-17	22757.81	6.64%	1511.12	24268.93	
2017-18	24268.93	6.64%	1611.46	25880.39	
2018-19	25880.39	6.64%	1718.46	27598.84	

40. Accordingly, the year-wise O&M expenses allowed for the generating station are as under:



	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	21340.78	22757.81	24268.93	25880.39	27598.84

Interest on Working Capital

41. Sub-section (c) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

"28 (1) (c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month."

42. Working capital has been calculated considering the following elements:

Maintenance spares

43. Maintenance spares have been worked out and allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	3201.12	3413.67	3640.34	3882.06	4139.83

Receivables

44. Receivables component of working capital has been worked out on the basis of two months of fixed cost as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	23242.87	22821.88	22350.76	21888.22	21476.17

O&M Expenses

45. O&M expenses for 1 month for the purpose of working capital are as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	1778.40	1896.48	2022.41	2156.70	2299.90



46. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

"(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later."

47. In terms of the above regulations, the Bank Rate of 13.50% (Base Rate + 350 Basis Points) as on 1.4.2014 has been considered by the petitioner. This has been considered in the calculations for the purpose of tariff.

Interest on Working Capital

48. Necessary computations in support of interest on working capital are appended below:

	2014-15	2015-16	2016-17	2017-18	2018-19
O & M expenses- 1 Month	1778.40	1896.48	2022.41	2156.70	2299.90
Maintenance Spares	3201.12	3413.67	3640.34	3882.06	4139.83
Receivables- 2 months	23242.87	22821.88	22350.76	21888.22	21476.17
Total Working Capital	28222.38	28132.04	28013.51	27926.97	27915.90
Rate of interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	3810.02	3797.82	3781.82	3770.14	3768.65

Annual Fixed charges for 2014-19

49. Accordingly, annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	36928.82	36946.25	37021.57	37075.77	37181.36
Interest on Loan	24268.44	20063.32	15666.14	11236.94	6942.07
Depreciation	53109.13	53366.08	53366.08	53366.08	53366.08
Interest on Working Capital	3810.02	3797.82	3781.82	3770.14	3768.65
O&M Expenses	21340.78	22757.81	24268.93	25880.39	27598.84
Total	139457.20	136931.28	134104.53	131329.31	128856.99



Design Energy and Normative Annual Generating station Availability Factor

50. The Design Energy as approved by CEA on completion of the project is 2797 Million units (MUs) and the NAPAF of the generating station for recovery of capacity charges is 77% as per the 2014 Tariff Regulations. Accordingly, NAPAF of 77% has been considered for this generating station for the period 2014-19. The Commission in order dated 20.3.2017 in Petition No.172/GT/2015 had approved the annual Design Energy (DE) of 2797 Million units (MUs) for the period 2009-14 in respect of this generating station. This DE has been considered for this generating station for the period 2014-19 as per month-wise details as under:

Month		Design Energy (MUs)
April	I	64.77
	II	65.54
	III	73.71
May	I	82.21
	II	72.00
	III	80.92
June	I	70.97
	II	70.07
	III	21.86
July	I	23.95
	II	25.23
	III	40.35
August	I	123.83
	II	129.50
	III	186.18
September	I	89.51
	II	94.82
	III	56.25
October	I	65.48
	II	54.79
	III	42.68
November	I	54.87
	II	55.91
	III	57.70
December	I	92.75
	II	94.60
	III	103.11
January	I	96.33
	II	99.08
	III	108.97
February	I	102.54
	II	81.36
	III	68.12
March	I	84.04
	II	82.31



Month	Design Energy (MUs)
III	80.26
Total	2797

Application Fee and Publication Expenses

51. The petitioner has sought reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees of ₹4400000 each for the years 2014-15 and 2015-16 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 5.1.2016 in Petition No. 232/GT/2014, we direct that the petitioner shall be entitled to recover, the filing fees and the expenses incurred on publication of notices for the period 2014-15 and 2015-16 directly from the respondents on submission of documentary proof. The filing fees for the remaining years of the tariff period 2016-19 shall be recovered pro rata after deposit of the same and production of documentary proof.
52. The annual fixed charges approved for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.
53. Petition No. 178/GT/2015 is disposed of in terms of the above.

Sd/-
(Dr. M.K.Iyer)
Member

Sd/-
(A. K. Singhal)
Member

Sd/-
(Gireesh B. Pradhan)
Chairperson



12/19/2018

JSW Mail - Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)



Himanshu Puri <himanshu.puri@jsw.in>

Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)

Suri, Deepak (GE Power) <deepak.suri@ge.com>

Sat, May 26, 2018 at 12:12 PM

To: Himanshu Puri <himanshu.puri@jsw.in>

Cc: "ravindra.rena@jsw.in" <ravindra.rena@jsw.in>, manik Kapoor <manik.scs@gmail.com>, "Subhash, Chand (GE Power)" <chand.subhash@ge.com>, "Syai, Sandeep (GE Power)" <sandeep.syai@ge.com>, "Sunish, Sukumaran (GE Power)" <sukumaran.sunish@ge.com>, "Anand, Sreenivasan (GE Power)" <sreenivasan.anand@ge.com>, "Rupesh, Kurup (GE Power)" <kurup.rupesh@ge.com>, "Singal, Vivek (GE Power)" <vivek.singal@ge.com>

Dear Sir

Please find our budgetary offer as follows :

GE-ALSTOM Make MICOM Agile P443 suitable for 400KV : Unit Ex-works Price: 279,000/- (the model will be selected as per PGCIL specifications)

GE Make Multilin D60 relay suitable for 400KV : Unit Ex-works Price: 355,000/- (the model will be selected as per PGCIL specifications)

Supply Terms

GST @ 18% Extra

F&I @ 3% Extra

P&F Inclusive

Delivery : 10 weeks

Payment : 30% advance and balance against proforma Invoice

Order to be placed on our authorized channel partner.

Service Portion

Erection, Testing and commissioning Charges : 40,000/- Per relay

Note : lodging and boarding to be arranged by JSW

Secondary test kit to be arranged by JSW

GST @ 18% Extra

15 days intimation is required to depute our team at site.

SCOPE OF WORK

- Supply of relays.
- Design and RE- Engineering for the Protection Scheme
- Testing & Commissioning of Offered Numerical Relay
- Removal of existing Protection relays
- Mounting and Wiring of New Protection Relays
- Supply of Required Wiring materials and Blanking Plates for Mounting and wiring of Protective scheme during site activities.
- Integration of offered numerical relay with existing GPS and PC (ethernet switch & cable to be arranged by JSW)

Notes :

- Supply and Termination of Control and CT Cables outside to the protection panels / Cubicles are not included in the scope of this project.
- Laying and Supplying of FO cables not in this scope of offer
- GPS / Time Synchronizing Equipment not in this scope of offer
- No panels / Office furniture are considered in this scope of offer



12/19/2018

JSW Mail - Upgradation of EPAC-3000 Series Numerical Relay (Make-Alstom)

- All the drawings will be submitted after the receipt of purchase order as per the drawing & delivery schedule which will be furnished in our offer.
- Any modifications which pertain to the switch gear controls are excluded from this offer.
- Any changes / services on the primary side and primary equipment are not considered as part of this offer.
- Painting of existing panel and replacement of entire panel is not considered under scope of this offer.
- Supply of PC / Printer is not considered under scope of this offer.
- Supply of any additional relays / equipment required will be on chargeable basis.

For any clarification, please contact undersigned.

Best Regards

Deepak Suri



GE T&D India Limited

(Formerly Alstom T&D India Limited) | Manager - Automation Sales | G/A

Phone: +91 120 4790924 | Mobile: +91 8130750123

Office address: A-7, Sector 65, Noida, U.P. 201301

From: Himanshu Puri (mailto:himanshu.puri@jsw.in)

Sent: Tuesday, May 22, 2018 11:25 AM

To: Suri, Deepak (GE Power) <deepak.suri@ge.com>

Cc: ravindra.rana@jsw.in; manik Kapoor <manik.scs@gmail.com>; Subhash, Chand (GE Power) <chand.subhash@ge.com>; Syal,

Sandeep (GE Power) <sandeep.syal@ge.com>; Sunish, Sukumaran (GE Power) <sukumaran.sunish@ge.com>

Subject: EXT: Re: Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)

Dear Mr. Deepak,

In reference to the trailing mails, please provide individual budgetary quotes (inclusive of GST) for supply, retrofitting, testing & training (at site) for D60 and P443 relays.

Best Regards,

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.

HBPCL, Sholli Colony, PO - Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India.

M +91 8894289616 | +91 1786 261696 Ext 203



On Wed, May 9, 2018 at 12:37 PM, Suri, Deepak (GE Power) <deepak.suri@ge.com> wrote:

Dear Sir

Re:our discussion during our visit at your works last week regarding Main II relay, we wish to inform you that MICOM P442 and MICOM P443 belong to the same MICOM family, they differ both in hardware and software platform. While P442 comes from the Alstom French design, P443 follows GEC UK design. Both relays have similar power supply, Digital input and communications board. However, the main PCB which contains the microprocessor and relay algorithm is totally different. Some of the key differences are tabled below and attached. However for any doubt/clarification, we would request you to please revert to us before concluding.

P442	P443
French Design	British Design

<https://mail.google.com/mail/u/07?ik=dcad368e06&view=p&search=all&permmsgid=msg-f%3A1601507946184611338&dsqt=1&siml=msg-f%3A1...> 2/7



12/19/2018

JSW Mail - Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)

Enhanced Version of EPAC relay	Enhanced Version of LFZR relay
Quadrilateral Characteristic Distance Zones	Quadrilateral and Mho Characteristic Distance Zones
Processor Board Part no. ZN0041	Processor Board Part no. ZN0069
Output Board containing 7 output relays; Board Ref ZN0031001	Output Board containing 8 output relays; Board Ref ZN0019001
Case Size 60TE	Case Size 80TE

Mr. Sunish : The customer is using MAIN 1 relay as P442 and he has an apprehension using Micom platform P443 as MAIN II, though I have explained the difference above but need your suggestion if he should go for P443 or D60 for better accuracy and stability of the system.

Regards

Deepak Suri

From: Suri, Deepak (GE Power)
Sent: Thursday, April 26, 2018 2:03 PM
To: 'Himanshu Puri' <himanshu.puri@jsw.in>
Cc: ravindra.rana@jsw.in; vikas.gupta@jsw.in; dinesh.mahato@jsw.in; manik.kapoor <manik.scs@gmail.com>; Subhash, Chand (GE Power) <chand.subhash@ge.com>; Syal, Sandeep (GE Power) <sandeep.syal@ge.com>
Subject: RE: Re: Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)

Dear Sir

Thanks for informing more details.

If the MAIN 1 relay is P442 then we can provide two options for MAIN 2 relay for better accuracy.

1. D60
2. P443

Both have different characteristics and hardware platform as compared to P442.

We are attaching the catalogue for your reference, please check and confirm which relay you would like to procure.

Best Regards

Deepak Suri



GE T&D India Limited

(Formerly Alstom T&D India Limited) | Manager - Automation Sales | G/A

Phone: +91 120 4790924 | Mobile: +91 8130750123

Office address: A-7, Sector 65, Noida, U.P. 201301

From: Himanshu Puri [mailto:himanshu.puri@jsw.in]
Sent: Thursday, April 26, 2018 12:26 PM

<https://mail.google.com/mail/u/071k=ccac368e06&view=pt&search=all&permmsgid=msg-f%3A1601507946184611339&dsqt=1&iml=msg-f%3A1...> 3/7



12/19/2018

JSW Mail - Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)

To: Suri, Deepak (GE Power) <deepak.suri@ge.com>
Cc: ravindra.rana@jsw.in; vikas.gupta@jsw.in; dinesh.mahato@jsw.in; manik kapoor <manik.scs@gmail.com>
Subject: EXT: Re: Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)

Dear Mr. Deepak,

As discussed, we have two protection relays working in our 400 KV line "distance protection" scheme.

- 1) Micom P442- Used as Main-1, Make - Alstom.
- 2) EPAC- 3000- Used as Main-2, Make - Alstom.

Taking this into consideration, please provide alternate compatible solution and Budgetary quote for substituting existing EPAC - 3000 relay (with new upgraded relay) having operational philosophy similar to EPAC 3000 relay.

Best Regards,

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.

HBPCL, Sholitu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India.

M +91 8894289616 |+91 1786 261696 Ext 217

 JSW Energy

On Thu, Apr 26, 2018 at 11:09 AM, Suri, Deepak (GE Power) <deepak.suri@ge.com> wrote:

Dear Sir

It was nice talking to you.

We have checked once again the photographs and model number of EPAC300, please note the dimensions of quoted relay P444 in the trailing email are same as of EPAC3000 but we have similar relay with same functionality but less DI/DO, the type is P442 with 16DI and 21 DO. The width of this relay would be less as compared to EPAC3000 but if you are going for retrofitting solution with us, we will take care of all the work related to installation, erection, testing and commissioning. The price for P442 is given below :

Unit Price : INR 195,000/-

GST Extra

F&I Extra

P&F Inclusive

Delivery : 10 weeks

Payment : 100% against PI before dispatch.

Erection, testing and commissioning including wires, ferrules, aux relays to complete the scheme : 47,000 per relay.

GST Extra

Testkit shall be provided by you.

Lodging and boarding shall be provided by you

<https://mail.google.com/mail/u/0/?ik=dcad366e06&view=pt&search=all&permmsgid=msg-f%3A1601507946184611339&dsqt=1&siml=msg-f%3A1...> 4/7



12/10/2018

JSW Mail - Upgradation of EPAC-3000 Series Numerical Relay (Make- Aletom)

Order will be routed through dealer.

Best Regards

Deepak Suri



GE T&D India Limited

(Formerly Alstom T&D India Limited) | Manager - Automation Sales | CA

Phone: +91 120 4790924 | Mobile: +91 8130750123

Office address: A-7, Sector 65, Noida, U.P. 201301

From: Surl, Deepak (GE Power)
Sent: Monday, April 09, 2018 12:19 PM
To: himanshu.puri@jsw.in
Cc: Rupesh, Kurup (GE Power) <kurup.rupesh@ge.com>; ravindra.rana@jsw.in; vikas.gupta@jsw.in; dinesh.mahato@jsw.in; Syal, Sandeep (GE Power) <sandeep.syal@ge.com>; Subhash, Chand (GE Power) <chand.subhash@ge.com>
Subject: RE: Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)

Dear Sir

We thank you for the enquiry, please find our offer as follows:

Since EPAC-3000 is obsolete, the upgraded version with same dimensions is Mitcom Agile P444 (catalogue attached)

Unit Price : INR 255,000/-

GST Extra

F&I Extra

P&F Inclusive

Delivery : 10 weeks

Payment : 100% aglnst PI before dispatch.

Erection, testing and commissioning including wires, ferrules, aux relays to complete the scheme : 55,000 per relay.

GST Extra

Teekit shall be provided by you.

Lodging and boarding shall be provided by you



P44491AB6M0710M

Distance Protection Relay

Version :

1 & 3 Pole tripping/reclosing with 24 inputs & 32 outputs + Check synch

Vx auxiliary rating :

110-250 Vdc (100-240 Vac)

In/Vn rating :

Dual rated CT (1 & 5A : 100 - 120V)

Hardware options :

Single Ethernet (100Mbit/s) plus IRIG-B (Modulated)

Software options :

1 & 3 Pole tripping/reclosing with 24 inputs & 32 outputs

Protocol options :

IEC61850 + Courier via rear RS485 port

Mounting :

Flush/Panel Mounting with Harsh Environment Coating

Language :

English, French, German, Spanish

Customer Specific Options :

Standard version

Best Regards

Deepak Suri



GE T&D India Limited

(Formerly Alstom T&D India Limited) | Manager - Automation Sales | G/A

Phone: +91 120 4790924 | Mobile: +91 81 30750123

Office address: A-7, Sector 65, Noida, U.P. 201301

From: Himanshu Puri [mailto:himanshu.puri@jsw.in]

Sent: 07 April 2018 11:23

To: Poongunran, Sedaya (GE Power) <sedaya.poongunran@ge.com>

Cc: Ravindra Rana <ravindra.rana@jsw.in>; vikas gupta <vikas.gupta@jsw.in>; Dinesh Mahato <dinesh.mahato@jsw.in>

Subject: EXT: Upgradation of EPAC-3000 Series Numerical Relay (Make- Alstom)

Dear Sir,

It was a pleasure talking to you over call.

Further, as discussed we require (02 No.) of distance protection relays as spare for our existing Epac -3000 protection relays (please refer detailed specifications below) or else in case of unavailability of the required relay, please suggest a compatible substitute for up gradation / replacement of the existing relays (2 No.).

Case-I (For supply of Epac-3000 Relay) - Please submit your budgetary quote (Inclusive of GST) for supply of relays.

Case-II (In case you suggest compatible substitute for replacing existing Epac- 3000 Relay) - Please submit your budgetary quote (Inclusive of GST) for supply and service (testing at site) of relays.

DETAILED TECHNICAL SPECIFICATION:

- Relay: Distance Protection, Type:Numerical
- Application : Switchyard / Line Protection, Auxiliary Voltage:220 Vdc
- C.T Sec. Rating :1Amp, P.T Sec. Rating :110 V, Reset Type : Auto, Mounting: Flush, Terminal Type : Screw
- Service : Laptop Connectivity
- Make : Alstom



12/19/2018

JSW Mail - Upgradation of EPAC-3000 Series Numerical Relay (Make- Aistom)

- Model: Epac 3000 Series.
- Digital Input - 08 No.
- Digital Output - 08 No.

Photographs of existing Epac-3000 relay along with its technical literature is also attached herein for your ready reference.

An early reply from your end will be highly Appreciated.

Best Regards,

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.

HBPCL, Sholtu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India.

M +91 8894289616 |+91 1786 261696 Ext 217

JSW Energy

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JSW Hydro Energy Limited,
Baspa - II H. E. Project,
Sholru Colony, P. O. Tapri - 172104,
District Kinnaur (Himachal Pradesh)

Date: 18-12-2018

Minutes Of Meeting

Between M/s Shashi Engicon Pvt. Ltd. and M/s JSW Hydro Energy Limited
at
3x100 MW Baspa-II HEP

Installation, Testing & Commissioning (Retrofitting) Of D-60 Line Distance
Protection Relay (Make-GE) In Main-II Protection of Baspa-Wangtoo
400 KV Feeder-I

Following were present

M/s JSW Hydro Energy Limited

Mr. Ravindra Singh Rana

Mr. Himanshu Puri

Mr. Dinesh Prasad Mahato

M/s Shashi Engicon Pvt. Ltd.

Mr. Gowtham Meenatchi

Background

Distance Protection Relay is used to protect the outgoing 400 kV Feeders from external line faults and tripping of line under fault conditions. These relays action depends on the distance of the fault feeding point in the line.

As Earlier Alstom make "EPAC 3000 Series" Distance Protection Relay (Main-II) was used to protect the Baspa-Wangtoo Feeder-1 from external line faults. Since, EPAC-3000 Series relay is obsolete, so its upgraded version "D60, Make-GE T&D India Ltd" was recommended by OEM to have better spares and operational support. Hence, replacement of this obsolete relay (i.e. EPAC 3000) is carried out as per OEM, s recommendations.

Activities Undertaken

M/s Shashi Engicon Pvt. Ltd. Testing Engineer reached Baspa-II site on 10.12.2018 and concluded Installation, Testing & Commissioning (Retrofitting) Of D-60 Line Distance Protection Relay on 18.12.2018 evening. During his visit the activities undertaken are briefed as below: -

1. 400 kV Baspa- Wangtoo Feeder-1 Main-II Line Protection Relay (EPAC 3000) replaced by GE T&D Make D-60 Line Protection Relay.

(Gowtham M)
Dinesh
Dinesh

Page 1 of 2





JSW Hydro Energy Limited,
Baspata - II H. E. Project,
Sholtu Colony, P. O. Tapri - 172104,
District Kinnaur (Himachal Pradesh)

2. All the applicable software setting for D-60 relay is configured as per old EPAC 3000 Relay.
3. All the hardwire connection are done as per 400 kV line Protection Drawing and few necessary connections are modified as per requirement.
4. Relay Testing has been done through Three Phase Injection Kit (Kit: OMICRON 356 and Software: Test Universe version 3.2).
5. All the relay test results are verified with old recorded EPAC 3000 result values.
6. IRIG Port is also connected with D-60 relay for time synchronization with GPS Clock.

Pending points

1. As built Drawing in reference to newly installed D-60 relay submission by M/s Shashi Engicon Pvt. Ltd. (Target Date- 30.12.2018)
2. Protection setting notice report for D-60 relay submission by M/s Shashi Engicon Pvt. Ltd. (Target Date- 30.12.2018)
3. During Simulation testing, Reverse Zone (Z4), ABC Phase fault did not operate and hence cannot be tested in simulation by secondary current injection.
4. During Simulation testing it was observed that beyond 20% of Zone-2 protection (i.e. 100% of protected line, which is 21.04 Km) 80% of Zone-2 protection and for full Zone-3 and Zone-4 protection fault distance is not visible in D-60 relay.
5. M/s JSWHEL raised concerned on the issue and asked M/s Shashi Engicon Pvt. Ltd. To provide this functionality in existing D-60 relay. M/s Shashi Engicon Pvt. Ltd. Representative will confirm this functionality with OEM and will reply on the same by 30.12.2018.
6. During Simulation testing lots of software configuration issues for new D-60 Protection relay were faced which, resulted extra time in completion of job than expected.

List of Annexures attached

1. List of Configured Digital Input Signals (Annexure-1)
2. List of Configured Digital Output Signals (Annexure-2)
3. Test Results of D-60 Relay (Annexure-3)
4. LED Labels Configuration (Annexure-4)

Handwritten signature

(Gowtham M.)

HIKANSHU POKRI

18/12/2018

Handwritten signature

18/12/2018

(D. P. MAHATO)

Page 2 of 2




ANNEXURE-15.1

UNILINE ENERGY SYSTEMS PVT. LTD.

"Uniline House" 198/23, Ramesh Market, East of Kailash, New Delhi-110065
 Ph: 46661111, 26469031, 26469039 Fax: 91-11-26481469
 Tollfree No.: 1800-102-2011 Email: uniline@uniline.in Website: www.unilineindia.com

**SERVICE REPORT**

CLIENT:	DATE: 25-02-2018
ADDRESS: Himachal Baba Bawa Gurukul Kinnaur	SERVICE ENGINEER'S NAME & NO. Lovely Kumar
CONTACT PERSON'S NAME & CONTACT NO.:	
CLIENT E-MAIL:	JOB NO.:
TYPE OF EQUIPMENT: Inverter	RATING: 15kva
SERVICE TYPE:- INSTALLATION / PREVENTIVE MAINTENANCE / BREAK DOWN MAINTENANCE	
WARRANTY STATUS: WARRANTY / OUT OF WARRANTY / UNDER AMG	
DEFECT FOUND ON INSPECTION: Inverter card, Drive card and Protection card found faulty. Old model manufacturing Year 2002	
SERVICE RENDERED: Old technology card obsolete model and ATC not as perable	
REMARKS	JOB COMPLETED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
CLIENTS REMARKS AND SIGN. WITH SEAL	ENGINEER'S SIGNATURE 

PARTS REPLACED WITH DETAILS

S NO	PART NAME	QTY	OLD PART NO.	NEW PART NO.

TECHNICAL SPECIFICATION

I/P VOLTAGE	DC VOLTAGE
O/P VOLTAGE	DC CURRENT
O/P CURRENT	EARTHING STATUS



**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 46/GT/2015

Coram:

Shri Gireesh B. Pradhan, Chairperson
Shri A. K. Singhal, Member
Shri A. S. Bakshi, Member

DATE OF HEARING: 16.07.2015

DATE OF ORDER: 13.01.2016

IN THE MATTER OF

Approval of tariff of Kopili Hydro Electric Power plant (4X50 MW) of North Eastern Electric Power Corporation Limited (NEEPCO) Shillong for the period from 1.4.2014 to 31.3.2019.

AND

IN THE MATTER OF

North Eastern Electric Power Corporation Ltd
Brookland Compound
Lower New Colony
Shillong-793 003

.....Petitioner

Vs

1. Assam Power Distribution Company Ltd.
"Bijulee Bhawan", Paltanbazar
Guwahati-781 001
2. Meghalaya Energy Corporation Ltd.
Meter Factory Area, Short Round Road
Integrated Office Complex
Shillong-793 001
3. Tripura State Electricity Corporation Ltd.
Bidyut Bhavan, North Banamalipur
Agartala-799 001
4. Power and Electricity Department
Govt. of Mizoram
P&E Office Complex, Electric Veng,
Aizwal-796 001
5. Manipur State Power Distribution Co. Ltd.,
Electrical Complex, Khawai Bazar,
Keishampat, Imphal-795 001
6. Department of Power
Govt. of Arunachal Pradesh
Vidyut Bhawan
Itanagar-791 111



7. Department of Power
Govt. of Nagaland
Kohima-797 001
8. North Eastern Regional Power Committee
NERPC Complex, Dong Parmaw
Lapalang , Shillong-793 003
9. North Eastern Regional Load Despatch Centre
Dongtiah, Lower Nongrah
Lapalang, Shillong-793 006
- ...Respondents

Parties present:

Shri Rana Bose, NEEPCO
Shri Pares Ch. Barman, NEEPCO
Shri Devapriya Choudhary, NEEPCO
Ms. Elizabeth Pyrbot, NEEPCO
Shri K. Goswami, APDCL
Shri M.K Adhikary, APDCL

ORDER

This petition has filed by petitioner, North Eastern Electric Power Corporation Ltd (NEEPCO) for approval of tariff of Kopili Hydro Electric Project (4 x 50MW) (hereinafter referred to as "the generating station") for the period 2014-19 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ("the 2014 Tariff Regulations").

2. The project comprises of four units of 50 MW. The date of commercial operation of the respective units of the generating station is as under:

	Date of commercial operation
Unit-I	5.7.1988
Unit-II	22.6.1988
Unit-III	1.5.1997
Unit-IV /Generating station	12.7.1997

3. The tariff of the generating station for the 2009-14 was determined by the Commission in order dated 4.7.2014 and 7.10.2015 in Petition No. 238/GT/2013 and Petition No. 456/GT/2014. The annual fixed charges approved by the Commission vide its order dated 28.9.2015 is as under:

	₹ in lakh	
	2012-13	2013-14
Return on Equity	2648.57	2841.43
Interest on Loan	35.36	8.43
Depreciation	566.74	572.47
Interest on Working Capital	275.94	290.87
O & M Expenses	4162.10	4400.17
Total	30819.36	32126.72

4. The petitioner vide affidavit dated 19.12.2014 has prayed for determination of tariff of the generating station for the period 2014-19 in accordance with the 2014 Tariff Regulations. Accordingly, the annual fixed charges claimed by the petitioner for the period 2014-19 are as under:

	₹ in lakh				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	2950.87	3547.40	3749.98	3902.46	4052.46
Interest on Loan	92.52	171.66	129.89	172.60	203.70
Depreciation	673.70	802.84	825.61	945.42	1071.54
Interest on Working Capital	424.35	465.38	493.61	526.46	560.84
O & M Expenses	6132.72	6540.18	6974.71	7432.11	7932.30
Total	10274.16	11527.46	12173.80	12985.05	13820.84

5. Reply to the petition has been filed by the respondent No.1, APDCL. The petition was heard on 7.4.2015 and the Commission vide Record of the proceedings held on 7.4.2015 directed the petitioner to file certain additional information. In response, the petitioner vide affidavit dated 1.6.2015 has filed the information with copy to the respondents. Thereafter, the matter was heard on 16.7.2015 and the Commission after directing the petitioner to file certain additional information, reserved its orders in the petition.
6. Based on the submissions of the parties and the documents available on record and on prudence check, we proceed to determine the tariff of the generating station for the period 2014-19 as stated in the subsequent paragraphs.

Capital Cost

7. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. Clause (3) of Regulation 9 provides as under:

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"9(3) The Capital cost of an existing project shall include the following: (a) the capital cost admitted by the Commission prior to 1.4.2014 duly tried up by excluding liability, if any, as on 1.4.2014;

(b) xxx

(c) xxx

8. The Commission in its order dated 7.10.2015 in Petition No.456/GT2014 had approved the closing capital cost of ₹27835.74 lakh as on 31.3.2014. This has been considered as the opening capital cost as on 1.4.2014 for the purpose of determination of tariff of the generating station for the period 2014-19.

Additional Capital Expenditure for 2014-19

9. Clause (3) of Regulation 7 of the 2014 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted upto 31.3.2014 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2014-15 to 2018-19. Clause (3) of Regulation 14 of the 2014

Tariff Regulations, provides as under:

"14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;

(ii) Change in law or compliance of any existing law;

(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;

(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;

(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;

(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;



(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;

(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station.

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation."

10. The year-wise breakup of the actual/ projected additional capital expenditure claimed by the petitioner is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Additional Capital Expenditure claimed on gross basis	5253.70	895.44	255.00	6379.65	150.00
De-capitalization claimed	962.00	252.00	97.00	2471.00	58.00
Net Additional Capital Expenditure claimed	4291.70	643.44	158.00	3908.65	92.00



11. It is noticed that the petitioner has claimed projected additional capital expenditure of ₹12933.79 lakh during the period 2014-19 which includes expenditure of ₹12497.94 lakh towards replacement of assets and ₹435.85 lakh towards New assets/works. It is observed that major expenditure claimed on under replacement include machinery components which had worn out /corroded due to the acidic nature of water. It is pertinent to mention that the problem of acidic nature of water became evident during the period after June, 2006 when the same was tested by the Geological Survey of India NER, Meghalaya Pollution Control Board and the Centre for Soil and Material Research Station, New Delhi. Based on the recommendations of the expert committee comprising of CEA, CWC and CSMRS and since the assets are necessary for efficient operation of the generating station, the Commission by order dated 30.9.2011 in Petition No.297/2009 had allowed the expenditure for replacement of assets/repair of the assets and procurement of new assets on account of damage caused due to acidic nature of water in terms of Regulation 9(2)(iv) of the 2009 Tariff Regulations. It was also made clear in the said order that the expenditure towards treatment of assets should not be frequent and should be for a longer period failing which the expenses cannot be capitalized and would fall under the category of O&M expenses. The relevant portion of the order dated order dated 30.9.2011 is extracted as under:

" 23. We now examine the claim of the petitioner for replacement of assets damaged due to acidic nature of water. It is observed that most of the items/assets which have been damaged and replaced or repaired due to acidic nature of water (pH value 3.36 to 5.44 instead of the normal pH value of 6.5 to 8.5) are sought to be replaced. The quality of the water became evident during the period after June, 2006, when the same was tested by the Geological Survey of India, North Eastern Region, Shillong, the Meghalaya State Pollution Control Board and the Centre for Soil and Material Research Station (CSMRS), New Delhi. The expert committee comprising of the CEA, CWC and the CSMRS had also visited the project site during the period from 27.2.2009 to 3.3.2009 and has suggested for routine testing of water in the area, concrete core drilling at specified locations in Khandong Dam, test of silt & slush, monitoring of seepage etc., Repair and replacement of corroded machine components, replacement of guide vanes with stainless steel materials, replacement of cooling pipes and tubes with suitable materials with epoxy coating. The expert committee had also recommended various short-term and long-term measures to be taken up. In the light of the recommendations of the expert committee, the petitioner has sought the replacement of assets/repair of assets and procurement of new assets, on account of damage caused due to the acidic nature of water. Taking into consideration the recommendations of the expert committee and since these assets are necessary for the efficient operation of the generating station, we are of the view that the expenditure to be incurred for replacement of the assets/repair of the assets and the procurement of new assets on account of the damage caused due to the acidic nature of water should be allowed in terms of Regulation 9(2)(iv) of the 2009 regulations. We proceed accordingly. However, it is expected that the expenditure towards treatment of the assets in order to encounter the acidic nature of water should not be frequent (within a year or two) and should be for a longer period (more than five years), failing which, the expenses cannot be capitalized and would fall under the category of O & M expenses for which the petitioner may be



required to approach the Commission separately with a detailed project report for carrying out the renovation works, which would be considered in accordance with law.

12. It is further noticed that as against the projected expenditure of ₹5613.41 lakh allowed on projected basis, the petitioner had capitalized expenditure of ₹1263.36 lakh during 2009-14. As regards the variation, the petitioner in Petition Nos. 238/GT/2013 and 456/GT/2014 had clarified that certain expenditure of nature of repairs and maintenance were allowed by the Commission as projected additional capital expenditure for the period 2009-14 considering the water acidity problems specific to the generating station causing damage to the underwater parts and the petitioner has already incurred a major portion of the expenditure allowed during the period 2009-14. However, the petitioner further submitted that considering the nature of such activities as well as to ensure compliance with the relevant accounting standards/policy, the expenditure has not been claimed as capital expenditure and has been excluded from the scope of the present petition for the purpose of revision of the annual fixed charges.
13. It is evident from the above submission that though the petitioner had incurred expenditure on replacement of corroded components during 2009-14, major portion of the expenditure which are in the nature of O&M expenses could not be capitalized. The expenses towards replacement of worn out/ corroded components have been charged to O&M expenses by the petitioner for the period 2009-14 and the same has been considered in the normative O&M expenses allowed to the generating station under the 2014 Tariff Regulations applicable for the period 2014-19. Accordingly, the projected additional capital expenditure claimed by the petitioner during the period 2014-19 i.e expenditure on replacement of cooler tubes, small valves, annual overhauling of turbines etc., which are in the nature of O&M expenses have not been considered for capitalization for the purpose of tariff by this order.
14. Based on the above submissions of the parties and information available on record, the claims of the petitioner for the period 2014-19 are considered and allowed on prudence check, after reduction of the gross value of old assets, wherever necessary, as detailed in the subsequent paragraphs.



2014-15

Sl. No.	Assets/ Works	Amount claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Turbine Spare Replacement.	2176.68	Replacement/ erection & commissioning of materials on account of acidification of reservoir water and technical obsolescence The works have been approved in principle by CEA.	Not allowed , as the claim is in the nature of revenue expenditure and expenditure for replacement of corroded components on account of acidification of reservoir water is already a part of normative O&M expenses allowed to the station for the period 2014-19	0.00
2	Panel Spares Replacement.	520.33			0.00
3	Generator Spares Replacement.	1394.68			0.00
4	Construction of bay for 5 MVA 132/33 KV transformers at Kopili PS switchyard for station auxiliary supply on cost plus basis.	163.93	The works have been approved in principle by CEA.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	163.93
5	Supply and delivery of Turbine spares for BHEL Hydro Turbine Generators Unit 3&4 of 4x50 MW Kopili Power Station.	188.36	Due to Acidification of reservoir water these items are to be replaced for smooth and efficient operation of the unit.	Not allowed , as the claim is in the nature of revenue expenditure and expenditure for replacement of corroded components on account of acidification of reservoir water is already a part of normative O&M expenses allowed to the station for the period 2014-19	0.00
6	Major Overhauling works in BHEL make Hydro Turbine Generator (Unit 3) of 4x50 MW Kopili P.S.	61.89			0.00
7	Supply, installation, testing & commissioning of CGL make complete GT winding along with transformer accessories of Kopili P.S., KHEP, NEEPCO Ltd. (Unit 3 & 4)	91.59	Due to Acidification of reservoir water cooler tubes are getting punctured and water is getting mixed up with the transformer oil as a result existing transformer winding got damaged.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	91.59



8	Supply and Delivery of 135 barrels (28350 ltrs.) of Turbine Oil (Servo Prime-57) to Kopili Power Station, KHEP, NEEPCO Ltd. (Unit-1 & 2)	53.88	Due to Acidification of reservoir water cooler tubes are getting punctured and water is getting mixed up with the transformer oil as such all the oil are to be replaced/topped up.	Not allowed , as the claim is in the nature of revenue expenditure and expenditure for replacement of corroded components on account of acidification of reservoir water is already a part of normative O&M expenses allowed to the station for the period 2014-19	0.00
9	Supply and Delivery of SS Plates to Kopili Power Station. (Unit-1 & 2)	12.37	Due to erosion in underwater parts of turbine on account of acidification of reservoir water these SS plates are to be cladded in the embedded potion of turbine components.		0.00
10	Manufacture, shop testing, supply and delivery of 73:30 Cu:Ni Oil Cooler Tubes bundles (for EMCO make GT) to Kopili Hydro Electric Plant. (Unit-1 & 2)	76.83	Due to Acidification of reservoir water cooler tubes are getting punctured and hence the same are to be replaced.	Not allowed , as the claim is in the nature of revenue expenditure and such expenditure for replacement of corroded components on account of acidification of reservoir water is already a part of normative O&M expenses allowed to the station for the period 2014-19	0.00
11	Supply and Delivery of 70/30 Cu-Ni cooler tubes for LGB/UGB & Thrust oil coolers of 4x50 MW Kopili Power Station. (Unit-1 & 2)	13.96			0.00
12	Supply and Delivery of Oil Coolers (tube bundles) for 20 MVA , 11/220 KV CGL make Generator Transformers of 4x50 MW Kopili Power Station. (Unit-1 & 2)	9.86			0.00
13	Supply and Delivery of cables to Kopili Hydro Electric Plant. (Unit-1 & 2)	14.23	The works has been approved in principle by CEA.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	14.23



14	Supply including installation, testing & commissioning of 2(two) no. of Spare Winding Limbs comprising of HV. LV & Tap Coil for 20 MVA, 11/220 KV EMCO make Generator Transformer including installation, testing & commissioning of Kopili P.S., KHEP. (Unit-1 & 2)	234.81	Due to Acidification of reservoir water cooler tubes are getting punctured and water is getting mixed up with the transformer oil as a result existing transformer winding got damaged and hence replacement is required.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	234.81
15	Supply and Delivery of 70:30 Cu:Ni Cooler tubes required for BHEL make Hydro Turbine Generators of 4x50 MW Kopili Power Station. (Unit-1&2)	12.24	Due to Acidification of reservoir water cooler tubes are getting punctured and hence the same are to be replaced.	Not Allowed as the claim is in the nature of revenue expenditure and expenditure for replacement of corroded components on account of acidification of reservoir water is already a part of normative O&M expenses allowed to the station for the period 2014-19	0.00
16	Supply of SS pipe & other SS materials of 304 grades. (Unit-1 & 2)	11.76	Due to erosion in underwater parts of turbine on account of acidification of reservoir water		0.00
17	Supply, installation, testing & commissioning of 2 nos. of Diesel Pump sets. (one for Unit#1&2 side and the other for Unit#3&4 side)	2.00	To pump out leakage water from Valve gallery , turbine pit and dewatering sump in case of emergency (i.e. power failure) such that power station can be saved from flooding. This leakages has been occurred due to Acidification of reservoir water	Need based expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	2.00
18	Supply, installation, testing & commissioning of 4 nos. of Submergible Pump sets. (for all the 4 (four) units)	4.00			4.00
19	Supply, installation, testing & commissioning of 2 nos. of Ingersol Rand make HP Air Compressor (1 no. unit1&2 side and other Unit-3&4 side)	6.00	Existing one was installed in the year 1996 and remains frequently inoperative and after sales service is very poor.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	6.00



20	Hydro mechanical works (New works in old existing structure) for one No Draft Tube gate and one No Pressure Release Valve (PRV) Gate for Unit-IV of Kopli Power Station (4X50MW), KHEP, Umrungso, Dima, Hasao, Assam	35.99	This is a new item. As per guideline of CWC each and every generating unit should have dedicated Draft Tube Gate. In Kopli Power Station 3 Nos of DT gates were used for operating 4 nos of generating units. Hence the 4th DT gate along with PRV gate is very essential for smooth operation of the power Station.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	35.99
21	Supply, Fabrication and Erection of Stainless Steel liner over the existing steel liner of Umrong Tunnel at the tunnel outlet near Kopili Vaive House, KHEP, Umrong, Assam	163.68	This is a new item. The steel liner provided at the outlet of Umrong tunnel near kopli valve house has been badly eroded and punctured at several locations resulting in huge leakage from the tunnel. Frequent shut down is necessary for repairing of the punctured steel liner which resulted in huge loss of generation. So rehabilitation measures with stainless steel liner are of utmost necessity.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	163.68
22	Raising of Umrong dyke from EL 608.30 M to EL 612.60 M	4.64	To achieve increased storage capacity and consequent increased generation capacity of Kopili H. E. Project and to support the 1st Stage extension (2 x 50 MW) and the Stage-II (1 x 25 MW) of KHEP.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	4.64
Total amount		5253.70		Amount allowed	720.87

2015-16

Sl. No.	Assets/ Works	Amount claimed	Justification submitted by the petitioner	Amount Allowed	
				Remarks on admissibility	(₹ in lakh)
1	Major overhauling works of Unit-4 including supply of consumables	100.00	Due to erosion in underwater parts of TG Unit-4 on account of acidification of reservoir water	Not allowed, as the claim is in the nature of revenue expenditure and replacement of corroded components on account of acidification of reservoir water is	0.00



				already a part of normative O&M expenses allowed to the station for the period 2014-19	
2	Installation & Commissioning of New Governing System for suitable implementation of FGMO/RGMO in BHEL make Hydro Turbine Generator Unit 3&4 (2x50 MW) of Kopili P.S.	283.94	Required under Regulation 5.2 (f) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	283.94
3	Supply & Commissioning of Numerical Protection system for Unit-1 & 2 (Generator and Unit Control Panel)	125.00	Minutes for the Joint Standing Committee Meeting of Eastern and North Eastern Region on Power System Planning held at Guwahati on 03-01-2014 circulated by CEA vide letter no. 66/5/SP&PA-2013/212-35 dated 23.1.2014.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant. The gross value of old asset is considered as ₹ 23.00 lakh.	125.00
4	Supply and commissioning of SF6 Breaker for 220kV Kopili-Misa feeder-III	30.00	The OEM (M/s BHEL) has stopped manufacturing of existing MOCB and spares against the same is also not available hence replacement is necessary.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	30.00
5	Supply, installation, testing & commissioning of New 3-phase 5MVA Station Service Transformer	120.00	The existing 5 MVA transformer which was purchased almost 25 years back failed and it is essential to procure new one for providing station supply.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant. The gross value of old asset is considered as Rs. 7.00 lakh.	120.00
6	Supply, installation, testing & commissioning of Coil for 3-phase 5MVA Station Service transformer.	40.00	New Coil for replacement of the existing damaged coil of 5MVA transformer	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	40.00



7	Supply, installation, & testing of super duplex TGB Cooler Tube Bundles. Unit 3&4	39.00	Due to Acidification of reservoir water cooler tubes are getting punctured and hence the same are to be replaced.	Not allowed , as the claim is in the nature of revenue expenditure and replacement of corroded components on account of acidification of reservoir water is already a part of normative O&M expenses allowed to the station for the period 2014-19	0.00
8	Supply, installation, & testing of 2 sets of New Battery Bank for providing DC supply to the control panels of the units.	7.50	Useful life of old battery bank is over.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	7.50
9	Supply, installation, & testing of New Battery Charger.	10.00	Due to technical obsolescence	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	10.00
10	Installation & commissioning of Fire Fighting System in place of existing damaged Fire Fighting System.	50.00	Due to Acidification of reservoir water existing pipe line and cooling water pump got damaged.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	50.00
11	Design, Engineering, manufacturing & supply of twin tube type / Oil Forced Air Forced heat exchanger for generator transformer (phase-1). Unit-1&2	80.00	This modification is required due to Acidification of reservoir water such that a permanent solution can be made to arrest damage of transformer winding and impurification of transformer oil.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	80.00
12	Supply, installation, & commissioning of New DC Distribution Board due to technical obsolescence	10.00	Due to technical obsolescence.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	10.00
Total amount claimed				Amount allowed	756.44



2016-17

Sl. No.	Assets/ Works	Amount claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Supply & Commissioning of Numerical Protection system for Unit-3 & 4 (Generator and Unit Control Panel) including LBB protection	150.00	Minutes for the Joint Standing Committee Meeting of Eastern and North Eastern Region on Power System Planning held at Guwahati on 03-01-2014 circulated by CEA vide letter no. 66/5/SP&PA-2013/212-35 dated 23/01/2014.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	150.00
2	Design, Engineering, & manufacturing & supply of twin tube type / Oil Forced Air Forced heat exchanger for generator transformer (Phase-2). Unit 3&4	40.00	These modifications are required due to Acidification of reservoir water such that a permanent solution can be made to arrest damage of transformer winding and impurification of transformer oil.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	40.00
3	Manufacture , shop testing, supply and delivery of 73:30 Cu:Ni / Super Duplex Oil Cooler Tubes to Kopili Hydro Electric Plant (for Unit-1&2)	15.00	Due to Acidification of reservoir water cooler tubes are getting punctured and hence the same are to be replaced.	Not allowed , as the claim is in the nature of revenue expenditure and replacement of corroded components on account of acidification of reservoir water is already a part of normative O&M expenses allowed to the station for the period 2014-19	0.00
4	Replacement of cooling water header pipe line with Stain less steel pipes (for Unit-3&4)	50.00	Due to Acidification of reservoir water existing GI pipelines got eroded hence it is proposed to replace the existing pipes with stainless steel pipes to have a permanent solution.	Amount allowed	0.00
Total amount claimed		255.00		Amount allowed	190.00

2017-18

Sl. No.	Assets/ Works	Amount claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Design, Engineering, & manufacturing & supply of twin tube type / Oil Forced Air Forced heat exchanger for generator	40.00	These modifications are required due to Acidification of reservoir water such that a permanent solution can be made to arrest damage of transformer winding and impurification of	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of	40.00



	transformer (Phase-3). Unit 3&4	transformer oil.	plant.	
2	Replacement of cooling water header line with SS pipes (for Unit-1&2)	150.00	Due to Acidification of reservoir water existing pipelines got eroded hence it is proposed to replace the existing pipes with stainless steel pipes to have a permanent solution.	Not allowed , as the claim is in the nature of revenue expenditure and replacement of corroded components on account of acidification of reservoir water is already a part of normative O&M expenses allowed to the station for the period 2014-19
3	Supply, installation, testing & commissioning of Stainless Steel Gate Valve of different size (for all four units)	75.00	Due to Acidification of reservoir water existing valves got eroded hence it is proposed to replace the existing valves with stainless steel valves to have a permanent solution.	0.00
4	Major Overhauling Works related to Unit# 3 & 4 of Kopili Power Station. As per Annexure-1	6114.65	Due to Acidification of reservoir water severe erosion of different water contact components of the Turbine-Generator has been observed and this work is necessary for smooth and efficient operation of the unit.	0.00
Total amount claimed			Amount allowed	190.00

2018-19

Sl. No.	Assets/ Works	Amount claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Supply, installation, testing & commissioning of 3 nos of Cooling Water Pump for Unit-3 & 4 side.	60.00	Old pumpsets are commissioned in the year 1996 and now these pumpsets are giving frequent trouble which sometimes leads to forced outage of the unit.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of plant.	60.00
2	Manufacture , shop testing, supply and delivery of 73:30 Cu:Ni / Super Duplex Oil Cooler Tubes to Kopili Hydro Electric Plant - Unit 3&4	90.00	Due to Acidification of reservoir water cooler tubes are getting punctured and hence the same are to be replaced for smooth & efficient operation of the unit.	Not allowed , as the claim is in the nature of revenue expenditure and expenditure for replacement of corroded components on account of acidification of reservoir water	0.00



					is already a part of normative O&M expenses allowed to the station for the period 2014-19
Total amount claimed	150.00	Amount allowed	60.00		

Additional capital expenditure

15. Based on the above, the additional capital expenditure claimed and allowed for the period 2014-19 is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure claimed	5253.70	895.44	255.00	6379.65	150.00
Additional capital expenditure allowed	720.87	756.44	190.00	190.00	60.00

Deletion

16. The petitioner has claimed the following de-capitalization for the period 2014-19 is as under:

		(₹ in lakh)
Sl. No.	Name of Asset	Original value of asset
1	Turbine Spare Replacement.	(-)400.00
2	Panel Spares Replacement.	(-)96.00
3	Generator Spares Replacement.	(-)256.00
4	Supply and delivery of Turbine spares for BHEL make Hydro Turbine Generators Unit# 3&4 of 4x50 MW Kopili Power Station.	(-)74.00
5	Major Overhauling works in BHEL make Hydro Turbine Generator (Unit#3) of 4x50 MW Kopili P.S.	(-)24.00
6	Supply, installation, testing & commissioning of CGL make complete GT winding along with transformer accessories of Kopili P.S., KHEP, NEEPCO Ltd. (Unit 3 & 4)	(-)36.00
7	Manufacture , shop testing, supply and delivery of 73:30 Cu:Ni Oil Cooler Tubes bundles (for EMCO make GT) to Kopili Hydro Electric Plant. (Unit-1 & 2)	(-)14.00
8	Supply and Delivery of 70/30 Cu-Ni cooler tubes for LGB/UGB & Thrust oil coolers of 4x50 MW Kopili Power Station. (Unit-1 & 2)	(-)2.00
9	Supply and Delivery of Oil Coolers (Tube Bundles) for 20 MVA 11/220 KV CGL make Generator Transformers of 4x50 MW Kopili Power Station. (Unit-1 & 2)	(-)2.00
10	Supply and Delivery of cables to Kopili Hydro Electric Plant. (Unit-1 & 2)	(-)2.00
11	Supply, installation testing & commissioning of 2(two) no. of Spare Winding Limbs comprising of HV. LV & Tap Coil for 20 MVA, 11/220 KV EMCO make Generator Transformer of Kopili P.S., KHEP. (Unit-1 & 2)	(-)43.00
12	Supply and Delivery of 70:30 Cu:Ni Cooler tubes required for BHEL make Hydro Turbine Generators of 4x50 MW Kopili Power Station. (Unit-1&2)	(-)2.00
13	Supply of SS pipe & other SS materials of 304 grade. (Unit-1 & 2)	(-)2.00
14	Supply, installation, testing & commissioning of 2 nos of IngersollRand make HP Air Compressor (1 no. unit1&2 side and other Unit-3&4 side)	(-)2.00



15	Design, Engineering, manufacturing & supply of twin tube type / Oil Forced Air Forced heat exchanger for generator transformer (Phase-1). Unit-1&2	(-)7.00
Total de-capitalization projected for 2014-15		(-)962.00
2015-16		
1	Major overhauling works of Unit-4 including supply of consumables	(-)1.00
2	Installation & Commissioning of New Governing System suitable for implementation of FGMO/RGMO in BHEL make Hydro Turbine Generator Unit 3&4 (2x50 MW) of Kopili P.S.	(-)2.00
3	Supply & Commissioning of Numerical Protection system for Unit-1 & 2 (Generator and Unit Control Panel)	(-)9.00
4	Supply and commissioning of SF6 Breaker for 220kV Kopili-Misa feeder-III	(-)14.00
5	Supply, installation, testing & commissioning of Coil for 3-phase 5MVA Station Service transformer.	(-)2.00
6	Supply, installation, testing & commissioning of TGB Cooler Tube Bundles. Unit 3&4	(-)39.00
7	Supply, installation, testing & commissioning of 2 sets of New Battery Bank for providing DC supply to the control panels of the units.	(-)111.00
8	Supply, installation, testing & commissioning of New Battery Charger.	(-)23.00
9	Renovation & Modernisation including installation & commissioning of Fire Fighting System	(-)6.00
10	Design, Engineering, manufacturing & supply of twin tube type / Oil Forced Air Forced heat exchanger for generator transformer (phase-1). Unit-1&2	(-)7.00
11	Supply, installation, testing & commissioning of New DC Distribution Board due to technical obsolescence.	(-)16.00
12	Supply, installation, testing & commissioning of New 3-phase 5MVA Station Service Transformer	(-)22.00
Total de-capitalization projected for 2015-16		(-)252.00
2016-17		
1	Supply & Commissioning of Numerical Protection system for Unit-3 & 4 (Generator and Unit Control Panel) including LBB protection	(-)59.00
2	Design, Engineering, manufacturing & supply of twin tube type / Oil Forced Air Forced heat exchanger for generator transformer (Phase-2). Unit 3&4	(-)16.00
3	Manufacture , shop testing, supply and delivery of 73:30 Cu:Ni / Super Duplex Oil Cooler Tubes to Kopili Hydro Electric Plant (for Unit-1&2)	(-)2.00
4	Replacement of cooling water header pipe line with Stain less steel pipes (for Unit-3&4)	(-)20.00
Total de-capitalization projected for 2016-17		(-)97.00
2017-18		
1	Design, Engineering, manufacturing & supply of twin tube type /Oil Forced Air Forced heat exchanger for generator transformer (Phase-3). Unit 3&4	(-)16.00
2	Replacement of cooling water header line with SS pipes (for Unit-1&2)	(-)27.00
3	Supply, installation, testing & commissioning of Stainless Steel Gate Valve of different size (for all four units)	(-)29.00
4	Major Over Hauling Works related to Unit 3 & 4 of Kopili Power Station	(-)2399.00
Total de-capitalization projected for 2017-18		(-)2471.00
2018-19		
1	Supply, installation, testing & commissioning of 3 nos of Cooling Water Pump for Unit-3 & 4 side.	(-)23.00
2	Manufacture , shop testing, supply and delivery of 73:30 Cu:Ni / Super Duplex Oil Cooler Tubes to Kopili Hydro Electric Plant - Unit 3&4	(-)35.00
Total de-capitalization projected for 2018-19		(-)58.00



17. Considering the fact that the capitalization of expenditure on replacement of assets of revenue nature e.g. overhauling expenditure, replacement of cooler tube bundles, spares, etc. has not been allowed. The corresponding projected deletions have also been ignored for the purpose of tariff. However, the petitioner is directed that any asset de-capitalized from books of accounts then the same will also be de-capitalized for the purpose of tariff provided that the same is in the capital base for the purpose of tariff. In case petitioner is able to prove that the de-capitalized asset is not a part of capital base for the purpose of tariff then the de-capitalization is ignored for the purpose of tariff. As such, the onus of proving that the de-capitalized asset is not a part of capital base would be on the petitioner.

18. In view of the above the de-capitalization projected and considered for the period 2014-19 corresponding to the assets allowed under replacement is as under, subject to review at the time of final truing-up:

	2014-15	2015-16	2016-17	2017-18	2018-19
De-capitalization projected	(-)962.00	(-)252.00	(-)97.00	(-)2471.00	(-)59.00
De-capitalization allowed	(-)90.00	(-)197.00	(-)75.00	(-)43.00	(-)23.00

19. Based on additional capital expenditure allowed and deletions considered, the net additional capital expenditure allowed is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure allowed	720.87	756.44	190.00	190.00	60.00
De-capitalization allowed	(-)90.00	(-)197.00	(-)75.00	(-)43.00	(-)23.00
Net additional capital expenditure allowed	630.87	559.44	115.00	147.00	37.00

Capital Cost for 2014-19

20. As stated, the closing capital cost as on 31.3.2014 is ₹ 27835.74 lakh. The same has been considered as the opening capital cost as on 1.4.2014. Accordingly, the capital cost considered for the purpose of tariff for the period 2014-19 is as under:



	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	27835.74	28466.61	29026.05	29141.05	29288.05
Additional Capital expenditure allowed	630.87	559.44	115.00	147.00	37.00
Capital Cost as on 31st March of the year	28466.61	29026.05	29141.05	29288.05	29325.05

Return on Equity

21. Regulation 24 of the 2014 Tariff Regulations provides as under:

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

- i). in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I;
- ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever;
- iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid;
- iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGM)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system;
- v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues;
- vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

22. Regulation 25 of the 2014 Tariff Regulations provides as under:

“Tax on Return on Equity

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in



the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate".

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after trueing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis."

23. The rate of Return on Equity (RoE) claimed by the petitioner is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Base Rate	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax Rate	20.961%	30.795%	33.990%	33.990%	33.990%
Rate of ROE (pre-tax)	20.876%	23.842%	24.996%	24.996%	24.996%

24. With regard to tax rate claimed for the purpose of grossing up of RoE, the Commission vide ROP dated 7.4.2015 directed the petitioner to submit clarifications/information on the following:

"The applicable tax rate for grossing up of Return on Equity as claimed by the petitioner is Minimum Alternate Tax rate for the year 2014-15 and Corporate Tax rate for the years 2015-16 to 2018-19. Clarification/ justification for the change in applicable tax rate claimed"

25. In response, the petitioner vide affidavit dated 10.6.2015 has submitted as under:



2014-15

After availing available MAT credit during the financial year 2014-15, it is estimated that the effective tax rate applicable for NEEPCO for the FY 2014-15 is expected to be the MAT rate only and accordingly the same has been considered.

2015-16

It is estimated that the during the FY 2015-16, the balance of the MAT credit available will be exhausted resulting in the expected effective tax rate for NEEPCO considered, which is more than MAT rate but lower than corporate tax rate"

2016-17 to 2018-19

It is expected that total MAT credit available will be exhausted during the FY 2015-16. Accordingly, NEEPCO will continue to paying normal corporate tax since the FY 2016-17 and accordingly, the same has been considered".

26. As per Regulation, effective tax rate is to be considered on the basis of actual tax paid in the respect of the financial year. Accordingly, the tax rates as claimed by the petitioner on projection basis have not been considered for the purpose of determination of tariff. Tax Rate as applicable for 2014-15 is considered for all the years of tariff. However, the petitioner is directed to furnish the detailed calculation of the effective tax rate, duly certified by Auditor and supported by tax audit report for the respective years, at the time of revision of tariff based on truing-up exercise in terms of the 2014 Tariff Regulations. Return on Equity has been computed as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Notional Equity	13489.70	13678.96	13846.79	13881.29	13925.39
Addition due to additional capital expenditure	189.26	167.83	34.50	44.10	11.10
Closing Equity	13678.96	13846.79	13881.29	13925.39	13936.49
Average Equity	13584.33	13762.88	13864.04	13903.34	13930.94
Rate of ROE (pre-tax)	20.876%	20.876%	20.876%	20.876%	20.876%
Return on Equity	2835.82	2,873.09	2,894.21	2,902.41	2,908.17

Interest on Loan

27. Regulation 26 of the 2014 Tariff Regulations provides as under:

"26. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.



- (3) *The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*
- (4) *Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*
- (5) *The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*
- Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*
- Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*
- (6) *The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*
- (7) *The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*
- (8) *The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.*
- (9) *In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:*
- Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."*
28. The normative loan of the project has already been repaid. The normative loan on account of admitted additional capital expenditure during the respective year of the tariff period has also been considered as paid fully, as the admitted depreciation is more than the amount of normative loan in these years. Accordingly, Interest on Loan during the period 2014-19 is Nil.



Depreciation

29. Regulation 27 of the 2014 Tariff Regulations provides as under:

“27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.



(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) alongwith justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”

30. The COD of the generating station is 12.7.1997. As such, the generating station has completed 12 years of operation as on 12.7.2009, the remaining depreciable value has been spread over the balance useful life of the project. Accordingly, depreciation has been worked out as follows:

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	27835.74	28466.61	29026.05	29141.05	29288.05
Additional capital expenditure during 2014-19	630.87	559.44	115.00	147.00	37.00
Closing gross block	28466.61	29026.05	29141.05	29288.05	29325.05
Average gross block	28151.17	28746.33	29083.55	29214.55	29306.55
Depreciable Value	25336.05	25871.69	26175.19	26293.09	26375.89
Balance Useful life of the asset	18.28	17.28	16.28	15.28	14.28
Remaining Depreciable Value	10779.70	10773.93	10560.96	10072.01	9520.48
Depreciation	589.68	623.47	648.69	659.14	666.67

Operation & Maintenance Expenses

31. Regulation 29 (3) (a) of the 2014 Tariff Regulations provides as under:

29. Operation and Maintenance Expenses:

(3) Hydro Generating Station

(a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 01.04.2014:

	2014-15	2015-16	2016-17	2017-18	2018-19
	6132.72	6540.18	6974.71	7438.11	7932.30

32. The petitioner has claimed the O&M expenses as per the above norms. The generating station is in operation for three or more years as on 1.4.2014. Accordingly, in terms

of sub-section (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations, the year-wise O&M expense norms claimed by the petitioner as above is allowed for the period 2014-19.

Interest on working capital

33. Sub-section (c) of Clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

28. Interest on Working Capital:

(1) The working capital shall cover

(a) Hydro generating station including pumped storage hydro electric generating Station and transmission system including communication system:

(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expense specified in regulation 29; and

(iii) Operation and maintenance expenses for one month.

34. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides that the rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.”

35. Accordingly, the receivables equivalent to two months of fixed cost is allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	1662.64	1,746.42	1,830.74	1,915.42	2,004.61

36. Maintenance spares @15% of the OM expenses is worked out and allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	919.91	981.03	1046.21	1115.72	1189.85

37. O&M Expenses for one month is worked out and allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	511.06	545.02	581.23	619.84	661.03



38. In terms of the above regulations, Bank Rate of 13.50% (Base Rate + 350 Basis Points) as on 1.4.2014 claimed by the petitioner has been considered in the calculations for working capital.

39. Necessary computations in support of interest on working capital are as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	919.91	981.03	1046.21	1115.72	1189.85
O & M expenses	511.06	545.02	581.23	619.84	661.03
Receivables	1662.64	1,746.42	1,830.74	1,915.42	2,004.61
Total	3093.61	3,272.46	3,458.18	3,650.98	3,855.48
Interest on Working Capital	417.64	441.78	466.85	492.88	520.49

(₹ in lakh)

40. Accordingly, the annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	2835.82	2,873.09	2,894.21	2,902.41	2,908.17
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	589.68	623.47	648.69	659.14	666.67
Interest on Working Capital	417.64	441.78	466.85	492.88	520.49
O & M Expenses	6132.72	6540.18	6974.71	7438.11	7932.30
Annual Fixed Charges	9975.85	10,478.52	10,984.46	11,492.54	12,027.64

(₹ in lakh)

Normative Annual Plant Availability Factor

41. Clause (4) of Regulation 37 of the 2014 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) for hydro generating stations already in operation. Accordingly, the NAPAF of 79% has been considered for this generating station.

Design Energy

42. The Commission in its order dated 10.5.2011 in Petition No.294/2009 had approved the annual Design Energy (DE) of 1186.14 Million units for the period 2009-14 in respect of this generating station. This DE has been considered for this generating station for the period 2014-19 as per month-wise details as under:

Month	Design Energy (MUs)
April	58.03
May	148.80
June	144.00
July	148.80
August	148.80
September	144.00
October	118.30
November	54.72
December	56.54
January	56.54
February	51.07
March	56.54
Total	1186.14

Enhancement of O&M expenses

43. The petitioner in the petition has submitted that the salary & wages of the employees of the petitioner will be due from 1.1.2017. It has further submitted that the petition has been submitted considering the O&M expenses in terms of Regulation 29(3)(a) of the 2014 Tariff Regulations and the yearly escalation provided in the O&M expenses may not cover the enhanced employee cost due to the aforesaid pay revision. Accordingly, the petitioner has sought liberty to approach the Commission for seeking enhancement in the O&M expenses with effect from 1.1.2017 due to pay revision, if any, under Regulation 54 and 55 of the 2014 Tariff Regulations. The matter has been examined. On this issue, the Commission in the Statement of Reasons to the 2014 Tariff Regulations has observed as under:

"29.26 Some of the generating stations have suggested that the impact of pay revision should be allowed on the basis of actual share of pay revision instead of normative 40% and one generating company suggested that the same should be considered as 60%. In the draft Regulations, the Commission had provided for a normative percentage of employee cost to total O&M expenses for different type of generating stations with an intention to provide a ceiling limit so that it does not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission would however, like to review the same considering the macro economics involved as these norms are also applicable for private generating stations. In order to ensure that such increase in employee expenses on account of pay revision in case of central generating stations and private generating stations are considered appropriately, the Commission is of the view that it shall be examined on case to case basis, balancing the interest of generating stations and consumers"

44. Accordingly, the prayer of the petitioner for enhancement of O&M expenses if any, due to pay revision may be examined by the Commission, on a case to case basis, subject to the



implementation of pay revision as per DPE guidelines and the filing of an appropriate application by the petitioner in this regard.

Application Fee and Publication Expenses

45. The petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees for the period 2014-19 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The petitioner has incurred charges towards publication of the said tariff petition in the newspapers. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations, and the decision of the Commission in order dated 6.1.2016 in Petition No.232/GT/2014, the petitioner is entitled to recover the filing fees and the expenses incurred on publication of notices for the period 2014-19 directly from the respondents. Accordingly, the expenses incurred by the petitioner towards tariff application filing fees and publication of notices in connection with the present petition shall be directly recovered from the respondent beneficiaries on pro rata basis.

46. The annual fixed charges approved for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

47. Petition No. 46/GT/2015 is disposed of in terms of the above.

**-Sd/-
(A.S. Bakshi)
Member**

**-Sd/-
(A.K.Singhal)
Member**

**-Sd/-
(Gireesh B.Pradhan)
Chairperson**



ANNEXURE-16.1

12/25/2018

JSW Mail - Fwd: Revised Estimate of Hanwha(Samsung) CCTV Products



Dinesh Mahato <dinesh.mahato@jsw.in>

Fwd: Revised Estimate of Hanwha(Samsung) CCTV Products

1 message

Navinder Rawat <navinder.rawat@jsw.in>

To: Dinesh Mahato <dinesh.mahato@jsw.in>

Cc: vikas gupta <vikas.gupta@jsw.in>, Himanshu Puri <himanshu.puri@jsw.in>

Sat, Dec 22, 2018 at 4:12 PM

Dear Dinesh,

Please find the attachment of CCTV offer as well Vendors recommendation for your reference.

----- Forwarded message -----

From: Mukesh Samsung <sales@cctvsamsung.in>

Date: Sat, Dec 22, 2018 at 2:10 PM

Subject: Revised Estimate of Hanwha(Samsung) CCTV Products

To: Navinder Rawat <navinder.rawat@jsw.in>

Dear Sir,

This is in reference with the site visit to one of your Plant.

Sir, the technology that you are currently using is obsolete. And that time I suggested you to install the latest technology i.e. IP System. It will be beneficial in all terms like good quality, durability, easy to access of information etc.

Please find enclosed herewith estimate for reference.

Please feel free to contact for any clarifications.

Thanks and Best Regards,

Mukesh

SRA Infosolutions

#404, Saraswati House, 4th Floor,

Building No.27, (Above Sona Sweets)

Nehru Place, New Delhi-110019

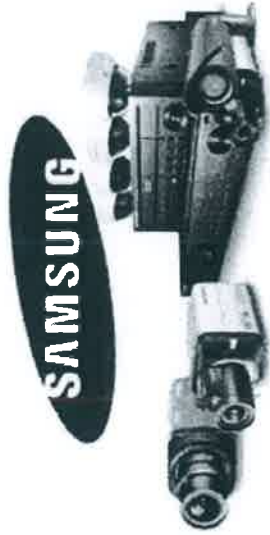
Landline : 9810955507/8860417700/9654493242

Email: aashish@cctvsamsung.in



12/25/2018

JSW Mail - Fwd: Revised Estimate of Hanwha(Samsung) CCTV Products



On Sat, Dec 22, 2018 at 12:34 PM Navinder Rawat <navinder.rawat@jsw.in> wrote:
FYIP

On Sat, Dec 22, 2018 at 12:31 PM Mukesh Samsung <sales@cctvsamsung.in> wrote:
Dear sir,

Greetings from SRA!

Thanks for remember, please re-send the attachment.

Thanks and Best Regards,

Mukesh

SRA Infosolutions

#404, Saraswati House, 4th Floor,

Building No.27, (Above Sona Sweets)

Nehru Place, New Delhi-110019

Landline : 9810955507/8860417700/9654493242

Email: aashish@cctvsamsung.in



On Sat, Dec 22, 2018 at 11:05 AM Navinder Rawat <navinder.rawat@jsw.in> wrote:
Dear Sir,

<https://mail.google.com/mail/u/0?ik=31570f3c03&view=pt&search=all&permthid=thread-f%3A1620546314962807538&siml=msg-f%3A16205463149...> 2/3



12/25/2018

JSW Mail - Fwd: Revised Estimate of Hanwha(Samsung) CCTV Products

In future Please communicate with this mail.

With Best Regards,

Navinder Rawat | Engineer (O&M Baspa-II) | JSW Hydro Energy Ltd.

HBPCL, Sholtu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India

M +91 9805644789 | +91 1786 261696 Extn 200/210

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With Best Regards,

Navinder Rawat | Engineer (O&M Baspa-II) | JSW Hydro Energy Ltd.

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With Best Regards,

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 **Revised JSW Estimate.pdf**
118K

<https://mail.google.com/mail/u/0?ik=315703c03&view=pt&search=all&permthid=thred-f%3A1620548314962807538&siml=msg-f%3A16205483149...> 3/3



ANNEXURE-16.2



SRA INFOSOLUTIONS

Deals In A complete range of Samsung CCTV Products

9810965507
0654405247

609 Madhuban Enclave 55 Nehru Place, Delhi-110019

Email: sales@srainfosolutions.com

Ref: Sra/JSw/111

Date: 22/12/2018

Estimate for Hanwha(Samsung) CCTV Products

S.no.	Specifications	Qty	Unit Price	Value(Rs.)
1	8-ports 10/100/1000 ports + 2 Gigabit SFP ports L2 Managable POE Switch along with SFP Modules / Fiber Transceiver	7	18500.00	129500.00
2	24-ports 10/100/1000 ports + 4 Gigabit SFP ports L2 Managable POE Switch along with SFP Modules/ Fiber Transceiver	4	25500.00	102000.00
3	20 10/100/1000 PoE+ Ports + 4 combo 10/100/1000BASE-T/SFP ports + 4 10Gb SFP+ ports L3 Gigabit Stackable Managed Switch along with SFP Modules/Fiber Transceiver	1	220000.00	220000.00
4	32 Channel NVR -XRN-2010P	1	105000.00	105000.00
5	HDD 4TB WD	12	8200.00	98400.00
6	IP Jyostick -SPC-2000	1	28500.00	28500.00
7	Workstation --Assembled -17, keyboard, mouse, monitor	1	67500.00	67500.00
8	40" LED industrial grade	2	48000.00	96000.00
9	IP PTZ -SNP-6320RHP	4	102000.00	408000.00
10	IP IR Fixed Bullet Camera -QNO-6010RP / QNO-6030RP	16	8500.00	136000.00
11	IP IR Motorised vertical Bullet Camera -QNO-7080RP	7	16500.00	115500.00
12	100Base-T to 1000Base-LX SC Single-mode Media Converter (10km	9	15000.00	135000.00
14	CAT6 UTP 23AWG Solid:305M	1000	28.00	28000.00
15	Supply of 42U Floor Mount Rack with accessories	1	75000.00	75000.00
16	Supply of 1U 6 PORT Rack Mount - Fully Loaded(SC) 5M with adapter and	6	9500.00	57000.00
17	Supply of 1U 12 PORT Rack Mount - Fully Loaded(SC) 5M with adapter and	4.00	9500.00	38000.00
18	PIGTAIL SC SM SIMPLEX LENGTH- 1m	100	520.00	52000.00
19	PATCH CORD LC-SC SM DUPLEX LENGTH- 2m	25	1850.00	46250.00
20	Patch Panel Cat 6 UTP Keystone Type- 12 Port-Fully Loaded	6	4700.00	28200.00
21	Commissioning & Testing , with fibre splicing, Freight charges etc.			220000.00
	Sub Total			2188850.00
	GST @18%			300709.00
	GST @28%(Rs.96,000)			26800.00
	Grand Total			2593439.00

1 Term & Conditions :-

- 2 Delivery : With in 45days
- 3 Payment : 50% advance and balance against delivery.
- 4 warranty : 3 years (No warranty for any physical damage), One year On-site and rest visit basis or AMC
- 5 Extra cameras : One PTZ, Two each ir bullet camera in costing .
- 6 Training to one of your employee will be provided by us.
- 7 Wiring and cabling fitting in your scope.

Thanking you,

For SRA Infosolutions,

(Keshav Juwal - Mgr. Accounts)





Himanshu Puri <himanshu.puri@jsw.in>

Requirement of terminal Relay Module-536126(Make:- Murr Elektronik)

Dipak Khot <dipak.k@murrelektronik.in>
 To: Himanshu Puri <himanshu.puri@jsw.in>
 Cc: raghavendra.b.c@murrelektronik.in

Wed, Jul 19, 2017 at 12:52 PM

Dear Sir,

With refer to below email, please note 536126 is pahse out product & we can not suggest you any alternative.

As solution please find attached technical data sheet of this Module, in which we will come to know that this module is having 2 relay & 2 Optocouplers working together with Input voltage of 230VAC / DC.

Also note this particular module must be installed on Base Module, so it is very difficult for us to suggest you any alternative soultion.

In this situation we suggest you to please study your application especially of Base & modules and it's input output electrical components. **Based upon this understanding you may use normal Relays & Optocouplers by removing this Phaseout Base & Modules.**

Please feel free to contact us for further query

Viele Grüße / Best Regards/ नमस्ते / नमस्कार

„Stay Connected“

Dipak Khot

Regional Sales Manager – Maharashtra & Goa Region

Murrelektronik Pvt Ltd

Office no. 106&107, First Floor,

Monyia business Centre,

Plot no. – GP115, G-Block,

MIDC Chinchwad, Pune - 411019

Cell : +91 9011397486

Email : dipak.k@murrelektronik.in

Web : <http://www.murrelektronik.com>

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From: Himanshu Puri [mailto:himanshu.puri@jsw.in]
Sent: 17 July 2017 17:56
To: dipak.k@murrelektronik.in
Subject: Requirement of terminal Relay Module-536126(Make:- Murr Elektronik)

Dear Mr.Dipak Khot,

As per the discussion we had,please find the details of the required relay module/optocoupler given as below:-

Relay Module/Optocoupler (2- Channel)

Make- MURR ELEKTRONIK

Article No.- 536126

Input: 60-230 V AC/DC

Output: Opto max 50mA/58 VDC

Relias max: 2A/250V AC/DC

Kindly revert back as per the availability of the same.Also please suggest a suitable replacement for the existing relay incase its not available any more.

An early reply from your side will be highly appreciated.

Himanshu Puri | Manager (O&M Baspa-II) | JSW Energy Ltd.

HBPCL, Shoitu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India

M +91 8894289616



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536126_db_2_c.pdf
212K



**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 232/GT/2014

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member**

Date of Hearing: 16.07.2015

Date of Order: 06.01.2016

In the matter of

Revision of Annual Fixed Charges for the period 2009-14 after truing-up exercise and Determination of annual fixed charges for the period 2014-19 respect of Rangit Hydroelectric Power Station

And

In the matter of

NHPC Limited
NHPC Office Complex,
Sector-33, Faridabad,
Haryana-121003

Vs

...Petitioner

1. West Bengal State Electricity Distribution Company Ltd
Bidyut Bhawan (8th Floor) Block-DJ, Sector-II Salt Lake
Kolkata – 700091

2. Damodar Valley Corporation ,
DVC Towers VIP Road
Kolkata – 700054

3. Jharkhand State Electricity Board
Doranda, Ranchi
Jharkhand – 834002

4. Bihar State Electricity Board
Vidyut Bhawan, Bailey Road
New Delhi – 110 019

5. Department of Power
Govt of Sikkim, Kazi Road,
Gangtok, Sikkim-737101

...Respondents



Parties present:

For Petitioner: Shri A.K. Pandey, NHPC
 Shri Piyush Kumar, NHPC
 Shri Karpatru Nayak, NHPC
 Shri Naresh Bansal, NHPC

For Respondents: None

ORDER

This petition has been filed by the petitioner, NHPC for revision of annual fixed charges of Rangit Hydroelectric Power Station (3 x 20 MW) (hereinafter referred to as 'the generating station') for the period 2009-14 in terms of Regulation 6(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 ("the 2009 Tariff Regulations") and for determination of tariff for the period 2014-19 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ("the 2014 Tariff Regulations").

2. The generating station located in the State of Sikkim comprises of three units of 20 MW capacity each and was declared under commercial operation on 15.2.2000. The tariff for the generating station for the period from 1.4.2004 to 31.3.2009 was approved by the Commission vide order dated 9.5.2006 in Petition No.175/2004. Against the said order, the petitioner filed appeal (Appeal No.138/2006) before the Appellate Tribunal for Electricity (the Tribunal) challenging amongst others, the (i) computation of correct amount of O&M expenses and (ii) computation of correct amount of maintenance spares. During the pendency of this appeal, the Commission by order dated 12.10.2009 in Petition No.40/2009 revised the annual fixed charges for the generating station after considering the impact on account of additional capitalization/de-capitalization during the years 2004-05 and 2005-06. Thereafter, the Tribunal by its judgment dated 23.12.2009 allowed the prayers of the petitioner as regards the Computation of O&M expenses and Maintenance spares. With regard to O&M expenses, the Tribunal directed that the O&M expenses shall be allowed in terms of the decision of the Commission dated 28.7.2008



in R.P. No. 22/2008 (in Petition No. 107/2006) in respect of Dhauliganga HEP. The relevant portion of the judgment is extracted as under:

"8. This issue has been decided by the Commission in its review order dated July, 28, 2008 in respect of Dhauli Ganga Hydroelectric Project. The decision of the Commission is set out hereunder:

xxxxxx

12. In the order dated December 13, 2007, the Commission in para 51 of the order observed as under:

"51. We observe that the petitioner has claimed the O&M expenses @ 1.5% of the admitted capital cost as on the date of commercial operation as per the Tariff Regulations, 2004. However, for the year 2006-07, the O&M expenses have been escalated @ 4% for the full year instead of considering pro rata escalation after completion of one year of DOCO. After considering pro rata escalation during 2006-07, the O&M expenses allowed for calculation of tariff for the tariff period are as under:

xxxxxxx

It is thus seen that there has not been adequate discussion on the statutory provisions made in the 2004 regulations and their effect before arriving at the conclusion as per para 51, reproduced above. This prima facie, in our opinion amounts to an error of law, apparent on the face of record. Therefore, we allow review of the order dated December 13, 2007 as regards computation of O&M expenses."

9. The above decision of the Commission in DhauliGanga squarely applies to the issue in hand in this Appeal. Accordingly we direct the Commission to allow the O&M expenses as per the approach followed in its review order dated July 28, 2008."

3. With regard to computation of Maintenance spares for working capital, the Tribunal in its judgment held as under:

"11. The issue lies in a narrow compass. The station has been commissioned on February 15, 2000. An escalation @ 6% per annum is provided for as per Clause (v) (a)(ii) of Regulation 38 of the 2004 Regulations. Regulations provide for escalation @ 6% for the full year. As the unit has been commissioned during the year 1999-2000 on February 15, 2000, effect of pro rata escalation @ 6% can be given by considering pro rata escalation for the period February 16, 2000 to March 31, 2000 and then allowing 6% escalation in the following full year i.e. from April 01, 2000 to March 31, 2001. In this regard Sub Section 4 of Section 62 of The Electricity Act, 2003 requires that "No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year except in respect of any changes expressly permitted in the terms of any fuel surcharge formula as may be specified". In view of this requirement of the Act it is not prudent to give effect to the annual escalation only after period of one year is completed as it would result in revision of the tariff in the middle of the tariff year. We, therefore, consider that pro rata escalation at the stipulated rate of 6% may be allowed for the period February 16, 2000 to March 31, 2000. With effect from April 01, 2000 a further escalation @ 6% per annum is payable. We order accordingly."

4. Against the judgment dated 23.12.2009, review petition was filed by the respondent, BSEB which was dismissed by order of the Tribunal dated 13.4.2010.



5. Thereafter, by order dated 3.9.2010 in Petition No.176/2009, the Commission revised the annual fixed charges for the generating station after considering the impact on account of additional capitalization/de-capitalization during the years 2006-07, 2007-08 and 2008-09. The annual fixed charges approved by the Commission vide orders dated 12.10.2009 and 3.9.2010 for the period 2004-09 are as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1155.06	1155.84	1155.85	918.20	920.33
Interest on Loan	622.74	202.53	73.99	0.00	0.00
Return on Equity	2616.05	2617.44	2617.46	2617.82	2620.92
Advance Against Depreciation	1892.58	0.00	393.58	0.00	0.00
Interest on Working Capital	194.25	158.76	168.29	161.24	166.83
O & M Expenses	839.19	872.76	907.67	943.98	981.73
TOTAL	7319.87	5007.32	5316.83	4641.25	4689.81

6. Though the tariff for the period 2004-09 in respect of this generating station was revised by the Commission through its various tariff orders as stated above, it is noticed that the observations of the Tribunal in the judgment dated 23.12.2009 had inadvertently not been considered in the computation of the O&M expenses and Maintenance spares for working capital which were allowed in those tariff orders for 2004-09, perhaps due to oversight. This inadvertent error is rectified and the O&M expenses and Maintenance spares earlier approved for the period 2004-09 has been revised in line with the observations of the Tribunal and allowed as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on Working Capital	198.31	163.04	172.81	166.01	171.87
O & M Expenses	868.42	903.15	939.28	976.85	1015.92

7. Consequent upon this, the annual fixed charges for the period 2004-09 in respect of this generating station stand revised as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1155.06	1155.84	1155.85	918.20	920.33
Interest on Loan	622.74	202.53	73.99	0.00	0.00
Return on Equity	2616.05	2617.44	2617.46	2617.82	2620.92
Advance Against Depreciation	1892.58	0.00	393.58	0.00	0.00
Interest on Working Capital	198.31	163.04	172.81	166.01	171.87
O & M Expenses	868.42	903.15	939.28	976.85	1015.92
TOTAL	7353.15	5041.99	5352.96	4678.89	4729.05

Revision of Annual Fixed Charges for 2009-14

8. Petition No.121/2010 was filed by the petitioner for determination of tariff of the generating station for the period from 1.4.2009 to 31.3.2014 and the Commission by its order dated 30.11.2011 had determined the annual fixed charges for the generating station for the said period. Subsequently, the annual fixed charges determined by order dated 30.11.2011 were revised by Commission's order dated 31.8.2012 in Review Petition No.3/2012. Thereafter, by order dated 10.12.2013 in Petition No.154/GT/2013, the annual fixed charges of the generating station for 2009-14 was revised after truing-up exercise based on the actual additional capital expenditure incurred during the period 2009-12 and revised projections for additional capital expenditure for the period 2012-14. The annual fixed charges allowed for the period 2009-14 by the said order dated 10.12.2013 is as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	4387.56	4325.88	4279.68	3315.70	3474.92
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	2499.40	2493.48	2498.92	873.41	874.55
Interest on Working Capital	284.42	291.06	298.73	253.77	266.63
O & M Expenses	2816.33	2977.42	3147.73	3327.78	3518.13
Total	9987.71	10087.84	10225.06	7770.66	8134.24

9. Clause (1) of Regulation 6 of the 2009 Tariff Regulations provides as under:

"6. Truing up of Capital Expenditure and Tariff

(1) *The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.*

Provided that the generating company or the transmission licensee, as the case may be, may in its discretion make an application before the Commission one more time prior to 2013-14 for revision of tariff."

(2) *The generating company or the transmission licensee, as the case may be, shall make an application, as per Appendix 1 to these regulations, for carrying out truing up exercise in respect of the generating station a unit or block thereof or the transmission system or the transmission lines or sub-stations thereof by 31.10.2014.*

(3) *The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors;*



10. The petitioner in this petition has claimed the revision of annual fixed charges for the period 2009-14 based on the actual additional capital expenditure incurred during the years 2012-13 and 2013-14 after truing-up in terms of Regulation 6(1) of the 2009 Tariff Regulations and for determination of tariff of the generating station for 2014-19. Accordingly, the annual fixed charges claimed by the petitioner for the period 2009-14 in this petition are as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	4387.56	4325.88	4279.68	3682.48	3920.46
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	2499.40	2493.48	2498.92	878.48	889.64
Interest on Working Capital	284.42	291.06	298.73	261.52	276.23
O & M Expenses	2816.33	2977.42	3147.73	3327.78	3518.13
Total	9987.71	10087.84	10225.06	8150.27	8604.46

11. The petition was heard on 16.7.2015 and the Commission after directing the petitioner to file some additional information reserved its orders in the petition. The petitioner has filed the additional information in compliance with the directions of the Commission and has served copies to the respondents. None of the respondents have filed replies to the petition. Based on the submissions of the petitioner and the documents available on record, we proceed to revise the tariff for the period 2012-14 based on truing-up exercise and also determine the tariff for the period 2014-19 in respect of the generating station as stated in the subsequent paragraphs:

Capital cost

12. The last proviso to Regulation 7 of the 2009 Tariff Regulations, as amended on 21.6.2011 provides as under:

"Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff."

13. The Commission had considered the opening capital cost of ₹49350.88 lakh as on 1.4.2009 for the purpose of revision of tariff for the period 2009-14 in order dated 10.12.2013 in



Petition No.154/GT/2013. Also, the admitted capital cost of ₹49101.63 lakh as on 1.4.2012 in the said order dated 10.12.2013 has been considered for revision of tariff for the period 2012-14.

Actual Additional Capital Expenditure (2012-13 and 2013-14)

14. Regulation 9 (2) of the 2009 Tariff Regulations, as amended on 21.6.2011 provides as under:

"9. (2) The capital expenditure incurred or projected to be incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
- (ii) Change in law;
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and
- (v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2009.

15. The re-conciliation of actual additional capital expenditure claimed in this petition with respect to additional capital expenditure as per books of accounts duly certified by auditor for the period 2012-13 and 2013-14 is as under:

Sl. No.	Particulars	2012-13	2013-14
1	Additional Capitalization claimed		
(a)	Additions		
i	Capitalisation against works projected and allowed for additional capitalisation during 2012-13 and 2013-14	37.11	75.99
ii	Capital expenditure allowed in previous years but actually incurred in this year	18.08	11.84
iii	Additional Capital Expenditure not projected but claimed.	247.14	180.87



		Total 1(a)	302.32	268.70
(b)	Deletion / Deduction			
i	Assets deducted on Replacement of new assets covered under Category-A		(-) 0.86	(-) 1.33
ii	Deduction of Assets without any Replacement and not covered under Exclusion clause		(-) 4.35	(-0) 23.77
	Total 1(b)		(-) 5.21	(-) 25.10
(c)	Net Additional claimed 1(c)=1(a)+1(b)		297.11	243.60
2	Additional Capitalization (Not claimed)			
(a)	Additions			
i	Addition other than Inter-unit additions		888.01	151.48
ii	Addition on account of Inter-unit transfer		0.00	1.84
	Total 2 (a)		888.01	153.31
(b)	Deletions			
i	Deletion other than Inter-unit transfer		(-) 23.14	(-) 91.70
ii	Deletion on account of Inter-unit transfer of minor assets		0.00	(-) 3.65
	Total 2 (b)		(-) 23.14	(-) 95.36
(c)	Net amount under Exclusion Category 2(c)= 2(a)+ 2(b)		864.87	57.96
3	Net Additional Capitalisation (including Inter-Unit Transfer) as per Books of Accounts 3=1(c)+2(c)		1161.99	301.56
4	Net additional capitalisation			
i	Net additional capitalisation as above		297.11	243.60
ii	Less:- Assumed deletions		(-) 28.22	(-) 2.69
	Net additional capitalisation claimed		268.88	240.91

* note: all figures have been rounded off to the nearest amount

16. Based on the above reconciliation, the year-wise admissibility of the additional capital expenditure under various heads is discussed in the subsequent paragraphs.

Additions against works already approved

2012-13

17. The details of works/assets, the additional capital expenditure allowed for these works / actual additional capital expenditure against these works along with reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

Sl. No	Assets/works	Amount allowed on projected basis	Actual expenditure incurred/ claimed	Justification for admissibility of expenditure
1	Construction of Store & Miscellaneous at dam and Power house area.	10.00	13.63	Allowed as the asset / work was approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations. However, the claim of the petitioner for capitalisation of an



				expenditure of ₹3.21 lakh for Supply, Installation and Commissioning of fountain at VIP guest house of the generating station has not been allowed as the asset does not contribute to the efficient operation of the generating station. Accordingly, a total expenditure of ₹10.42 lakh has only been allowed.
2	Purchase of different type of Switchyard spares, LT & HT switchgear for Dam (HM), Colony, power house.	8.00	16.69	Allowed as the asset/work was already approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations. Since deletion value of old asset is not available, the assumed deletion of ₹9.29 lakh has been considered as against the claim of the petitioner for 10% of the cost of the new asset. The old asset has been de-capitalized under "Assumed deletions".
3	Purchase of different types of pumps against replacement	4.60	5.17	Allowed as the asset/work was already approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations. An amount of ₹0.95 lakh has been considered as the deletion value of the old asset under "Assumed deletions".
4	Safety measure equipments & Fire fighting accessories	2.00	1.62	Allowed as the asset/work was already approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations.
Total claimed			37.11	
Total allowed				33.90



Works allowed in previous years but capitalized in 2012-13

18. The details of works/assets, the additional capital expenditure allowed for these works / actual additional capital expenditure against these works along with reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations are as under:

Sl. No	Assets/works	Amount allowed on projected basis	Actual expenditure incurred/ claimed	Justification for admissibility of expenditure
1	Transformer Oil Filtration Plant Of Capacity 200 LPH	9.33	5.64	Allowed as the asset/work was already approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations. Since deletion value of the old asset is not available, the assumed deletion of ₹3.14 lakh has been considered as against the claim of the petitioner for 10% of the cost of new asset. The old asset has been de-capitalized under "Assumed deletions".
2	X-Ray Machine	7.00	9.71	Allowed as the asset/work was already approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations. An amount of ₹0.86 lakh has been considered as the deletion value of the old asset under "Deletions".
3	Sub Woofer Min Power Capacity Continuous/Program/Peak- 800 / 1600 /3200	4.20	1.16	Not allowed. The assets claimed under this head have already been allowed in year 2009-10 vide order dated 10.12.2013 in Petition no. 154/GT/2013 against the projection of ₹4.20 lakh.
4	2 Way Passive PA Speaker System, Min Power Capacity, Continuous/ Program/Peak- 800/ 1600 /3200		1.57	
	Total claimed		18.08	
	Total allowed			15.35



2013-14

19. The details of works/assets, the additional capital expenditure allowed for these works / actual additional capital expenditure against these works along with reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

Sl. No	Assets/works	Amount allowed on projected basis	Actual expenditure incurred/ claimed	Justification for admissibility of expenditure
1	Construction of room, latrine, toilet and miscellaneous structure for DAV school and office / stores from township, since the existing temporary sheds are in damaged condition.	40.00	52.76	Allowed as the asset/work was already approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations.
2	Purchase of different types of pumps against replacement	5.00	14.54	Allowed as the asset/work was already approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations. The petitioner has considered de-capitalized value of ₹1.15 lakh under "Assumed deletions". However, keeping in view the COD of generating station, an amount of ₹7.71 lakh has been considered as the de-capitalized value of the old replaced assets. The old asset has been de-capitalized under "Assumed deletions".
3	Safety measure equipments & Fire fighting accessories, Security & Surveillance Equipments.	12.00	8.69	Allowed as the asset/work was already approved by Commission in order dated 30.11.2011 in Petition No. 121/2010 under Regulation 9(2) (iv) of the 2009 Tariff Regulations. Since the gross value of the replaced assets is not available, the petitioner has recommended 10% value of the actual additional expenditure incurred to be considered as de-capitalized value of the old assets. Keeping in view the COD



				of generating station, an amount of ₹1.27 lakh has been considered as the de-capitalized value of the old replaced assets. The old asset has been de-capitalized under "Assumed deletions".
			75.99	
			75.99	

Works allowed in previous years but capitalized in 2013-14

20. The details of works, the additional capital expenditure allowed for these works, the actual additional capital expenditure incurred against these works along with justification for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

Sl. No	Assets/works	Amount allowed on projected basis	Actual expenditure incurred/ claimed	Justification for admissibility of expenditure
1	TATA Bus	12.00	11.84	Allowed as the asset/work was already approved by Commission under Regulation 9(2) (iv) vide Order dated 30.11.2011. However, deletion value of ₹10.00 lakh as provided in Petition No. 121/2010 has been considered under "Assumed Deletions" in place of ₹1.33 lakh as considered by the petitioner under regular "Deletions".
	Total claimed		11.84	
	Total allowed			11.84

Capital expenditure not projected/allowed, but incurred and claimed

21. The details of the actual additional capital expenditure incurred against new works/ assets along with admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:



2012-13

Sl. No	Assets/works	Actual expenditure incurred / claimed	Justification submitted by petitioner	Admissibility of expenditure (₹ in lakhs)
1	Supply, Erection & Commissioning of level sensor at Rangit dam	11.34	The Level sensor at Rangit Dam has been installed on replacement of level sensor installed earlier which was not functioning properly. The level sensor is very much essential for the monitoring of Dam water level and its display at Control Rooms.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the asset is considered necessary for successful and efficient operation of the generating station. Since the deletion value of old asset is not available, the assumed deletion of ₹6.31 lakh has been considered as against the claim of the petitioner @ 10% cost of the new asset. The old asset has been de-capitalized under "Assumed deletions".
2	Purchase of Common Meter Reading Instrument(CMR) complete with software, communication cable to pc and charger etc	0.31	The generating station has two CMRI meters. Out of these two meters, one meter is very old and defunct, the second meter is used for collecting data from Unit/Lines special energy metres. This SEM data is further utilized for preparation of daily generation report. In case of any problem in this meter, it is very difficult to download data from energy meters and hence interruption in preparing of DGR. Keeping in view of these facts, one additional meter has been purchased.	Not allowed under Regulation 9(2)(iv) as the asset is of minor nature.



3	Purchase of Manual Operated Variable Auto Transformer 3-Phase, 50 Hz	0.32	3-Phase Manual Operated Variable Auto Transformer is used for supplying different level of current and voltages for relay testing and other purposes. Hence necessities have been felt to purchase one no. 3-Phase Manual Operated Variable Auto Transformer.	Not allowed under Regulation 9(2)(iv) as the asset is of minor nature.
4	Purchase of CVT	10.53	07 nos. of Single winding 132 KV CVTs (3 x 2 in Transmission line viz. Siliguri, Ramam & 132 kV Melli + 1 X 1 in 20 MVA Transformer incomer) are installed at Switchyard of Rangit Power House. It is necessary to maintain some spare CVT to meet any emergent requirement and also to replace some faulty CVT. Keeping in view of all these facts, spare CVT has been purchased.	Not allowed under Regulation 9(2)(iv) as the asset is in the nature of spares.
5	Purchase of event logger with accessories	26.76	Event logger is a data recording / storing device used to record SoE of electrical / mechanical equipments in any power generating station. The generating station has 'AREVA make' Event Logger of 'Model S900' which is not operational due to some faults in its internal parts.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the asset is considered necessary for successful and efficient operation of the generating station. Since the deletion value of old asset is not available, the assumed deletion of ₹14.90 lakh has been considered as against the claim of the petitioner @ 10% cost of the new asset. The old asset has been de-capitalized under "Assumed



			<p>Continuous operation of machines without taking event logger in-line is not a healthy practice because sequence of some events before and after a fault could not be explored for diagnosis, if a fault occurs. Also the point of un-healthiest of the event logger in generating station has been raised by technical inspection team from corporate office time-to-time. Existing event logger could not be made functional without repairing / changing of the faulty cards. OEM has informed that manufacturing of the existing model (S900) of Event Logger/card has been stopped and issued a certificate of 'Product Obsolescence for S900 Event Logger'. Hence, proposal for replacement of this existing event logger with its latest counterpart which will suit our current requirement as well as future requirement of up-gradation of system to SCADA. And based on the suggestion by OEM, Model MICOM C264 RTU (80TE) has been found technically suitable</p>	<p>deletions".</p>
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6	Installation and commissioning of 01 no. of 66kv circuit breaker at switchyard of Rangit power station	0.77	meeting all the requirements.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the asset is considered necessary for successful and efficient operation of the generating station. Since the deletion value of old asset is not available, the assumed deletion of ₹0.43 lakh has been considered as against the claim of the petitioner @ 10% cost of the new asset. The old asset has been de-capitalized under "Assumed deletions".
<p>There are three no. of BHEL make 66 KV SF6 circuit breaker in the Switchyard of generating station. Out of these three, the breaker in the incomer side of 66 kV Bus, which also acts as a connecting link between 66 kV bus and 132 KV bus through an Auto-Transformer, is not performing well. Its unreliable operation is creating difficulties in order to maintain the smooth operation of power house as well as to maintain the cordial relations with other Grid utilities. As the BHEL make breakers of all three generating units and three lines (132 KV RGT-SLG, 132 KV RGT-RAMMAM and 132 KV RGT-MELLI) have already been replaced by Siemens breakers due to the same reasons and performance of the installed Siemens make 132 KV SF6 circuit breakers are quite satisfactory. Therefore, 1 no. of BHEL make SF6 circuit breaker has been replaced by Siemens make breaker.</p>				



7	Purchase of SF6 outdoor circuit breaker with all fittings and galvanised steel structure	8.14	The generating station switchyard have total nine bays i.e (3 generator bays +5 line bays +1 bus coupler bay) and 9 no. SF6 breakers, make-BHEL are very old and installed at the time of commissioning of generating station. Keeping in view of day to day operation problems, these breakers were replaced one by one in last past years. Therefore Siemens Make SF6 breaker has been purchased based on past performance of SF6 breakers in Unit, Line bays to replace old BHEL Make SF6 breaker in bus coupler bay.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the asset is considered necessary for successful and efficient operation of the generating station. Since the deletion value of old asset is not available, the assumed deletion of ₹4.53 lakh has been considered as against the claim of the petitioner @ 10% cost of the new asset. The old asset has been de-capitalized under "Assumed deletions".
8	Purchase of non integral floodlight luminaries.	2.47	The same is purchase for the lightening of various places of power station areas like store yard, dam etc. It is very much essential to keep these places very-very lighted.	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the asset is considered necessary for the safety of the plant which will in turn ensure the efficient operation of the generating station.
9	Purchase of high mast lighting system each in power house, switchyard and central store	19.21	Power house & Switchyard area consists of vital establishments/equipments/assets/instruments for smooth operation of Power House. The above outdoor area of Power House & Switchyard is spread in the length of approx. 50 to 100 m. Also, the power station being the	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the asset is considered necessary for the safety of the plant which will in turn ensure the efficient operation of the generating station.

			<p>asset of national importance, there is need to enhance the security of the Power House & Switchyard area for which proper illumination of the area during night is required. Also, the area in Central store is scattered having various Godowns & Scrap-yard situated in the radius of approx 50 m and the same require daylight illumination. Therefore, due to security point of view, necessity has been felt for High Mast Lighting in these areas.</p>	
10	Supply, Erection & Commissioning of AMF panel for DG set at Dam	9.80	<p>One no. of 350 KVA DG set is installed at Rangit Power House to meet the power demand in emergency situation like grid fail etc. This DG set is also used for starting power required to start a synchronous generator in the case of complete black out. Therefore, this DG set acts as a critical asset of Rangit Power House. Presently, the control of DG set i.e., START/STOP is done manually. Since DG set is located at a distance from power house control room so it takes considerable time to reach operating personnel at DG set</p>	<p>Allowed under Regulation 9(2)(iv) as the asset is considered necessary for the safety of the plant which will facilitate the successful and efficient operation of the generating station.</p>



			control panel. In emergency situation like grid fail, such time delay to start a DG set may lead to delay in control of leakage water through drainage / dewatering sump. Therefore, it is essential to install AMF control panel for DG set so that it can START/STOP automatically to control the leakage water and avoid any flood like situation as well as to provide sufficient starting power to normalize the units		
11	Purchase of loader-cum excavator.	26.51	Loader cum Excavator has been purchased on replacement of Hyd. Excavator to cope up with requirements of Power Station as per approval of O&M Division Office Order no. NH /O&M/ RGT / 05 / 2012/685 dated 27.6.2012.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations, as the asset is considered necessary for the efficient operation of the generating station. The gross value of the replaced asset is considered as ₹13.63 lakh. The old asset is being de-capitalized under "Assumed deletions"	
12	Purchase of Hydra crane, 14 ton capacity.	15.81	Hydra Crane has been purchased on replacement of 02 truck mounted cranes to cope up with requirements of Power Station.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations, as the asset is considered necessary for the efficient operation of the generating station. Since the deletion value of old asset provided by the petitioner is less, an amount of ₹8.80 lakh has been considered as against the amount for ₹0.89 lakh indicated by the petitioner. The old asset has been de-capitalized under "Assumed deletions"	



13	Purchase of Refrigerated Air dryer, capacity-40 cfm,	1.64	High Press - 50 kg/cm ² system are in use for operation of guide vane servomotor and MIV and Low Press. -7 kg/cm ² system are in use for applying of brake jack and misc. Due to hilly area and high moisture content in air of this location it creates problem in aforesaid system by mixing of moisture to oil and brake jack system. Hence Refrigerated Air Dryer was quite urgent of smooth running of aforesaid system being lifeline of power house.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations, as the asset is considered necessary for the efficient operation of the generating station.
14	Purchase of Refrigerated air dryer, capacity-110cfm	2.07		
15	Purchase of chain pulley block triple spacer (gear type) 3 ton capacity (2 nos.)	0.34	The chain pulley blocks required for the shifting of various heavy items like pumps etc. from one part to other within the power house.	Not allowed as the asset is in the nature of "Tools & Tackles".
16	Purchase of Resistance Test card	2.83	These are required as accessories to the main testing equipment i.e. Multi function test kit for testing of various other equipments.	
17	Purchase of CT Test card	4.38	These are required as accessories to the main testing equipment i.e. Multi function test kit for testing of various other equipments.	Not allowed as the asset is in the nature of O&M
18	Purchase of pipe bender capacity 4" to 8" complete with 5hp hydraulic power pack.	8.95	In Rangit Power House, different types of pipe segments in circular/bended form are installed for cooling water pipeline in LGB,	Not allowed as the asset is in the nature of "Tools & Tackles".

19	Multifunctional primary injection test kit with display machine	22.15	<p>UGB and Stator Air Cooler, Oil line for guide vane servomotor as well as MIV, MIV Bypass etc. Since 12 years have been passed after commissioning of power house and eroded pipe are getting punctured. Hence for replace the same, Pipe Bending Machine is quite urgent for smooth running of power house.</p> <p>The multi function test kit is essentially required for Condition monitoring/assessment of various high voltage systems/equipment s e.g. Power Transformers, Current Transformers, Voltage Transformers etc., Contact resistance measurements, Winding resistance measurement, testing of various Sub-station equipments of power station.</p>	
20	Purchase of Gasoline power unit for radial gate (size 9x12mtr. height) along with materials for piping.	12.75	<p>Gasoline Power Pack has been purchased as an alternate source for operation of Radial Gates to cope up with urgency in case of non functioning of Hydraulic cylinders.</p>	<p>Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations, as the asset is considered necessary for successful and efficient operation of the generating station.</p>



21	Purchase of traveller ambulance.	8.35	The ambulance in the power station met with an accident & got missed in the river bed, become untraceable due to heavy current of water, in the current financial year. Hence a new one is purchased for mitigation of the emergency medical situation.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations, Keeping in view that the asset is for the benefit of the employees working in remote areas of the project and in turn facilitates the successful and efficient operation of the generating station. The gross value of the replaced asset is considered as ₹5.82 lakh. The old asset is being de-capitalized under "Assumed deletions".
22	Purchase of LAN extender 2(nos.)	0.38	These are the networking devices and the same is required for the connecting remote sites of power station like admin. Building to other sites for ERP and sharing of power plant related data.	Not allowed as the asset is in the nature of minor assets.
23	Purchase of Analog extension line card 24 port	1.13	For establishing effective communication network between Dam site and other Location of generating station the EPABX installed at Rangit Dam site.	
24	Purchase of Siemens Hipath 3800 voice communication server with all accessories	4.20	There was no surveillance system installed at Rangit Power Station to online monitor Power house & Switchyard area which consists of vital equipments for smooth operation of Power House & Switchyard. Also, the power station being the asset of national importance, hence necessities have been felt to enhance the security of the	Allowed under Regulation 9(2)(iv) since the asset is considered necessary for the successful and efficient operation of the generating station.



			<p>Power House & Switchyard area by equipping online surveillance cameras with LAN compatibility along with main big size display in PH & control room & storage facility for the coverage for few weeks. Therefore, surveillance system has been installed at various locations viz. switchyard, TRC/Outside Power House Building and different floors of Power House. Apart from strengthening of security, the above surveillance system will also help in monitoring the various equipments inside Power House, Switchyard & Generator Transformers (GT) area. In addition to that the camera at the TRC area would also help in monitoring the silt condition of the river during monsoon season along with TRC level which will help during day-to-day working and during emergency situations as well.</p>	<p>Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the asset is considered necessary for the safety of the plant which will facilitate the successful and efficient operation of the generating station.</p>
25	Purchase of surveillance system in power house & switchyard	19.68	<p>There was existing LAN system which consists of very few nodes to connect with the end user terminals as well as of low bandwidth. Hence it is felt to increase the</p>	



26	Purchase of LAN (Wired & Wireless) at Rangit Administrative building	20.10	connectivity due to increase in users and increase in IT applications like ERP, high speed LAN (wired and wireless) has been implemented. Further, the same is also helpful in connecting to the remote sites of the power station as well for better and redundant connectivity.	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the asset is considered necessary for the efficient operation of the generating station.
27	Purchase of Xerox WC5016 digital copier	0.75	As per the requirement in the power station the photo copier machines were purchased to upgrade the existing analogue machines in the power station.	Not allowed as the asset is in the nature of minor assets
28	Purchase of Xerox digital photocopier model no. WC5020 with duplication and networking item	1.04		
29	Purchase of metal halide fitting (tunnel lighting luminaries)	0.85	The light fittings were purchased for use in various places in the power station like Dam, Tunnel and power house etc.	Not allowed as the asset is in the nature of minor assets
30	Purchase of digital insulation tester.	3.39	The instruments are purchased for the checking of healthiness of insulation of various electrical instruments in the power house.	Not allowed as the asset is in the nature "Tools & Tackles".
31	Purchase of constant voltage transformer	0.17		Not allowed as the asset is in the nature of minor assets
	Total claimed	247.14		
	Total allowed			189.62



2013-14

Sl. No.	Assets/works	Actual expenditure incurred/ claimed	Justification submitted by the petitioner	Remarks for admissibility (₹ in lakhs)
1.	Dam & Barrage	154.82	After finalization of the final deviation related to the construction of the Concrete Dam and slide zone treatment of the right bank of dam axis by M/s HCL Ltd., the amount has been capitalized.	Allowed under Regulation 9 (2)(ii) of the 2009 Tariff Regulations as the expenditure is towards final adjustment of bill
2.	Purchase of HPSV street light fitting 70 watt, elliptical type	1.63	The same is purchased for use in various places of Dam, ECD and power house etc.	Not allowed as the asset is in the nature of minor assets
3.	Purchase of Gasoline power unit for radial gate (size 9 mtr.x 12 mtr. height) along with materials for piping.	1.11	Gasoline power pack has been purchased as an alternate source for operation of radial gates to cope up with urgency in case of non functioning of hydraulic cylinders.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the asset is considered necessary for successful and efficient operation of the generating station.
4.	Purchase of digital Earth tester	0.17	Earth tester is very important measuring instrument to measure soil resistivity. it is necessary to measure soil resistivity once in a year to know grounding resistance of earth pits which should not go beyond the specified limit. hence it is necessary to have a earth tester so that continuous monitoring of soil resistivity could be monitored time to time and suitable necessary action for improving grounding resistance of various pits could be taken timely. Hence a digital earth tester has been purchased.	Not allowed as the asset is in the nature of "Tools & Tackles".



5.	Purchase of 60 kV lightning arrester	0.99	27 nos. of 120 kV, Crompton Greaves make lightning arrester are installed in switchyard. as the lightning arrestors are very first guard to protect the power house/switchyard's vital equipments against any type of unwanted surge/lightning, there must be sufficient no. of spares available for smooth operation of ph and to avoid any longer shutdown especially for generating units, which will ruin the generation / capacity index target. also, most of the las installed at power house & switchyard are very old and very prone to be damaged during the fault conditions. keeping in view of above, additional 06 nos. of 120 kV as a spare of m/s Crompton greaves make (model no.- zlx25c) has been purchased.	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations towards safety of the plant which will in turn facilitate the successful and efficient operation of the generating station.
6.	Purchase of 72.5 kv 2500 amp, SF6 outdoor circuit breaker	12.99	There are three number of 66kv sf6 circuit breaker in the switchyard of generating station. Out of these three, one is Siemens make which has been installed after replacing the old BHEL make, and the other two are of BHEL make. These two circuit breakers are installed at very critical locations viz, one at 66 kV Rangit – Ravangla line and the other at the hv side of 3 MVA transformer. Above two circuit breakers are very old therefore creating some operational problem. The unreliable operation of these circuit breakers is creating difficulties in order to maintain the smooth operation of power house. Therefore, necessities are being felt to replace the above mentioned BHEL make 66 kV sf6 circuit breakers by new ones. Keeping in view of all these facts, 02 nos. of BHEL make SF6 circuit breaker has been purchased.	Allowed on replacement under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the asset is considered necessary for successful and efficient operation of the generating station. Since the deletion value of old asset is not available, the assumed deletion of ₹6.89 lakh has been considered as against the claim of the petitioner for 10% of the cost of new asset. The old asset is being de-capitalized under "Assumed deletions"
7.	Purchase of	0.14	The same asset was	The asset will reduce the



	solar panel.			purchased for the purpose of providing current to automatic weather station installed at dam site.	O&M expenses of the generating station. As O&M expenses have been allowed to the generating station on normative basis, the capitalization of this asset is not allowed even though it indirectly has impact on the efficient operation of the generating station.
8.	Purchase of light duty concrete hammer drill machine.	0.19		These drill machines were purchased for use in various drilling works of the power station.	Not allowed as the asset is in the nature of "Tools & Tackles".
9.	Purchase of portable drill machine	0.32			
10.	Purchase of sander grinder	0.17		The same asset is purchased in power house for the purpose of grinding of mechanical equipments	Not allowed as the asset is in the nature of minor assets
11.	Purchase of hot air oven	2.06		Heating and drying oven is required for different purposes like drying of silica gel, welding electrodes and drying of varnished small windings etc. most of these application needs accurate temperature control and forced air convection. Presently there is no heating and drying oven available in generating station. Hence necessities have been felt to purchase a drying oven	
12.	Purchase of VT test card	2.57		These are required as accessories to the main testing equipment i.e. multi function test kit for testing of various other equipments.	Not allowed as the assets are in the nature of "Tools & Tackles".
13.	Purchase of transformer test card	3.71		These are required as accessories to the main testing equipment i.e. multi function test kit for testing of various other equipments.	
	Total claimed			180.87	
	Total allowed				169.91



Deletions

22. The following year-wise expenditure has been de-capitalized by the petitioner on account of replacement of old assets. The de-capitalized assets include X-ray machines, free hold land, buses, ambulance, boats, wheel loader, survey pillar, etc.

(₹ in lakh)	
2012-13	2013-14
(-) 5.21	(-) 25.10

23. As the corresponding assets do not render any useful service in the operation of the generating station, the de-capitalization of the above expenditure as affected in the books of accounts has been allowed for the purpose of tariff. However, during the year 2013-14, the deletion of (-) ₹1.33 lakh towards the de-capitalization of buses has been considered as (-) ₹10.00 lakh under "Assumed Deletions" based on the deletion value provided by the petitioner in Petition No. 121/2010. As such, to avoid double deduction deletion the amount of (-) ₹1.33 lakh is being ignored here. Accordingly, the deletions allowed / considered for the purpose of tariff are as under:

(₹ in lakh)	
2012-13	2013-14
(-) 5.21	(-) 23.77

Exclusions

Exclusions in additions (incurred, capitalized in books but not to be claimed for purpose of tariff)

24. The following year-wise expenditure has been incurred by the petitioner on replacement of minor assets, purchase of capital spares, helicopter, purchase of miscellaneous assets, additions on inter-unit transfers, etc.,

(₹ in lakh)		
	2012-13	2013-14
Exclusions in additions (incurred, capitalized in books but not to be claimed for tariff purpose) (a)(iii)	888.01	153.31

25. The expenditure incurred towards procurement/replacement of minor assets and procurement of capital spares after the cut-off date is not permissible for the purpose of tariff in terms of the 2009 Tariff Regulations. Accordingly, the petitioner has considered these additions



under exclusion category; i.e positive entries are to be ignored for the purpose of tariff. As such, the exclusions of the positive entries under the head are in order and are allowed.

Exclusions in deletions (de-capitalized in books but not to be considered for tariff purpose)

26. The petitioner has de-capitalized amounts in books of accounts pertaining to capital spares, minor assets such as computers, office equipment, furniture, fixed assets of minor value etc., as these are not in use on account of their becoming unserviceable/obsolete and also deletion on account of inter-unit transfer of minor assets, as under :

	(₹In lakh)	
	2012-13	2013-14
Minor assets de-capitalized/Inter-unit transfer of minor assets	(-) 23.14	(-) 42.71
Capital spares de-capitalized on consumption	0.00	(-) 52.64
Total exclusions in deletions (de-capitalized in books but not to be considered for tariff)	(-) 23.14	(-) 95.36

27. The petitioner has prayed that the negative entries may be ignored/ excluded for the purpose of tariff as the corresponding positive entries for purchase of such assets are not being allowed for the purpose of tariff in terms of the provisions of the 2009 Tariff Regulations. In support of this, the petitioner has referred to the observations of the Commission in order dated 7.9.2010 in Petition No.190/2009 as under:

"20. After careful consideration, we are of the view that the cost of minor assets originally included in the capital cost of the projects and replaced by new assets should not be reduced from the gross block, if the cost of the new assets is not considered on account of implication of the regulations. In other words, the value of the old assets would continue to form part of the gross block and at the same time the cost of new assets would not be taken into account. The generating station should not be debarred from servicing the capital originally deployed on account of procurement of minor assets, if the services of those assets are being rendered by similar assets which do not form part of the gross block."

28. Accordingly, in line with the above decision of the Commission, the negative entries corresponding to the deletion of minor assets are allowed to be excluded/ ignored for the purpose of tariff.



29. The petitioner has excluded amount of (-) ₹52.64 lakh in 2013-14 towards de-capitalization of capital spares. As regards the prayer of the petitioner for exclusion of negative entries corresponding to de-capitalization of capital spares, it is observed that the expenditure on minor assets and capital spares are not allowed to be capitalized after the cut-off date in terms of the 2009 Tariff Regulations. While the recovery of expenditure on capital spares is allowed through O&M expenses on consumption, the recovery of additional expenditure on minor assets beyond the cut-off date is neither allowed to be capitalized nor permissible under O&M expenses. Hence, the observations of the Commission in order dated 7.9.2010 cannot be made applicable in respect of de-capitalization of spares. Accordingly, the claim of the petitioner for exclusion of negative entries arising out of de-capitalization of capital spares is justifiable provided that the de-capitalized spares are the ones which were not considered in the capital base for the purpose of tariff in the year of capitalization.

30. It is observed that the capital spares de-capitalized in books of accounts in the year 2013-14 are the ones which have not been allowed as part of the capital base for the purpose of tariff or in other words positive entries arising out of their purchase have been excluded / ignored for the purpose of tariff during 2012-13 and 2013-14. Hence, the exclusion/ignoring of negative entries arising out of de-capitalization of capital spares for the purpose of tariff has been allowed. In view of this, the following amounts have been excluded /ignored for the purpose of tariff as under:

	2012-13	2013-14
Exclusions in additions	888.01	153.31
Exclusions in deletions	(-) 23.14	(-) 95.36
Total exclusions allowed	864.87	57.96

Assumed Deletions

31. As per consistent methodology adopted by the Commission, the expenditure on replacement of assets, if found justified is allowed for the purpose of tariff provided that the capitalization of the said asset is followed by the de-capitalization of the value of the old asset.



However, in certain cases where de-capitalization is proposed to be effected /affected during the future years to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of tariff is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed deletion". The amounts considered by the petitioner under this head are as under:

(₹ in lakh)	
2012-13	2013-14
(-) 28.22	(-) 2.69

32. It is observed that against the expenditure towards the replacement of switchyard spares, LT & HT switchgear for Dam, transformer oil filtration plant, level sensor, and circuit breaker during the year 2012-13, the de-capitalization value of these assets has been considered by the petitioner at the rate of 10% of the value of new asset and ₹0.89 lakh only for replacement of hydra crane. Considering the fact that the plant is 15 years old, the de-capitalized value furnished by the petitioner for these assets appear to be low. Similarly, the gross value of the assets de-capitalized under 'assumed deletions' in 2013-14 like pumps, surveillance equipment and circuit breaker as considered by the petitioner @ 10% of the value of new asset is also not acceptable. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5 % per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. Accordingly, the assumed deletions claimed and allowed for the purpose of tariff are detailed as under:

Sl. No.	Asset/Work	Additions claimed for the asset	(₹ in lakh)	
			Assumed Deletions Claimed	Allowed
2012-13				
1.	Switchyard spares, LT & HT switchgear for Dam	(-) 16.69	(-) 1.67	(-) 9.29
2.	Transformer Oil filtration plant	(-) 5.64	(-) 0.56	(-) 3.14
3.	Purchase of Pumps	(-) 5.17	(-) 0.95	(-) 0.95
4.	Level sensor for Dam	(-) 11.34	(-) 1.13	(-) 6.31
5.	Installation of Circuit breaker	(-) 0.77	(-) 0.08	(-) 0.43
6.	Circuit breaker	(-) 8.14	(-) 0.81	(-) 4.53
7.	Event logger with accessories	(-) 26.76	(-) 2.67	(-) 14.90



8.	Loader-cum-excavator	(-) 26.51	(-)13.63	(-)13.63
9.	Hydra crane	(-)15.81	(-) 0.89	(-) 8.80
10	Traveler Ambulance	(-) 8.35	(-) 5.82	(-) 5.82
	Total for 2012-13	(-)125.18	(-) 28.22	(-) 67.80
	2013-14			
1.	Purchase of pumps	(-)14.54	(-)1.15	(-)7.71
2.	Safety measure equipments & Fire fighting accessories, Security & Surveillance Equipments.	(-) 8.69	(-) 0.24	(-)1.27
3.	TATA Bus	(-)11.84	(-)0.00	(-)10.00
4.	SF6 outdoor circuit breaker	(-)12.99	(-)1.30	(-)6.89
	Total for 2013-14	(-) 48.06	(-) 2.69	(-) 25.87

33. It is also observed that petitioner has claimed an amount of (-)₹20.34 lakh as 'assumed deletion' on account of Replacement of Loader-cum-excavator, Hydra crane and Ambulance in the year 2012-13 against the capitalization of ₹50.67 lakh towards expenditure allowed on new assets. The gross value of old Loader-cum-excavator, Hydra crane and Ambulance have been de-capitalized in the books of accounts in 2013-14. Accordingly, the negative book entry of ₹20.34 lakh in 2013-14 has been shifted to the year 2012-13 by way of assumed deletion, i.e in the year of capitalization of the new asset. This is found to be in order and hence allowed. Further, the petitioner has indicated amount of (-) ₹0.95 lakh under 'assumed deletion' on account of the Replacement of pumps in 2012-13 as against the capitalization of ₹5.17 lakh. The actual de-capitalization of these old assets may be effected in books of accounts during 2014-15. However, by way of assumed deletions in 2012-13, the future book entries have been shifted to the year of capitalization of the new assets. This is found to be in order and hence allowed. Based on the above, the 'assumed deletions' claimed and allowed for the years 2012-13 and 2013-14 are as under:

	(₹ in lakh)	
Assumed Deletion	2012-13	2013-14
Claimed	(-) 28.22	(-) 2.69
Allowed	(-) 67.80	(-) 25.87

Un-discharged and discharge of Liabilities

34. The petitioner has submitted that there are no un-discharged liabilities and/or discharge of for the years 2012-13 and 2013-14.



35. Based on the above discussions, the actual additional capital expenditure allowed for the period 2012-14 for the purpose of tariff is as under:-

	2012-13	2013-14
Additions against works already approved by Commission	49.25 (33.90+15.35)	87.83 (75.99+11.84)
Additions not projected earlier but incurred and claimed	189.62	169.91
Total additions allowed (a)	238.87	257.74
Deletions allowed (b)	(-) 5.21	(-) 23.77
Assumed deletions considered (c)	(-) 67.80	(-) 25.87
Total additional capital expenditure allowed before un-discharged/ discharged liabilities (d)=(a)+(b)+(c)	165.86	208.10
Less: Un-discharged liabilities in the additional capital expenditure allowed above	0.00	0.00
Add: Liabilities discharged during the year out of un-discharged liability existing as on 31.3.2014	0.00	0.00
Additional Capital Expenditure allowed	165.86	208.10

Capital cost for 2012-14

36. Accordingly, the capital cost considered for the purpose of the tariff is as under:

	2012-13	2013-14
Opening capital cost as on 31.3.2012	49101.63	49267.49
Additional capital expenditure allowed	165.86	208.10
Closing capital cost	49267.49	49475.59

Debt-Equity Ratio

37. The debt-equity ratio as on 31.3.2009 worked out as above has been considered for revision of tariff for 2009-14 based on true-up in terms of Regulation 6 of the 2009 Tariff Regulations.

Return on Equity

38. The petitioner has considered the applicable tax rate of 20.008% and 20.961% for the years 2012-13 and 2013-14 respectively. Accordingly, the pre-tax rate of return on equity has been worked out in terms of Regulation 15(3) and 15(4) of the 2009 Tariff Regulations as under:

	2012-13	2013-14
Base Rate for Return on Equity	* 15.750%	16.500%
Tax Rate	20.008%	20.961%
Rate of ROE (pre-tax)	19.689%	20.876%

(*Based on 15.5% basis from 1.4.2012 to 31.12.2012 and 16.5% from 1.1.2013 to 31.3.2013)



39. Considering the pre-tax rate of return on equity as above, the return on equity has been computed as follows:

	2012-13	2013-14
Opening Gross Notional Equity	18662.92	18712.68
Addition due to Additional Capital Expenditure	49.76	62.43
Closing Equity	18712.68	18775.11
Average Equity	18687.80	18743.90
Base Rate for Return on Equity	15.750%	16.500%
Tax Rate	20.008%	20.961%
Rate of ROE (pre-tax)	19.689%	20.876%
Return on Equity	3679.44	3912.98

Interest on Loan

40. The normative loan in respect of the project has already been repaid. The normative loan on account of the admitted additional capital expenditure during the respective years of the tariff period 2009-14 have been considered as fully paid, as the admitted depreciation is more than the amount of normative loan in these years. As such, the Interest on loan during the period 2009-14 is worked out as 'Nil'.

Depreciation

41. The date of commercial operation of the generating station is 15.2.2000. Since the generating station has completed 12 years of operation as on 15.2.2012, the remaining depreciable value has been spread over the balance useful life of the assets. There is reduction of ₹4.36 lakh in the value of freehold land from 2012-13. Accordingly, depreciation has been computed as under:

	2012-13	2013-14
Gross Block as on 31.3.2009	49101.63	49267.49
Additional capital expenditure during 2009-14	165.86	208.10
Closing gross block	49267.49	49475.59
Average gross block	49184.56	49371.54
Land related cost	294.41	294.41
Depreciable Value	44001.14	44169.42
Balance Useful life of the asset	22.87	21.87
Remaining Depreciable Value	20044.33	19373.00
Depreciation	876.36	885.74



Operation & Maintenance Expenses

42. O&M expenses as allowed in order dated 10.12.2013 in Petition No. 154/GT/2013 has been considered as under:

(₹ in lakh)	
2012-13	2013-14
3327.78	3518.13

Interest on working capital

43. **Receivables:** In terms of Regulation 18(1) (c) (i) of 2009 Tariff Regulations, receivables equivalent to two months of fixed cost has been considered as under:

(₹ in lakh)	
2012-13	2013-14
1357.50	1432.14

44. **Maintenance Spares:** Regulation 18(1) (c) (ii) of 2009 Tariff Regulations, provides for Maintenance spares @ 15% of operation and maintenance expenses as specified in Regulation 19, the same has been considered as under:

(₹ in lakh)	
2012-13	2013-14
499.17	527.72

45. **O&M Expenses (one month):** Regulation 18(1) (c) (ii) of 2009 Tariff Regulations provides for operation and maintenance expenses for one month and the same has been considered in tariff as under.

(₹ in lakh)	
2012-13	2013-14
277.32	293.18

Rate of interest on working capital

46. Regulation 18(3) of 2009 Tariff Regulations provide that the Rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later.



47. In accordance with Regulation 18(3) of the 2009 Tariff Regulations, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later. The SBI PLR as on 1.4.2009 was 12.25% has been considered for computation of the interest on working capital. Accordingly, Interest on Working Capital has been calculated as under:

	(₹ in lakh)	
	2012-13	2013-14
Maintenance Spares	499.17	527.72
O & M expenses	277.32	293.18
Receivables	1357.50	1432.14
Total	2133.98	2253.04
Interest on Working Capital @ 12.25%	261.41	276.00

Annual Fixed charges for 2012-14

48. Accordingly, the annual fixed charges in respect of the generating station approved by the Commission for the period 2012-14 are summarized as under:

	(₹ in lakh)	
	2012-13	2013-14
Return on Equity	3679.44	3912.98
Interest on Loan	0.00	0.00
Depreciation	876.36	885.74
Interest on Working Capital	261.41	276.00
O & M Expenses	3327.78	3518.13
Total	8145.00	8592.84

49. The difference between the annual fixed charges already recovered by the petitioner and the annual fixed charges determined by this order as above shall be adjusted in terms of Clause (6) of Regulation 6 of the 2009 Tariff Regulations.

Determination of Annual Fixed Charges for the period 2014-19

50. The annual fixed charges determined by the Commission in respect of the generating station for the period 2009-14 are as under:



	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	4387.56	4325.88	4279.68	3679.44	3912.98
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	2499.40	2493.48	2498.92	876.36	885.74
Interest on Working Capital	284.42	291.06	298.73	261.41	276.00
O & M Expenses	2816.33	2977.42	3147.73	3327.78	3518.13
Total	9987.71	10087.84	10225.06	8145.00	8592.84

51. As stated, the petitioner in this petition has also prayed for the determination of annual fixed charges of the generating station for the period 2014-19 in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the annual fixed charges claimed by the petitioner for the period 2014-19 are as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	896.17	896.86	896.94	903.43	919.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	3928.94	3929.89	3929.99	3937.83	3954.67
Interest on Working Capital	363.88	380.72	398.63	418.07	439.18
O & M Expenses	4576.46	4880.52	5204.78	5550.58	5919.36
Total	9765.46	10087.98	10430.34	10809.90	11232.21

52. In response to the directions of the Commission the petitioner has submitted additional information and has served copies of the same on the respondents. No reply has been filed by the respondents. Accordingly, the claims of the petitioner for the period 2014-19 are considered and allowed on prudence check, as detailed in the subsequent paragraphs.

Capital Cost

53. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. Clause (3) of Regulation 9 provides as under:

"9(3) The Capital cost of an existing project shall include the following:

(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;

(b) xxxx

(c) xxxx



54. Accordingly, the closing capital cost considered by the Commission as on 31.3.2014 in this order is ₹49475.59 lakh. This has been considered as the opening capital cost as on 1.4.2014 for computation of tariff for the period 2014-19.

Actual/ Projected Additional Capital Expenditure during 2014-19

55. Clause (3) of Regulation 7 of the 2014 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted upto 31.3.2014 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2014-15 to 2018-19.

56. Regulation 14 (3) of the 2014 Tariff Regulations, provides as under:

"14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
- (ii) Change in law or compliance of any existing law;*
- (iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*
- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
- (vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*



(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.”

57. The year-wise breakup of the projected additional capital expenditure claimed by the petitioner is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure claimed on gross basis	30.50	0.00	7.00	270.00	312.00
De-capitalization	0.39	0.00	3.78	22.90	21.19
Net Additional capital expenditure claimed	30.11	0.00	3.22	247.10	290.81

(₹ in lakh)

* note: all figures have been rounded off to the nearest amount

58. Based on the submissions and the documents available on record, the claims of the petitioner for the period 2014-19 have been examined and allowed on prudence check, after reduction of the gross value of old assets, wherever necessary, as detailed in the subsequent paragraphs.



2014-15

Sl. No	Assets/ Works	Amount claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed (₹ in lakh)
1	Purchase of Bus	10.50	The same was allowed by the Commission in 2011-12, but processed in 2014-15	The Commission vide order dated 30.11.2011 in Petition No. 121/2010 had allowed a projected expenditure of ₹22.00 lakh in 2011-12. In view of this, the claim of the petitioner is considered. However, as the petitioner has not furnished the de-capitalized value of the old asset, an amount of ₹10.00 lakh (de-capitalized value furnished in Petition No. 121/2010) has been considered as the de-capitalized value of the old asset in this order. Accordingly, the expenditure of ₹0.50 lakh has only been allowed.	0.50 (10.50-10.00)
2	Purchase of Digital Plasma cutting Machine, Portable ARC machine spares	10.00	The same was allowed by the Commission in 2009-10, but processed in 2014-15 as per the approval of CO dated 5.5.2014.	Allowed under Regulation 14(3)(viii) as the assets which are necessary for efficient operation of the generating station. The Commission had already approved ₹2.00 lakh in order dated 30.11.2011 in Petition No. 121/2010 for the year 2009-10.	10.00
3	Purchase of Mini Truck	9.61	Replacement of Old mini Truck, which has completed its useful life as per NHPC disposal policy. Cost estimate is based on telephonic enquiry from authorized dealer in Siilguri.	Allowed under Regulation 14(3)(viii) as the asset is considered necessary for efficient and successful operation of the generating station. The gross value of the replaced old asset is ₹0.39 lakh	9.61 (10.00-0.39)
Total amount claimed		30.11			20.11
Total amount allowed					



2015-16

59. No additional capitalization and/or de-capitalization has been claimed by the petitioner for the period 2015-16.

2016-17

Sl. No	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks for admissibility	Amount Allowed (₹ in lakh)
1	Purchase of Maruti Gypsy	3.22 (7.00-3.378)	Replacement of old Maruti Gypsy, 'SK-04P-2216' which has completed its useful life as per NHPC disposal policy. The cost estimate is based on the telephonic enquiry from the authorized dealer in Siliguri plus an enhancement @7% per annum.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset is considered necessary for successful and efficient operation of the generating station. The gross value of replaced old asset is ₹ 3.78 lakh	3.22 (7.00-3.78)
Total amount claimed		3.22			
Total amount allowed					3.22

2017-18

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks for admissibility	Amount Allowed (₹ in lakh)
1	Purchase of Tipper	13.22 (20.00-6.78)	Replacement of old Tata Tipper 'SK-04D-0545', which has completed its useful life as per NHPC disposal policy. Cost estimate is based on telephonic enquiry from authorized dealer in Siliguri plus enhancement @7% per annum.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations as the asset is considered necessary for successful and efficient operation of the generating station. The gross value of old asset is indicated as ₹6.78 lakh	13.22 (20.00-6.78)
2	Replacement of 1 no. G40 Governor with new one having RGMO	233.88 (250.00-16.12)	At present the generating station has electro-hydraulic G-40 type Governor which was	Allowed under Regulation 14(3)(viii) of the 2014 Tariff	233.88 (250.00-16.12)



			supplied by M/s BHEL more than 16 year back. As this technology is going to be obsolete shortly, up gradation of the system in a phased manner shall be required to make the system compatible with the existing/ proposed control and automation system. Therefore operation of generators under restricted governor mode of operation(RGMO) are required to be ensured for operation of generating units which cannot be achieved with existing G-40 governor system. Cost estimate is based on supply order placed on M/s BHEL during 2012-13 for replacement of 01 no. G-40 governor.	Regulations as the asset will facilitate the successful and efficient operation of generating station. The gross value of old asset is indicated as ₹16.12 lakh	
Total amount claimed			247.10		247.10
Total amount allowed					247.10

2018-19

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks for admissibility	Amount Allowed (In lakh)
1	Replacement of 1no. G40 Governor with new one having RGMO	233.88 (250-16.12)	At present the generating station has electro-hydraulic G-40 type Governor which was supplied by M/s BHEL more than 16 year back. As this technology is going to be obsolete shortly, up-gradation of the system in a phased manner shall be required to make the system compatible with the existing/ proposed control and automation system. Therefore operation of generators under restricted governor mode of operation(RGMO) are required to be ensured for operation of	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations as the asset will facilitate the successful and efficient operation of generating station. The gross value of old asset is indicated as ₹16.12 lakh	233.88 (250-16.12)



			generating units which cannot be achieved with existing G-40 governor system. Cost estimate is based on supply order placed to M/s BHEL during 2012-13 for replacement of 01 no. G-40 governor.		
2	Purchase of Loader	39.82 (42.00-2.18)	On replacement of old CAT Loader, has completed its useful life as per NHPC disposal policy. Cost estimate based on telephonic enquiry from authorized dealer in Kolkata plus enhancement @7% per annum.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations as the asset will facilitate the successful and efficient operation of generating station. The gross value of the old asset is ₹2.18 lakh	39.82 (42.00-2.18)
3	Purchase of Fire Tender	20.00	On replacement of old Fire tender 'SK-04D-0543', which has completed its useful life as per NHPC disposal policy. Cost estimate based on telephonic enquiry from authorized dealer in Siliguri plus enhancement @7% per annum.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations as the asset will facilitate the successful and efficient operation of generating station. The gross value of old asset is ₹2.90 lakh	17.10 (20.00-2.90)
Total amount claimed		290.81			
Total amount allowed					290.81

60. Based on the above, the net additional capital expenditure allowed for the period 2014-19 is summarized as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure allowed	20.50	0.00	7.00	270.00	312.00
De-capitalization	0.39	0.00	3.78	22.90	21.19
Net Additional Capital expenditure allowed	20.11	0.00	3.22	247.10	290.81

Capital Cost for 2014-19

61. As stated, the closing capital cost as on 31.3.2014 is ₹49475.59 lakh. The same has been considered as the opening capital cost as on 1.4.2014. Accordingly, the capital cost considered for the purpose of tariff for the period 2014-19 is as under:



	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	49475.59	49495.70	49495.70	49498.92	49746.02
Admitted Capital expenditure	20.11	0.00	3.22	247.10	290.81
Capital Cost as on 31 March of the year	49495.70	49495.70	49498.92	49746.02	50036.83

(₹ in lakh)

Debt-Equity

62. In terms of Regulation 19 of the 2014 Tariff Regulations, the debt-equity ratio of 70:30 has been considered for the purpose of tariff.

Return on Equity

63. Regulation 24 of the 2014 Tariff Regulations provides as under:

"24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

- i). in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:
- ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.
- iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
- iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

64. Regulation 25 of the 2014 Tariff Regulations provides as under:



“Tax on Return on Equity

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after trueing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis.”

65. In line with the above, base rate for Return on Equity has been grossed up with the MAT

Rate for the year 2013-14. Accordingly, Return on Equity has been computed as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	18775.11	18781.14	18781.14	18782.11	18856.24
Addition due to Additional capital expenditure	6.03	0.00	0.97	74.13	87.24
Closing Equity	18781.14	18781.14	18782.11	18856.24	18943.48
Average Equity	18778.13	18781.14	18781.63	18819.17	18899.86
Return on Equity (Base Rate)	16.500%	16.500%	16.500%	16.500%	16.500%
Tax rate for the year	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	20.876%	20.876%	20.876%	20.876%	20.876%
Return on Equity (Pre Tax)	3920.12	3920.75	3920.85	3928.69	3945.53



66. The petitioner is directed to furnish on affidavit, the effective tax rates along with the Tax Audit Report for the period 2015-19 at the time of truing-up of tariff of the generating station in terms of the 2014 Tariff Regulations.

Interest on Loan

67. Regulation 26 of the 2014 Tariff Regulations provides as under:

“26. Interest on loan capital: (1) *The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

(2) *The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

(3) *The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

(4) *Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

(5) *The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) *The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

(7) *The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*

(8) *The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.*

(9) *In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as*



amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

68. The normative loan for the project has already been repaid. The normative loan on account of the admitted additional capital expenditure during the respective years of the tariff period have also been considered as fully paid, as the admitted depreciation is more than the amount of normative loan in these years. As such, Interest on loan during the period 2014-19 is worked out as 'Nil'.

Depreciation

69. Regulation 27 of the 2014 Tariff Regulations provides as under:

"27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) *The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.*

(3) *The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.*

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.



(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) alongwith justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”

70. The COD of the generating station is 15.2.2000. Since the station has completed 12 years of operation as on 15.2.2012, the remaining depreciable value has been spread over the balance useful life of the project. Accordingly, depreciation has been computed as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	49475.59	49495.70	49495.70	49498.92	49746.02
Addition due to Additional Capital Expenditure	20.11	0.00	3.22	247.10	290.81
Closing Gross Block	49495.70	49495.70	49498.92	49746.02	50036.83
Average Gross Block	49485.65	49495.70	49497.31	49622.47	49891.43
Land related cost	294.41	294.41	294.41	294.41	294.41
Depreciable Value	44272.11	44281.16	44282.61	44395.26	44637.31
Balance Useful life of the asset	20.87	19.87	18.87	17.87	16.87
Remaining Depreciable Value	18615.70	17733.07	16842.17	16064.54	15421.20
Depreciation	891.89	892.35	892.43	898.86	914.00



O&M Expenses

71. The generating station is in operation for three or more years as on 1.4.2014. Accordingly, in terms of sub-section (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations, the year-wise O&M expense norms considered for the generating station of the petitioner for the period 2014-19 is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	4576.46	4880.52	5204.78	5550.58	5919.36

Interest on working capital

72. Sub-section (c) of Clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

“28. Interest on Working Capital:

- (1) *The working capital shall cover*
- (c) *Hydro generating station including pumped storage hydro electric generating Station and transmission system including communication system:*
- (i) *Receivables equivalent to two months of fixed cost;*
- (ii) *Maintenance spares @ 15% of operation and maintenance expense specified in regulation 29; and*
- (iii) *Operation and maintenance expenses for one month.”*

73. Receivables have been worked out and allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Two months of annual fixed cost	1625.34	1679.00	1736.06	1799.31	1869.63

74. Maintenance spares have been worked out and allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of maintenance spares (15% of O & M)	686.47	732.08	780.72	832.59	887.90

75. O&M expenses for one month have been worked out and allowed as under:



	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O & M for one month	381.37	406.71	433.73	462.55	493.28

Rate of interest on working capital

76. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

“Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.”

77. In terms of the above regulations, the Bank Rate of 13.50% (Base Rate + 350 Basis Points) as on 1.4.2014 has been considered by the petitioner. This has been considered in the calculations for the purpose of tariff.

78. Necessary computations in support of interest on working capital are appended below:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	686.47	732.08	780.72	832.59	887.90
O & M expenses	381.37	406.71	433.73	462.55	493.28
Receivables	1625.34	1679.00	1736.06	1799.31	1869.63
Total	2693.18	2,817.79	2,950.51	3,094.45	3,250.81
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	363.58	380.40	398.32	417.75	438.86

79. Accordingly, the annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	3920.12	3920.75	3920.85	3928.69	3945.53
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	891.89	892.35	892.43	898.86	914.00
Interest on Working Capital	363.58	380.40	398.32	417.75	438.86
O & M Expenses	4576.46	4880.52	5204.78	5550.58	5919.36
Total	9752.05	10074.03	10416.38	10795.88	11217.75

Normative Annual Plant Availability Factor (NAPAF)

80. Clause (4) of Regulation 37 of the 2014 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) for hydro generating stations already in operation. Accordingly, the NAPAF of 90% has been considered for this generating station.



Design Energy

81. The Commission in its order dated 30.11.2011 in Petition No.121/2010 had approved the annual Design Energy (DE) of 338.61 Million Units for the period 2009-14 in respect of this generating station. This DE has been considered for this generating station for the period 2014-19 as per month wise details hereunder:

Month	Design Energy (MU)
April	22.83
May	30.29
June	41.04
July	42.41
August	42.41
September	41.04
October	40.10
November	24.44
December	15.04
January	13.46
February	11.88
March	13.67
Total	338.61

Application Fee and Publication Expenses

82. The petitioner has deposited the filing fees for the period 2014-19 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The petitioner has published the notice of the tariff petition for 2014-19 in the newspapers in terms of the Central Electricity Regulatory Commission (Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulation, 2004 and has vide affidavit dated 5.12.2014 submitted that it has incurred an expenditure of Rs 200449/- for the same. Accordingly, the petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. Regulation 52 of the 2014 Tariff Regulations provides as under:

"The following fees and charges and expenses shall be reimbursed directly by the beneficiary in the manner specified herein:

(1) The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be



recovered by the generating company or the transmission licensee, as the case may be, directly from the beneficiaries or the long term transmission customers/DICs, as the case may be."

83. The Commission after careful consideration has decided that filing fee will be reimbursed in the following cases:

(a) Main petitions for determination of tariff;

(b) Petitions for revision of tariff due to truing-up of expenditure of inter-state transmission system.

As the application filing fees paid by the generating companies are on MW basis in accordance with the Payment of Fee Regulations, 2012 and are reimbursed at the time of determination of tariff, no filing fees is required to be paid by them again at the time of filing of application for revision of tariff of these generating stations based on truing-up of the expenditure.

Filing fees paid for filing the Review Petitions, Interlocutory Applications and other Miscellaneous Applications will not be reimbursed in tariff. The Commission has also decided to reimburse the expenses on publication of notices as such expenses are incurred to meet the statutory requirement of transparency in the process of determination of tariff.

84. Accordingly, the expenses incurred by the petitioner towards tariff application filing fees and publication of notices in connection with the present petition shall be directly recovered from the respondent beneficiaries on pro rata basis.

85. The annual fixed charges approved for the generating station for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

86. Petition No. 232/GT/2014 is disposed of in terms of the above.

-Sd/-
(A.S. Bakshi)
Member

-Sd/-
(A.K.Singhal)
Member

-Sd/-
(Gireesh B. Pradhan)
Chairperson



ANNEXURE-18.1



To:

BASPA HEP 30MW
JSW Hydro Energy Ltd.,
District-Kinnaur, Himachal Pradesh.

Sub:

Letter of obsolescence for the commissioned Emulsifier system at Baspa HEP 30MW, JSW Hydro Energy Ltd in 2003.

Dear Mr. Manik Kumar – Dy. Chief Engineer,

This is to bring to your kind notice that the hitherto functioning Emulsifier system, commissioned by Technico (India) Private Limited as OEM at Baspa HEP 30MW, JSW Hydro Energy Limited, in 2003 – stands in the state of being obsolete in the present time. As such it is not possible to reinstate the same Emulsifier system with changes.

The way out is to dismantle the complete Emulsifier system and replace it with new Emulsifier system with new deluge valve assembly, piping, valves and other accessories.

Thanking you,


 Prasenjit Kundu,
 Manager Marketing.

CIN : U29193OR1979PTC000844

Corporate Office : 12 Janak Road, Kolkata 700 029 • Phone +91 33 6620 0400
Registered Office : Plot No. 1966, Patro Para, NH 5, Bhubaneswar 751 019, Odisha • Phone +91 674 247 0540
Branch Office : 3 B Ganguly Street, Kolkata 700 012
 info@technico.co.in • www.technico.co.in





To:
 BASPA HEP 30MW
 JSW Hydro Energy Ltd.,
 District-Kinnaur, Himachal Pradesh.

Sub: Letter of New-Budget Provision for the commissioned Emulsifier system at Baspa HEP 30MW,
JSW Hydro Energy Ltd in 2003.

Dear Mr. Manik Kumar – Dy. Chief Engineer,

This is to bring to your kind notice that the hitherto functioning Emulsifier system, commissioned by Technico (India) Private Limited as OEM at Baspa HEP 30MW, JSW Hydro Energy Limited, in 2003 – stands in the state of being obsolete in the present time. As such it is not possible to reinstate the same Emulsifier system with changes.

The way out is to dismantle the complete Emulsifier system and replace it with new Emulsifier system with new deluge valve assembly, piping, valves and other accessories. The budgetary ex-works Kolkata cost for the same will be INR 20,00,000.00 (Rupees Twenty Lakh only). The price quoted is excluding of pipes.

Thanking you,

Prasenjit Mullick,
 Manager Marketing.

CIN : U29193OR1979PTC000844
Corporate Office : 12 Janak Road, Kolkata 700 029 • Phone +91 33 6620 0400
Registered Office : Plot No. 1966, Patro Para, NH 5, Bhubaneswar 751 019, Odisha • Phone +91 674 247 0540
Branch Office : 3 B Ganguly Street, Kolkata 700 012
 info@technico.co.in • www.technico.co.in



12/29/2018

JSW Mail - Fwd: RFQ for Up gradation of AC System - JSW Hydro Energy Ltd, Baspa II H.E.P, Kinnaur, Himachal Pradesh



Dinesh Mahato <dinesh.mahato@jsw.in>

Fwd: RFQ for Up gradation of AC System - JSW Hydro Energy Ltd, Baspa II H.E.P, Kinnaur, Himachal Pradesh

1 message

Tejasvi Arora <tejasvi.arora@jsw.in>

To: Dinesh Mahato <dinesh.mahato@jsw.in>

Cc: vikas gupta <vikas.gupta@jsw.in>, Himanshu Puri <himanshu.pur@jsw.in>

Thu, Dec 27, 2018 at 5:18 PM

Dear Sir

Kindly refer discussions held with you regarding up gradation of HVAC System (AC System) in coming future.

In this regard, please find attached offer from OEM BLUESTAR along with recommendations made by OEM in trailing mail to replace the existing AC system due to obsolescence.

Thanks and Regards
Tejasvi Arora

----- Forwarded message -----

From: Vivek Bhushan <vivekbhushan@bluestarindia.com>

Date: Thu, Dec 27, 2018, 4:45 PM

Subject: RE: RFQ for Up gradation of AC System - JSW Hydro Energy Ltd, Baspa II H.E.P, Kinnaur, Himachal Pradesh

To: <tejasvi.arora@jsw.in>

Cc: Suraj Saurabh <surajsaurabh@bluestarindia.com>, Rajesh Verma <rajeshverma@bluestarindia.com>

Dear Sir

Kindly find revised offer with correction in dates for your reference.

I trust it is inline with your requirement. Do reach us in case of any query on this.

Thanks & Regards,

Vivek Bhushan

+91 950186 3399

From: Vivek Bhushan [mailto:vivekbhushan@bluestarindia.com]

Sent: 27 December 2018 15:41

To: tejasvi.arora@jsw.in

Cc: Suraj Saurabh; Rajesh Verma

Subject: RE: RFQ for Up gradation of AC System - JSW Hydro Energy Ltd, Baspa II H.E.P, Kinnaur, Himachal Pradesh

<https://mail.google.com/mail/u/0?ik=31570f6c03&view=pt&search=all&permithid=thread-f%3A1621005536077492485&siml=msg-f%3A16210055360...> 1/6



12/29/2018

JSW Mail - Fwd: RFQ for Up gradation of AC System - JSW Hydro Energy Ltd, Baspa II H.E.P, Kinnaur, Himachal Pradesh

Dear Sir

Pls find enclosed offer for supply of 16.5 TR x 3 nos. water cooled 16.5 TR x 3 nos. Floor Mounted water cooled packaged ac with Eco-Friendly refrigerant.

I trust it is inline with your requirement. Do reach us in case of any query on this.

Thanks & Regards,

Vivek Bhushan

+91 950186 3399

From: Rajesh Verma [mailto:rajeshverma@bluestarindia.com]

Sent: 26 December 2018 11:35

To: tejasvi.arora@jsw.in

Cc: 'Suraj Saurabh'; 'Vivek Bhushan'

Subject: RE: RFQ for Up gradation of AC System - JSW Hydro Energy Ltd, Baspa II H.E.P, Kinnaur, Himachal Pradesh

Importance: High

Dear Sir,

This is in reference to the discussion we had for the up gradation of Blue Star make 15 TR Water Cooled Ductable Package AC (Model - DPW1803 x 3 Nos) installed at JSW Hydro Energy Ltd, Baspa II H.E.P, Kinnaur, Himachal Pradesh. As we discussed, Air Conditioning units are around 18 years old and same model are already discontinued long back. Spare for the same are also not available any more. So we request you to replace your existing unit with our latest technology Air Conditioning units for better efficiency and trouble-free operations.

Please note the recommended Model is DPW1983R1/R2. We are enclosing our Technical Brochure also for your reference. Based your confirmation we will submit our Techno Commercial offer for the replacement of same.

For any clarification please contact to the undersigned.

Regards,

Rajesh Verma

Asst. Manager

Blue Star Limited

www.bluestarindia.com

Tel: +91 172 5024000 Extn: 4113

<https://mail.google.com/mail/u/0?ik=31570f3c03&view=pt&search=all&permthid=thread-f%3A1621005536077482485&siml=msg-f%3A16210055360...> 2/6



**BLUE STAR LIMITED**

4TH Floor , Plot No. 50 , Adarsh Mall
Phase II , Industrial Area ,
Chandigarh - 160002.

Our Ref: BSL/VB/00121
Dec 27th, 2018

To,

**M/s JSW Hydro Energy Ltd.,
Sholtu Colony, PO-Tapri, District. Kinnaur,
Himachal Pradesh, India - 172104**

Subject : Offer for supply of Blue Star make 16.5 TR x 3 nos. Water Cooled Package ACs with R407c refrigerant against replacement of existing acs.

Dear Sir

This is with reference to our discussions and subsequent received data , we are submitting our best suitable offer for **Supply** of Blue Star make 16.5 TR x 3 nos. Water Cooled Package ACs with R407c refrigerant against replacement of existing acs.

Annexure A : **Schedule of prices for Water Cooled Packaged ACs .**
Annexure C : **Exclusions.**

We hope you will find the above in line with your requirement. Now, we shall be looking forward to receive your valuable order.

Meanwhile, thanking you and assuring you of our best attention at all times.

Thanks & Regards,
Blue Star Limited.

Vivek Bhushan

Central and Packaged Airconditioning Service Department

+ 91 950186 3399

Blue Star Limited

Adarsh Mall, 4th Floor, Plot No.50,
Industrial and Business Park, Phase II,
Chandigarh - 160 002





Annexure A : Schedule of prices

Scope of Supply :

Bill Of Quantities :

SN	Description	Qty	UOM	Basic Rate	Basic Amount
1	Supply of 16.5 TR water Cooled packaged Model No. - DPW1983R2	3	Nos	295000.00	885000.00
	Total Basic Value				885000.00

Commercial terms :

- **CST:** Extra @ 28%
- **Road permil/ Entry tax:** If required to be arranged by customer .
- **Freight and Transportation:** Included.
- **Unloading of equipment :** Customer's scope.
- **Installation -** Customer's scope
- **Delivery Period -** 4 ~ 5 weeks from the date commercial cleared order and payment.

Ordering Document :

Order to be provided :

M/s Blue Star Ltd, Village Balongi, Tehsil-Kharrar, Ropar, Punjab.
 GST Number - 03AAACB4487D1Z2
 HSN Code - 84158210

Payment Terms:

- 90 % advance along with the order.
- 10 % against submission of PI on intimation towards readiness in factory.

Validity Of Offer - 30 days from the date of offer submitted.

DELIVERY PERIOD

5 ~ 6 weeks from the date of commercial cleared order and complete payment as mentioned above .

Subject to the terms of payment agreed upon being punctually complied with and the





equipment being operated properly, the equipment supplied by us carries a warranty against defective materials or workmanship for a period of 12 (twelve) months from the date of installation of the chilling units or 15 months from the date of delivery, whichever is earlier. We agree to repair / replace such parts which may prove defective and which do not fail from neglect or misuse or faulty operation. Our decision whether to repair or replace such parts shall be final. We agree to repair / replace such parts which may prove defective and which do not fail from neglect or misuse or faulty operation. Our decision whether to repair or replace such parts shall be final. The defective parts must be sent to us, duly insured and freight pre-paid for examination and our agreement that they are defective. The return freight and insurance charges on such repaired or replaced parts will be borne by the customer. No charges will be made by us for work involved in the repair or replacement of defective parts during the warranty period in the case of installations within the Municipal limits of any city where we have our own Branch or service centre. Should however, the services of our qualified men be required outside these limits our standard charges for such services will apply.

This warranty:

- does not extend to consequential damage or loss
- is null and void if repairs and modifications are carried out without our approval in writing
- Does not cover parts subject to normal wear and tear, such as V-belts, air filters, electrical contacts etc.
- Does not cover scaling or deterioration of the piping system due to circulation of hard or contaminated water.
- Does not cover deterioration or failure of equipment, controls and piping due to corrosive atmosphere.
- Does not cover supply of consumable items like refrigerant, oil, fuses etc.

SUSPENSION, CANCELLATION OF WORK

We will charge extra any increase in cost caused by suspension of work due to:

- a. Customer's Instructions / lack of Instructions
 - b. Non-payment of our bills
- If we required by the customer to delay delivery or, if any reason beyond our control, we cannot bring the equipment to site or commence or continue erection, then we may at our option divert our workmen or material or equipment as well as other expenses such as transportation, insurance etc. If the worker part of the work is cancelled for any reason whatsoever, cancellation charges as levied by our supplier / manufacturer shall be borne by the customer. In addition, the customer shall pay us compensation for cost and expenses incurred by us up to the date of cancellation plus then percent.

LIMITATION TO LIABILITY

In no event shall we be liable for any consequential damage arising out of or connected with this contract in anyway whatsoever. The LD compensation of for the delay of the work beyond the agreed completion date in case the delay is not on account of the required clearances and approvals from the customer shall be 0.5% of the unfinished work per week up to maximum of 5% of the unfinished work with equivalent bonus clause.





PROPERTY RIGHTS GENERAL LIEN

As unpaid vendors we shall retain the property rights in the equipment and materials supplied by us under this contract, and our rights of lien and resale, until full value thereof as per our bill is paid to us. We shall also be entitled to a general lien on our equipment and materials in customer's possession under the contract for monies for the time being due to us from the customer, on any account and shall be entitled to apply payment already received to monies due to us under any other order or orders.

FORCE MAJEURE

No liability shall attach to us for non-performance or delayed execution of this contract as a result of force majeure including strikes and lockouts affecting our suppliers or us.

ARBITRATION

All disputes and differences arising out of or connected with this contract, failing amicable settlement shall be referred to the arbitration of two arbitrators, one to be appointed by each party. The arbitrators shall appoint an Umpire before proceeding with arbitration under the Indian Arbitration Act, 1940 or any modifications thereof for the time being in force. Arbitration shall take place in New Delhi.

TESTING AND TAKING OVER

At the time of commissioning, we shall run the plant for a few hours during normal working hours to ascertain ourselves that the plant is running satisfactorily. During this period necessary adjustments in the water and the air circuit shall be made. After this trial run not exceeding 1 (one) day during normal working hours, the plant shall be deemed to have been commissioned and the same shall be taken over by you. Warranty of the plant shall commence from this date.





Annexures : Exclusions

Unless otherwise specifically mentioned, this Proposal does not provide for the following items:

Items of work listed below are not included in our quoted price. These and any other items of work not specifically mentioned by us in our Scope of Work will have to be carried out by you departmentally or through other agencies:

1. Electrical connection & Supply to Main Panel Board.
2. Provision of 400/415 Volts, 3 phase, 4 wires, 50 c/s AC supply (Stabilized) suitable for Ductable packages terminating in our Main panel, Packaged Unit Panel and Split Unit Panel.
3. All masonry work except specified.
4. Making and dressing of openings for running ducts, pipes, cables and for fixing grilles/dampers.
5. Power and water required for execution of the job shall be provided to us free of cost.
6. All carpenter's work including false ceiling, drop ceiling boxing for concealing duct / return air etc. Openings for fixing grilles / diffusers in wooden partition along with wooden frames for fixing grilles / diffusers / dampers.
7. Scaffolding as required shall be provided to us.
8. Lighting / ventilation of plant room.
9. Provision of drain traps in plant room.
10. Any kind of painting work to match the interior decoration except for painting of our equipment as per our standard.
11. All inspection, certification and fees by local authorities such as electricity dept., or any other local authority, if any.
12. Making Path way to move the ductable acs in to plant room.
13. All type of civil work.
14. Any other item of work not provided in Annexure (For Price Break Up) of this Proposal.



1/4/2019

JSW Mail - Fwd: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS



Dinesh Mahato <dinesh.mahato@jsw.in>

Fwd: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

2 messages

Durvesh Kumar <durvesh.kumar@jsw.in>
 To: Dinesh Mahato <dinesh.mahato@jsw.in>

Thu, Jan 3, 2019 at 2:46 PM

FYIP

Best Regards,

Durvesh Kumar | Plant Engineer (O&M Baspa II-HEP) | JSW Hydro Energy Ltd.

Sholtu Colony, P.O. Tapri, District Kinnaur, H.P. – 172104 | India

M +91 9816654323 | +91 1786 261696

E-mail : durvesh.kumar@jsw.in | Website : www.jsw.in



----- Forwarded message -----

From: SK SYSTEMS-AT <sksystemdelhi@gmail.com>

Date: Thu, Jan 3, 2019 at 1:28 PM

Subject: Re: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

To: Durvesh Kumar <durvesh.kumar@jsw.in>

Cc: Chandra Prakash Ral <cp.ral@jsw.in>, Ravindra rana <ravindra.rana@jsw.in>, vikas gupta <vikas.gupta@jsw.in>

Dear Sir,

We acknowledge the receipt of below mail and note the contents.

The HVAC System has been supplied & installed by M/s SK Systems in year 2001-2002. It is appx. 16 year old system. The exact modification required can be done only on the visit report of a competent engineer to site assessment of healthiness of the equipment installed.

We can plan the visit of our engineer to your power house for the assessment of healthiness of equipment installed only on chargeable basis lumpsum 80,000 + GST@18 Extra + Logging & boarding at site in JSW (2 Days).

As discussed, we are providing the prices for spares:-

S. NO.	ITEM	QTY.	Amount
1	Pre filters (HDPE)	1 Lot	5,00,000.00
2	Dampers	1 Lot	1,00,000.00
3	Back Draft Damper	1 Lot	50,000.00
4	Vibration isolation pads	1 Lot	25,000.00

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1/4/2019

JSW Mail - Fwd: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

5	Canvas Connection (fire retardant)	1 Lot	1,60,000.00
6	Motorized Dampers	1 Lot	90,000.00
7	V-Belt	1 Lot	25,000.00
8	Fan & Motor Bearing	1 Lot	1,10,000.00
9	Butterfly Valve	1 Lot	1,00,000.00
10	Gate Valve	1 Lot	1,00,000.00
11	Three Way Motorized Valve	1 Lot	50,000.00
12	Three Way Manual Valve	1 Lot	30,000.00
13	Flot Valve	1 Lot	20,000.00
14	Thermometer	1 Lot	20,000.00
15	Pressure Gauge	1 Lot	15,000.00
16	Non Return Valve	1 Lot	30,000.00
17	Actuator	1 Set	80,000.00
18	AC's Spare	1 Lot	1,50,000.00
	Total		16,55,000.00

We hope you will find the above in line with your requirement and now look forward towards further communication in this regard.

Regards,

Rakesh Sharma

SK Systems Pvt. Ltd.
601, V4 Tower, Plot No.14, Karkardooma Comm. Center, Delhi-92
Tel. - 011-22373004-7; Fax-011-22371345
Email- sksystemdelhi@gmail.com
Website - www.sksystem.com

From: Durvesh Kumar
Sent: Tuesday, December 11, 2018 2:52 PM
To: sksystemdelhi@gmail.com
Cc: Chandra Prakash Rai ; ravindra rana ; vikas gupta
Subject: Re: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

Dear Sir,

In reference to the discussion had Today with, regarding HVAC system installed in Baspa-II Power House.

Our HVAC system is working since commissioning 2003. Being OEM, your understanding level of drawing and system will be the best.

Please provide modification, up-gradation and scope of work for our HVAC system. So that we may understand our system requirements.

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1/4/2019

JSW Mail - Fwd: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS
Please feel free to contact for any query.

Best Regards,

Durvesh Kumar | Plant Engineer (O&M Baspa II-HEP) | JSW Hydro Energy Ltd.

Sholtu Colony, P.O. Tapri, District Kinnaur , H.P. – 172104 | India

M +91 9816654323 | +91 1786 261696

E-mail : durvesh.kumar@jsw.in | Website : www.jsw.in



On Wed, Dec 5, 2018 at 2:34 PM SK SYSTEMS-AT <sksystemdelhi@gmail.com> wrote:

Dear Mr. Rai,

Pl refer the below mail which is self explanatory, you go through the below mail and give the acceptance so that we can depute our person for condition monitoring.

Awaiting for your reply .

Regards

Rakesh sharma
Gm- Erection
mob: 9953454572

SK Systems Pvt. Ltd.
601, V4 Tower, Plot No.14, Karkardooma Comm. Center, Delhi-92
Tel. - 011-22373004-7; Fax-011-22371345
Email- sksystemdelhi@gmail.com
Website - www.skssystem.com

From: SK SYSTEMS-AT

Sent: Thursday, October 5, 2017 4:24 PM

To: Nitin Chaurasiya

Subject: Re: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

Dear Mr. Nitin,

Please refer the telephonic discussion with signatory held today afternoon regarding the condition monitoring & healthiness check-up of HVAC system being designed, supplied and installed at Karcham Wangtoo, BASPA-II by M/s SK Systems.

In this regard, we may inform you that we are OEM of the HVAC Package for both the Power House.

As required by you, we will carry out the visit to your Power House to monitor the activity related to HVAC System and make a detailed report with following terms & conditions.

The visit charges will be lumpsum Rs.2.25 Lakh + GST @ 18% inclusive of all except loading & boarding of two persons for three days at your Power House (including one senior person).

You are requested to kindly send your acceptance at the earliest.

Regards,

<https://mail.google.com/mail/u/0?ik=3157073c03&view=pt&search=all&permthid=thread-f%3A1621630100165334656&dsqt=1&simpl=msg-f%3A1621...> 3/10



1/4/2019

JSW Mail - Fwd: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

Rakesh Sharma
G.M. – Erection

SK Systems Pvt. Ltd.
601, V4 Tower, Plot No.14, Karkardooma Comm. Center, Delhi-92
Tel. - 011-22373004-7; Fax-011-22371345
Email- sksystemdelhi@gmail.com
Website - www.skssystem.com

From: Nitin Chaurasiya
Sent: Thursday, October 5, 2017 5:23 AM
To: enquiry@zecoaircon.com ; care@wavesaircon.in ; inder@wavesaircon.in ; sales@wavesaircon.in ; kanvacoolindustries@gmail.com ; online@bangaloreairtech.com
Cc: sksystemdelhi@gmail.com ; sksystem@eth.net ; sksystemblr@gmail.com ; sk_systems@dataone.in ; skskundli@gmail.com
Subject: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

Dear Sir,

Introduction: jsw group is a part of o.p. Jindal group and played a key role in india's growth story. Ranked among india's top business houses, jsw's innovative and sustainable forays into the core sectors of steel, energy, cement and infrastructure are helping build a new nation. The group continues to strive for excellence with its strengths, differentiated product mix, state-of-the-art technology, excellence in execution and focus on sustainability.

Jsw energy operates 4,531 mw (thermal - 3,140 mw & hydel - 1,391 mw) of power generation capacity

HYDEL : 1391 MW (BASPA-II 300 MW & KARCHAM WANGTOO 1091 MW)

BASPA-II HEPS 300 MW comes under HBPCL which is subsidiary company of JSW Group.

Three Nos. of Water Cooled Packaged Air Conditioners units, Air Handling units (AHU), Make up Air Units, Blowers are installed at Baspa II HEPS for air conditioning of the Control room and Offices of Control block & for ventilation purpose in power house.

These are supplied and Installed by M/S Zeco and are incorporation since commissioning 2003

As this system is operating more than 14 years so we want to carry out Overhauling / condition monitoring ventilation system including its water conducting system, Cooling Valves,& Air Duct & details RLA Study of its all part to ensure healthiness of whole system.

The brief scope of work of the Condition Monitoring as listed below:

1. Condition Monitoring.
2. Site visit of Representative & technical presentation.

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1/4/2019

JSW Mail - Fwd: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

- 3.Study Drawings / Layout of Ventilation System
- 4.Performance & healthiness checking of all individual units
5. Assessment report of Ventilation System
- 6.Recommendation for Overhauling & other suggestion.
7. Report submission
- 8.Finalizing scope of work for overhauling
- 9.Finalizing Schedule for overhauling
- 10.Execution of overhauling

Please confirm, if you can carry out this job and schedule site visit.

Feel free to contact for any requirement/queries.

With Best Regards,

Nitin Chourasiya | Sr. Engineer (O&M Baspa-II) | JSW Energy Ltd.

HBPCL, Sholtu Colony, PO -Tapri, District. Kinnaur – 172104 | Himachal Pradesh | India

M +91 9816514320

E-mail: nitin.chourasiya@jsw.in , Website - www.jsw.in



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Durvesh Kumar <durvesh.kumar@jsw.in>

To: Dinesh Mahato <dinesh.mahato@jsw.in>

Cc: vikas gupta <vikas.gupta@jsw.in>, Himanshu Puri <himanshu.puri@jsw.in>, Chandra Prakash Rai <cp.rai@jsw.in>

Thu, Jan 3, 2019 at 2:17 PM

----- Forwarded message -----

From: **SK SYSTEMS-AT** <sksystemdelhi@gmail.com>

Date: Thu, 3 Jan 2019 13:28

Subject: Re: Condition Monitoring/Overhauling of AHUs, Make Up Unit & Blowers at Baspa-II HEPS

<https://mail.google.com/mail/u/0/?ik=31570f3c03&view=pt&search=all&permthid=thread-f%3A1621630100165334658&dsq=1&simpl=msg-f%3A1621...> 5/10



**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 84/2010

Coram: 1. Dr. Pramod Deo, Chairperson
2. Shri S.Jayaraman, Member
3. Shri V.S.Verma, Member
4. Shri M.Deena Dayalan, Member

DATE OF HEARING: 7.12.2010

DATE OF ORDER: 12.7.2011

IN THE MATTER OF

Approval of generation tariff for Chamera-I Hydroelectric project, (540 MW) for the period from 1.4.2009 to 31.3.2014.

AND IN THE MATTER OF

NHPC Ltd, Faridabad

Vs

..... Petitioner

1. Punjab State Electricity Board, Patiala
2. Haryana Power Generation Corporation Ltd., Panchkula
3. BSES-Rajdhani Power Ltd., New Delhi
4. Uttar Pradesh Power Corporation Ltd, Lucknow
5. BSES-Yamuna Power Ltd., New Delhi
6. Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Jaipur
7. North Delhi Power Ltd., Delhi
8. Uttaranchal Power Corporation of Ltd., Dehradun
9. Jaipur Vidyut Vitaran Nigam Ltd., Jaipur9.
10. Himachal Pradesh State Electricity Board, Shimla
11. Jodhpur Vidyut Vitaran Nigam Ltd., Jodhpur
12. Engineering Department, UT Secretariat, Chandigarh
13. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
14. Power Development Department, Govt of J&K, Jammu

.....Respondents

The following were present:

1. Shri S.Balaji, NHPC
2. Shri A.K.Tewari, NHPC
3. Shri Ansuman Ray, NHPC
4. Shri S.K.Meena, NHPC
5. Ms. Reshma Hemrajan, NHPC
6. Shri K.K.Goel, NHPC
7. Shri M.M.Mishra, NHPC
8. Shri N.K.Chadha, NHPC
9. Shri Padamjit Singh, HPPC
10. Shri T.P.S.Bawa, HPPC



ORDER

This petition has been filed by the petitioner, NHPC Ltd, for approval of generation tariff for Chamera-I Hydroelectric project (540 MW) (hereinafter referred to as "the generating station") for the period from 1.4.2009 to 31.3.2014 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as "the 2009 regulations").

2. The generating station was commissioned on 1.5.1994. The tariff of the generating station for the period from 1.4.2004 to 31.3.2009 was approved by the Commission vide its order dated 9.5.2006 in Petition No.39/2005 and was revised by order dated 5.2.2007 in Review Petition No.64/2006 (in Petition No.39/2005). Thereafter, the Commission vide its order dated 21.12.2009 in Petition No.97/2009 revised the annual fixed charges for the generating station after considering the additional capital expenditure incurred during the years 2004-05 and 2005-06. Subsequently, by order dated 22.7.2010 in Petition No. 206/2009, the annual fixed charges were revised after considering the impact of additional capital expenditure for the period 2006-09, as under:

Particulars	(₹ in lakh)	
	2006-07	2007-08 2008-09
Depreciation	3624.12	3640.75 3648.74
Interest on Loan	0.00	0.00
Return on Equity	8623.21	8635.52 8642.69
Advance Against Depreciation	0.00	0.00
Interest on Working Capital	770.11	800.71 832.73
O & M Expenses	6418.00	6675.00 6942.00
TOTAL	19435.45	19751.98 20066.16

3. The annual fixed charges claimed by the petitioner for the period 2009-14 is as stated over/leaf:

	(₹ in lakh)						
Annual Fixed Charges	2009-10	2010-11	2011-12	2012-13	2013-14		
Return on Equity	11584.30	11649.08	11708.93	11744.61	11744.60		
Interest on Loan	31.71	89.52	138.73	161.80	149.68		
Depreciation	3920.44	3972.47	4023.08	4054.92	4054.92		
Interest on Working Capital	865.24	899.85	935.92	972.42	1008.76		
O & M Expenses	10823.87	11443.00	12097.54	12789.52	13521.08		
Total	27225.56	28053.92	28904.20	29723.26	30479.04		

4. The respondent No.4, UPPCL has filed its reply to the petition.

CAPITAL COST

(A) Capital Cost as on 1.4.2009

5. The last proviso of Clause 2 of Regulation 7 of the 2009 Regulations, provides as under:

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

6. The Commission vide its order dated 3.9.2010 in Petition No. 206/2009 had approved the capital cost of ₹203272.04 lakh as on 31.3.2009 after taking into account the additional capital expenditure for the period 2006-09. Accordingly, in terms of the above proviso, the capital cost of ₹203272.04 lakh as on 31.3.2009 has been considered as the opening capital cost as on 1.4.2009.

(B) Additional Capital Expenditure for 2009-14

7. Regulation 9 of the 2009 regulations provides as under:

“9. Additional Capitalization. (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and



(v) Change in law:

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

(2) *The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:*

(i) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*

(ii) *Change in law;*

(iii) *Deferred works relating to ash pond or ash handling system in the original scope of work;*

(iv) *In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and*

(v) *In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:*

Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2009.

8. The additional capital expenditure for the period 2009-14 claimed by the petitioner, is as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Expenditure necessary for successful and efficient plant operation-Regulation 9(2)(iv)	1182.00	1443.00	1058.00	368.00	255.00
Deletions	70.22	271.37	92.78	59.53	563.73
Additional Capital expenditure claimed	1111.78	1171.63	965.22	308.47	(-) 308.73

9. After examining the asset-wise details and justification for additional capitalization claimed by the petitioner under various categories, the reply of the respondents, the

admissibility of additional capital expenditure on prudence check, is discussed in the subsequent paragraphs.

Expenditure necessary for successful and efficient plant operation-Regulation 9(2)(iv)

10. The petitioner has claimed an amount of ₹1182.00 lakh, ₹1443.00 lakh, ₹1058.00 lakh, ₹368.00 lakh and ₹255.00 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively, under this head, in respect of assets like MIV servomotor, Up-gradation of plant monitoring system, special tools and tackles, construction of components for Sewerage Treatment Plant (STP) and sewage line, construction of frisking and visitor room, sports complex, CISF barrack, watch tower, high mast light, Security and surveillance system, wireless connectivity of LAN, centralized UPS System, telephone network, audio visual and training aides, hospital equipments, equipment for compliance of OHSAS and environment policy, hydraulic cylinder, air conditioner system, distribution transformer, vehicles, cranes, restoration and up-gradation of cooling system of turbine, hydraulic bolt tensioner, SCADA system, shopping complex, power factor correction panel, replacement of temporary B-type quarter, DG set, construction of executive field hostel/transit camp, printers, replacement of excitation system, replacement of vibration measurement system, modification/ up-gradation of power house ventilation system and some other assets.
11. Based on the submissions made by the parties and the documents available on record, the claims for additional capital expenditure for the respective years have been examined and our findings are as stated overleaf:



Year	Assets	Amount	Findings
2009-10	MIV Servomotor	450.00	Not allowed since the item is in the nature of spares.
	Up-gradation of plant and monitoring system	10.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Special tools and tackles	25.00	Not allowed as the expenditure is in the nature of minor assets.
	Replacement of air conditioning system	15.00	
	Replacement of printers, PCs and rack server	26.00	
	Replacement of centralized UPS system	5.00	
	Construction of components for STP and sewage line	125.00	Allowed in terms of Regulation 9(2)(iii) [instead of 9(2)(iv)] as the expenditure is in line with the directions of the State Pollution Control Board as regards connection of STP facility and complete treatment of sewerage.
	Purchase of equipments (water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Development of sports complex	30.00	Not allowed since it should form part of the original planning
	Audio visual equipment and training aids for hydro power training institute	15.00	Not allowed since it is not specific to this project.
	Replacement of hospital equipment	25.00	Not allowed since the gross value of the original assets has also not been furnished by the petitioner.
	Assets other than the above, like shaft sleeve, construction of frisking visitor room at power house, CISF barrack, watch tower at dam, high mast light, security and surveillance system, wireless connectivity, IP based telephone network etc.,	446.00	Allowed under Regulation 9(2)(iv)] as the expenditure is in respect of items/assets which are necessary to increase the efficiency and successful operation of the generating station.



Year	Assets	Amount	Findings
2010-11	Facilitate repair works of other pumps of cooling water system	90.00	Not allowed since these items are in the nature of spares.
	Additional hydraulic bolt tensioner	30.00	
	Oil filtration plant for Dam	10.00	
	Up-gradation of plant and monitoring system	9.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Replacement of SCADA system	200.00	Not allowed since the gross value of the original assets has not been furnished by the petitioner
	Replacement of hospital equipment	10.00	Not allowed as the expenditure is in the nature of minor assets
	Special tools and Tackles	15.00	
	Replacement of air conditioning system	15.00	
	Replacement of printers, PCs and rack server	15.00	
	Replacement of centralized UPS system	15.00	
	Development of sports complex	30.00	Not allowed since it should form part of the original planning
	Construction of shopping complex	10.00	
	Solar water system	10.00	Not allowed since the benefits which accrue from this asset is enjoyed by the petitioner only.
	Audio visual equipment and training aids for hydro power training institute	15.00	Not allowed since it is not specific to this project.
	Purchase of equipments (water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Assets other than the above, like shaft sleeve, construction of frisking visitor room at power house, CISF barrack, watch tower at dam, high mast light, security and surveillance system, wireless LAN connectivity, IP based telephone network etc.,	959.00	Allowed under Regulation 9(2)(iv) as the expenditure is in respect of items/assets which are necessary to increase the efficiency of the generating station.



Year	Assets	Amount	Findings
2011-12	Up-gradation of plant and monitoring system	5.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Replacement of SCADA system	100.00	Not allowed since the gross value of the original assets has not been furnished by the petitioner
	Replacement of hospital equipment	10.00	
	Special tools and Tackles	15.00	Not allowed as the expenditure is in the nature of minor assets
	Replacement of printers, PCs and rack server	15.00	
	Construction of executive field hostel/transit camp	200.00	Allowed being an additional requirement, since the existing guest house is not sufficient to meet the requirement of accommodation of the executives of the petitioner corporation who do not have families at site and that sufficient accommodation remain available to cater to the needs of the generating station.
	Construction of shopping complex	90.00	Not allowed since it should form part of the original planning
	Audio visual equipment and training aids for hydro power training institute	10.00	Not allowed since it is not specific to this project.
	Purchase of equipments (water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Assets other than the above, like security and surveillance system, wireless LAN connectivity, IP based telephone network etc., replacement of submersible pumps, excitation system, purchase of bottom handling device, distribution transformers, pole mounted 11 kV VCB, DG set, purchase of fire tenders, inspection vehicles (as replacement) etc.	603.00	Allowed under Regulation 9(2)(iv) as the expenditure is in respect of items/assets which are necessary to increase the efficiency of the generating station.



Year	Assets	Amount	Findings
2012-13	Up-gradation of plant and monitoring system	5.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Special tools and Tackles Replacement of printers, PCs and rack server	15.00 15.00	Not allowed as the expenditure is in the nature of minor assets.
	Audio visual equipment and training aids for hydro power training institute	10.00	Not allowed since it is not specific to this project.
	Purchase of equipments (<i>water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation</i>)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
2013-14	Assets other than the above, like wireless LAN connectivity, replacement of excitation system, up-gradation of power house ventilation system with humidity control, purchase of pumps for dams, vehicle (as replacements) etc.	313.00	Allowed under Regulation 9(2)(iv)] as the expenditure is in respect of items/assets which are necessary to increase the efficiency of the generating station.
	Up-gradation of plant and monitoring system	5.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Special tools and Tackles Replacement of printers, PCs and rack server	15.00 10.00	Not allowed as the expenditure is in the nature of minor assets.
	Audio visual equipment and training aids for hydro power training institute	10.00	Not allowed since it is not specific to this project.
	Purchase of equipments (<i>water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation</i>)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Assets other than the above, like wireless LAN connectivity, replacement of vibration	205.00	Allowed under Regulation 9(2)(iv)] as the expenditure is in respect of items/assets which are necessary to



	measurement system, up-gradation of power house ventilation system with humidity control, purchase of pumps for dams, fire tenders (as replacements) etc.	increase the efficiency of the generating station.
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12. Based on our findings in the table at para 11 above, the additional capital expenditure allowed for 2009-14 under Regulation 9(2)(ii) of the 2009 regulations is summarized as under:

Change in law- Regulation 9(2)(ii)

Year	Items/Assets	Amount (₹ in lakh)
2009-10	Purchase of equipments like water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation) to meet the standards of OHSAS and environment certification.	135.00
2010-11		10.00
2011-12		10.00
2012-13		10.00
2013-14		10.00

Deletions

13. In addition to the capitalization under the above categories, the petitioner has de-capitalized amounts of ₹70.21 lakh, ₹271.37 lakh, ₹92.78 lakh, ₹59.53 lakh, and ₹563.73 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively, in respect of gross value of original assets which were not in use.

14. The first proviso to Regulation 7(1) of the 2009 regulations provides that *'the assets forming part of the project, but not in use shall be taken out of the capital cost.'*

15. It is observed that all the assets which are proposed for de-capitalization by the petitioner are linked to assets which are proposed to be replaced by new assets. After prudence check, the gross value of these original assets proposed to be taken out of service are taken out of deletions, as under:

2009-10: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹26.00 lakh has been disallowed. The gross value of these original assets amounting to ₹14.50 lakh, as claimed as deletion by the petitioner is not allowed.



2010-11: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹15.00 lakh has been disallowed. The gross value of these original assets amounting to ₹34.92 lakh, as claimed as deletion by the petitioner is not allowed.

2011-12: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹15.00 lakh has been disallowed. The gross value of these original assets amounting to ₹18.14 lakh, as claimed as deletion by the petitioner, is not allowed.

2012-13: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹15.00 lakh has been disallowed. The gross value of these original assets amounting to ₹3.19 lakh, as claimed as deletion by the petitioner, is not allowed.

2013-14: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹10.00 lakh has been disallowed. The gross value of these original assets amounting to ₹8.91 lakh, as claimed in deletion by the petitioner, is not allowed.

16. As such, based on the prudence check, amounts of ₹55.71 lakh, ₹236.44 lakh, ₹74.63 lakh, ₹56.35 lakh, and ₹554.81 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively, is allowed as deletions.

17. In regard to some of the new replaced assets, the gross value of the original assets has not been proposed to be deducted during the respective years of the claim. These assets are as under:

Asset	Value of Replacement	Gross Value of Old Assets	Year of replacement	Reference
Hydraulic Cylinder	75.00	36.03	2009-10	Sl. No.19, Annexure-I, page-30
Total	75.00	36.03	2009-10	
B-type quarters	250.00	138.00	2010-11	Sl. No.34, Annexure-II, page-41
Total	250.00	138.00	2010-11	

18. The gross value of these assets amounting ₹36.03 lakh and ₹138.00 lakh which have not been proposed to be reduced in the respective years in which the assets were replaced, has been considered as 'assumed deletions' for the years 2009-10 and 2010-11 respectively, for the purpose of tariff. Accordingly, the adjustments are as stated overleaf:

	(₹ in lakh)						
	2009-10	2010-11	2011-12	2012-13	2013-14		2013-14
Deletions claimed	70.22	271.37	92.78	59.53	563.73		563.73
Less: Deletions disallowed	14.50	34.92	18.14	3.19	8.91		8.91
Deletions allowed against claim	55.71	236.44	74.63	56.35	554.81		554.81
Add: Assumed Deletions	36.03	138.00	0.00	0.00	0.00		0.00
Total Deletions allowed	91.74	374.44	74.63	56.35	554.81		554.81

Un-discharged/Discharged Liability

19. The petitioner vide its affidavit dated 15.3.2010 has submitted that the un-discharged liabilities of ₹29.25 lakh for the period 2004-09 has been projected to be discharged during the year 2009-10. The projected discharge of un-discharged liability of ₹29.25 lakh in the year 2009-10 is allowed.

Additional capital expenditure for 2009-14

20. Based on the above discussions, the additional capital expenditure allowed after adjustment of un-discharged liabilities, is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
On account of change in law- Regulation 9(2)(ii)	135.00	10.00	10.00	10.00	10.00
Expenditure necessary for successful and efficient plant operation- Regulation 9 (2)(iv)	446.00	959.00	803.00	313.00	205.00
Deletions	91.74	374.44	74.63	56.35	554.81
Liabilities discharged during the year	29.25	0.00	0.00	0.00	0.00
Total additional capitalization allowed	518.51	594.56	738.37	266.65	(-) 339.81

Capital Cost

21. As stated at para 6 above, the Commission had considered the capital cost of ₹203272.04 lakh as on 31.3.2009 in Petition No.206/2009. The same has been considered as the opening capital cost as on 1.4.2009 for the purpose of tariff for the

period 2009-14. Accordingly, the capital cost approved by the Commission for the period 2009-14 is as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	203272.04	203790.55	204385.10	205123.47	205390.13
Additional Capitalization admitted for the purpose of tariff	518.51	594.56	738.37	266.65	(-) 339.81
Capital Cost as on 31 st March of the financial year	203790.55	204385.10	205123.47	205390.13	205050.31

Debt-Equity Ratio

22. Regulation 12 of the 2009 regulations provides as under:

"(1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

23. The petitioner has submitted that the additional capital expenditure has been financed through internal resources and others. In terms of the above said regulation, the debt-equity ratio of 70:30 has been considered on the additional capital expenditure allowed for the purpose of tariff.

Return on Equity

24. Regulation 15 of the 2009 regulations provides that:



“(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation.

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in Appendix-II.

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be.

Provided that return on equity with respect to the actual tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be tried up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

25. The petitioner has considered Rate of Return on Equity @ 18.674%, based on prevailing MAT rate (Basic rate of 15%+10% surcharge+3% education Cess = 16.995%) for 2009-10.

26. In terms of the provisions of the above regulations, Return on equity has been worked out @17.481% per annum on the normative equity, after accounting for the additional capital expenditure, considering the base rate of 15.5% and MAT rate of 11.33%. Return on equity has been worked out as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	61722.77	61878.32	62056.69	62278.20	62358.20
Addition due to Additional capitalization	155.55	178.37	221.51	80.00	(-) 101.94
Closing Equity	61878.32	62056.69	62278.20	62358.20	62256.25
Average Equity	61800.55	61967.51	62167.44	62318.20	62307.22
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Min Alt. Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity	10803.07	10832.26	10867.21	10893.56	10891.64

27. Any change in the rate of return on equity due to changes in the tax rate would however be considered at the time of truing up.

Interest on loan

28. Regulation 16 of the 2009 regulations provides as under:

- "(1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan, for calculation of interest on loan.*
- (2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.*
- (3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year.*
- (4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.*
- (5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.*
- Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered.*
- Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*
- (6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*
- (7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*
- (8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.*
- (9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute.*
- Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.*

29. The normative loan of the generation station has already been repaid. The normative loan on account of the additional capital expenditure allowed during the period 2009-14 have been considered to be paid in full, as the admitted depreciation is



more than the normative loan amount during the years. As such, the interest on loan during the period 2009-14 is 'Nil'.

Depreciation

30. Regulation 17 of the 2009 regulations provides that:

"(1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site.

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system.

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting 3[the cumulative depreciation including Advance against Depreciation] as admitted by the Commission upto 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."

31. The date of commercial operation of the generating station is 1.5.1994. Since the generating station has completed 12 years of operation as on 1.5.2006, the remaining depreciable value has been spread over the balance useful life of the assets. Assets amounting to ₹91.74 lakh, ₹374.44 lakh, ₹74.63 lakh, ₹56.35 lakh and ₹554.81 lakh have been de-capitalized (including assumed deletions) during 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively. The amount of cumulative depreciation allowed in tariff against these de-capitalized assets has been calculated on *pro rata* basis and

the same has been adjusted from the cumulative depreciation of the year of de-capitalization. Accordingly, depreciation has been worked out as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as on 31.3.2009	203272.04	203790.55	204385.10	205123.47	205390.13
Additional capital expenditure during 2009-14	518.51	594.56	738.37	266.65	(-) 339.81
Closing gross block	203790.55	204385.10	205123.47	205390.13	205050.31
Average gross block	203531.29	204087.82	204754.29	205256.80	205220.22
Land related cost	3894.13	3894.13	3894.13	3894.13	3894.13
Rate of Depreciation	5.0272%	5.0272%	5.0272%	5.0272%	5.0272%
Depreciable value @ 90%	179673.45	180174.33	180774.14	181226.40	181193.48
Balance useful life of the asset	20.1	19.1	18.1	17.1	16.1
Remaining Depreciable value	80687.95	77217.54	73996.71	70369.00	66248.46
Depreciation	4017.64	4046.32	4090.31	4119.14	4119.06

O&M Expenses

32. Sub-clause (i) of Clause (f) of Regulation 19 of the 2009 regulations provides for normative operation and maintenance expenses for hydro generating stations as under:

"(i) Operation and maintenance expenses, for the existing generating stations which have been in operation for 5 years or more in the base year of 2007-08, shall be derived on the basis of actual operation and maintenance expenses for the years 2003-04 to 2007-08, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission.

33. O&M expenses claimed by the petitioner for 2009-14 is as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses	10823.87	11443.00	12097.54	12789.52	13521.08

34. The year-wise break-up of actual O&M expenses for the period 2003-08 furnished by the petitioner, based on which O&M expenses for the period 2009 to 2014 have been claimed is as stated overleaf:

Sl. No	ITEMS	(₹ in lakhs)					
		2003-04	2004-05	2005-06	2006-07	2007-08	
	Breakup of O & M expenses						
1	Consumption of Stores and Spares	97.57	556.41	290.89	196.83	471.79	
2	Repair and Maintenance	765.82	1142.25	788.45	1,089.90	1,005.32	
3	Insurance (Including Self Insurance)	1056.09	1054.11	1056.39	1059.94	1,062.84	
4	Security	68.51	82.97	86.84	106.23	164.95	
5	Administrative Expenses	332.48	313.62	374.64	260.42	303.61	
6	Employee Cost	2659.42	3039.85	3228.29	3441.76	4027.51	
7	Loss of store	-	-	-	-	-	
8	Provisions	316.00	-	277.49	1191.41	254.16	
9	Corporate office expenses allocation	247.19	259.08	86.65	74.62	86.34	
10	Other Items	897.11	582.69	151.06	262.09	325.77	
11	Total (1 to 10)	6440.19	7030.98	6340.70	7683.20	7702.29	
12	Revenue/Recoveries, if any	108.38	63.45	94.56	152.78	84.80	
13	Net O&M expenses	6331.81	6967.53	6246.14	7530.42	7617.49	

35. The petitioner has furnished reasons wherever O&M expenses during a year exceed the expenses from the previous year. It is noticed that in case of Repair & Maintenance works and Consumption of Stores & Spares, Electricity charges etc, there has been variations in the expenditure during certain years. The admissibility of O&M expenses claimed by the petitioner is discussed in the succeeding paragraphs:

36. Details of expenditure stated to have been incurred by the petitioner under the heads "Consumption of Stores & Spares and Repairs & Maintenance" in respect of the generating station during the period 2003-08 is as under:

	(₹ in lakhs)					
	2003-04	2004-05	2005-06	2006-07	2007-08	
1	Consumption of Stores & Spares	97.57	556.41	290.89	196.83	471.79
2	Repair & Maintenance	765.82	1142.25	788.45	1089.90	1005.32
	Total	863.39	1698.66	1079.34	1286.73	1477.11

37. Though the expenses towards consumption of Stores & Spares have been indicated separately, it is observed that the same includes certain expenses towards Repair &

Maintenance and *vice versa*. After re-allocation of these expenses to the appropriate heads, the claims of the petitioner as above, is revised as under:

		(₹ in lakh)				
		2003-04	2004-05	2005-06	2006-07	2007-08
1	Consumption of Stores & Spares	97.57	187.68	290.89	295.83	471.79
2	Repair & Maintenance	765.82	1510.98	788.45	990.9	1005.32
	Total	863.39	1698.66	1079.34	1286.73	1477.11

Consumption of Stores and Spares

38. It is observed that the expenditure during 2004-05 (₹187.68 lakh) towards Consumption of stores increased by over 20% in comparison to the expenses for 2003-04. Since no justification has been submitted by the petitioner, the expenses for 2004-05 are restricted to an increase of 20% over the expenses for 2003-04 (₹117.08 lakh only). The expenditure for Consumption of Stores during the years 2005-06, 2006-07 and 2007-08 are higher by more than 20%, in comparison to the revised expenses for 2004-05. Except for 2007-08, no explanation has been furnished by the petitioner for such an abnormal increase in expenses for the years 2005-06 and 2006-07. Therefore, the expenditure during the years 2005-06 and 2006-07 have been restricted to an increase of 20% over the expenses of the previous years. The increase in expenses during 2007-08 has been attributed to the change in accounting policy of the petitioner corporation, whereby, the capitalization of capital spares disallowed by the Commission continues to remain in capital base in the books of accounts and gets depreciated when consumed and is transferred to O & M expenses at their net value. The depreciation is added back to claim its original gross value for the purpose of tariff in O & M expenses. The petitioner has submitted that the expenses for ₹471.79 lakh during 2007-08 under Consumption of Stores & Spares also includes accumulated depreciation on capital spares of ₹0.11 lakh and consumption of capital spares of Governor System (Power house) amounting to ₹290.00 lakh as per accounting policy of the petitioner corporation. The



justification submitted by the petitioner has been accepted and the expenses for ₹471.79 lakh for 2007-08 is allowed.

Repair and Maintenance work

39. It is observed that the expenses incurred towards Repair and Maintenance works (ten yearly) during 2004-05 includes major works like major overhauling of Main Inlet valve, Maintenance of gas insulated switchgear and annual maintenance of Units etc. These works were taken up during 2004-05 and payments have been made, as follows:

Works/Assets	Amount (₹ in lakh)
Condition monitoring of test on HIV electrical equipment by CPRI, Bangalore	17.99
Partial discharge test on Transformers & Reactors by Acoustic Emission Technique by CPRI, Bangalore	4.55
Engineering and supervision charges paid to M/s Alstom, Canada for Main inlet valve	62.19
Engineering and supervision charges paid to M/s Siemens Germany for Gas insulated switchgear	46.19
Painting work of Spiral Casing, Main Inlet Valve etc	5.61
Engineering service charges paid to M/s GE Power Services	3.71
Rewiring of Quarter of Banikhet & Chilly colony	34.71
Fabrication/ Installation of Steel / Brass fencing in Power House	7.16
Providing Grill, Stair case and painting of Gas Insulated Switchgear hall of switchyard	4.25
Increase in other miscellaneous works	1.03
Special repair / maintenance of main inlet valve by M/s Alstom, Canada for all three units	367.25
procurement for gas insulated switchgear from M/s Siemens, Germany	66.71
Total	621.35

40. From the above, it is noticed that the total expenditure of ₹621.35 lakh incurred in respect of the above works/assets during 2004-05 is a one-time expenditure and not recurring in nature. Hence, the expenditure of ₹621.35 lakh has not been allowed for the purpose of normalization of O&M expenses. Accordingly, out of the total expenses of ₹1510.98 lakh claimed for 2004-05, only an expenditure of ₹889.63 lakh (₹1510.98 lakh - ₹621.35 lakh) has been allowed during 2004-05, for normalization of O&M expenses.

41. The expenses incurred during 2005-06 are found reasonable and has been allowed. During 2006-07, the expenses increased by over 20% in comparison to that of the previous year. It has been submitted that the same is on account of tripping of unit, fault in Stator winding and repair of winding work, which involved a replacement of 47 Nos. of Stator bar/winding, thereby resulting in an expenditure of ₹99.00 lakh. The expenses for repair of Rotor pole coils amounting to ₹29.00 lakh, Special repair in Radial gates under water regulating system amounting to ₹15.00 lakh, repair of DG sets for ₹34 lakh are not a recurring expenditure and hence, an expenditure of ₹177.00 lakh has not been allowed for the purpose of normalization. The expenditure during 2007-08 (₹1005.32 lakh) increased by more than 20% in comparison to the normalized expenses of ₹813.90 lakh during 2006-07. In view of this, the expenses for 2007-08 have been restricted to an increase of 20% (₹976.68 lakh) over the expenses allowed for 2006-07 and the same has been allowed.

42. Based on the above discussions, the following expenses towards Consumption of Stores and Spares and Repair and Maintenance works for the period 2003-08 have been allowed for calculation of O&M expenses for the period 2009-14.

		(₹ in lakh)				
		2003-04	2004-05	2005-06	2006-07	2007-08
1	Consumption of Stores & Spares	97.57	117.08	140.5	168.6	471.79
2	Repair & Maintenance	765.82	889.63	788.45	813.90	976.68

Insurance Coverage

43. The petitioner has submitted the following details towards expenditure on insurance during the period 2003-08:

		(₹ in lakh)				
		2003-04	2004-05	2005-06	2006-07	2007-08
	Insurance expenses	1056.09	1054.11	1056.39	1059.94	1062.84

44. The Commission in its order dated 9.5.2006 in Petition No.47/2005 pertaining to determination of tariff of the generation station of the petitioner for the period 2004-09 had observed that in terms of the policy of the petitioner corporation, there was a need to establish a self-insurance reserve/fund in respect of O & M of the projects by transferring on year to year basis an amount equal to 0.5% of the gross block of assets under O&M. This reserve/fund is to be utilized for losses of assets due to fire, storms, cyclones, earthquakes, landslides, terrorist activities (inserted from May, 2002), floods (inserted from September, 2005) and not for routine wear and tear, repairs and maintenance etc, accidents or breakdown of machinery or shortage of inventory or insurance for human life. According to the petitioner, it has also been decided that losses on account of natural calamities, as above, shall be assessed by a Committee to be constituted for this purpose by the Chairman & Managing Director of the petitioner corporation and the actual losses based on the recommendations of the Committee, duly accepted, shall be reimbursed from the fund. On prudence check, the justification towards the expenditure for insurance coverage and the nature of assets covered under the insurance, submitted by the petitioner is found to be in order. Hence, the expenses claimed under this head are allowed.

Security

45. The expenses incurred towards security claimed by the petitioner is as stated under:

	2003-04	2004-05	2005-06	2006-07	2007-08
Security Expenses (Other than salary & wages)	68.51	82.97	86.84	106.23	164.95

(₹ in lakh)

46. There is increase in the expenditure during the year 2004-05 by more than 20% over that of the expenses for 2003-04. The petitioner has attributed the said increase

towards payments made for private security and for charges for ammunition provided to CISF. Keeping in view the security considerations involved in the generating station, the expenditure claimed by the petitioner is allowed for the purpose of normalization. The expenditure incurred for other years under this head, is found reasonable and hence allowed.

Administrative expenses

47. The total administrative expenses claimed by the petitioner is as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Total administrative expenses	332.48	313.62	374.64	260.42	303.61

48. It is observed that there is an increase in expenses by more than 20% over that of the previous years towards Rent, Traveling charges, Communication expenses and Advertising during different years. The reasons for increase in various components of the administrative expenses submitted by petitioner are examined as under:

- (a) The expenses towards rent during 2004-05 increased from ₹4.97 lakh to ₹7.01 lakh mainly on account of increase in the payment of lease amount ₹1.63 lakh to employee's accommodation. The increase from ₹7.01 lakh (2004-05) to ₹80.19 lakh during 2005-06 was on account of the implementation of change in the head of account with effect from 1.4.2005 such as the 're-allocation of transport expenses under rent-hiring of vehicles' which was booked earlier under Staff welfare expenses under 'Employees remuneration & benefits'. In view of the justification, the increase in the expenses is allowed.
- (b) The travelling expenses during 2006-07 significantly increased from ₹49.92 lakh to ₹61.18 lakh. The petitioner has submitted that the Stator winding of Unit-III of the generating station was damaged due to inter turn fault and in order to restore the same as early as possible, the executives of the generating station were sent to different places for collection of materials, tools & tackles etc, thereby resulting in an increase in the expenditure. In view of the justification, the increase on this count is allowed.
- (c) The expenses during 2004-05 towards Communication increased from ₹16.58 lakh to ₹20.22 lakh (26%). This was on account of international telephone calls made by the petitioner corporation to M/s Alstom, Canada and M/s Siemens, Germany during Special maintenance, thereby resulting in an increase in telephone & telex Charges. The increase is allowed for the reasons stated by the petitioner. However, for the increase in expenses from ₹16.58 lakh to ₹20.22 (22%) lakh during 2005-06, no proper justification has been submitted by the

petitioner. Hence, the expenses on this count is restricted to an increase of 20% over the expenses of the previous year during 2005-06 (i.e. ₹19.90 lakh)

(d) There is increase of advertisement expenses during the years 2004-05 and 2006-07 (i.e from ₹12.45 lakh to ₹17.38 lakh) (40%) and from ₹13.54 lakh to ₹18.31 (35%) from the expenses of the previous years. Since, proper justification has not been submitted by the petitioner, the expenses incurred are restricted to an increase of 20% over the expenses of the previous years. Accordingly, the expenditure towards advertising is worked out as ₹14.94 lakh for 2004-05 and ₹ 16.25 lakh for 2006-07 and the same has been allowed.

(e) As there is no significant increase in expenses under any other heads for the period 2003-08, the same has been allowed.

(f) The claim of the petitioner for ₹25.00 lakh on account of fees for filing the tariff petition before the Commission has not been considered and the same would be dealt with separately in terms of Regulation 42 of the 2009 Regulations.

49. Based on the above, the total administrative expenses allowed for computation of O&M expenses is as under:

	2003-04	2004-05	2005-06	2006-07	2007-08
Total Administrative Expenses	332.48	311.18	349.32	258.36	303.61

(₹ in lakh)

Employee cost

50. The expenses on account of Employee cost forms a major part of the total O&M expenses, and comprises of Salaries, wages & allowances, honorarium, leave, encashment, provident fund contribution, compensation under statutory provision, gratuity and provision on account of gratuity made on actuarial valuation basis every year, VRS and also arrears of wage revision of employees, etc. It also covers, Staff welfare expenses such as LTC, medical reimbursement, liveries & uniform, ex-gratia, grants & subsidies to sports & canteen, new year gifts, project school & hospital expenses, transport expenses etc. productivity-linked incentive, which are paid as per policy of the petitioner corporation. The year-wise break up of employees cost claimed by petitioner is as stated overleaf:

(₹ in lakh)					
Employee Cost	2003-04	2004-05	2005-06	2006-07	2007-08
	2659.42	3039.85	3228.29	3441.76	4027.51

51. The respondent No.4, UPPCL has submitted that the petitioner has not submitted the calculation certified by Chartered Accountant indicating that the actual rise in wage revision from 1.1.2007 was 35% in order to justify the moderation of O&M expenses for 2009-10. The petitioner has submitted that the provision for employee cost should be considered in terms of the provisions of the 2009 regulations. The provisions made on account of pay revision of employees' during 2005-06 and 2007-08 has not been considered and has been dealt separately as per relevant provisions of the 2009 regulations. Accordingly, the O&M expenses have been calculated in terms of the provisions of the 2009 regulations.

52. It is observed that the expenses on employee cost had remained more or less constant except during 2007-08. The increase in 2007-08 has been attributed by the petitioner to the pay revision arrears amounting to ₹799.82 lakh. This amount is being deducted from the claim of the petitioner, since expenses towards salary is considered in terms of Regulation 19(f) of the 2009 regulations. Similarly, an amount of ₹12.63 lakh is also deducted on this count for the claim during 2006-07.

53. Ex-gratia, VRS expenses, productivity-linked Incentive and Salary, Wages and Allowances (Allocation of Corporation office & Regional Office) are not being considered for the reasons given as under:

- (a) Ex-gratia is an incentive and is required to be paid from the profits of the petitioner corporation. The expenses on new year gifts should be borne by the petitioner company out of its profits and not loaded to the beneficiaries. VRS expenses are not of regular nature, particularly when the petitioner has not indicated the likely pattern of expenses on this account during the period 2009-14.
- (b) The expenses on account of productivity-linked Incentive (under section 31 A of Payment of Bonus Act), included under the category staff welfare expenses, are

not allowed for the purpose of tariff since expenses incurred under this head are on account of incentive paid to the employees for maintaining high availability of the generating station which are recovered from the beneficiaries.

(c) The proportionate employee cost under Corporate expenses and Regional expenses allocation is considered for Salary, Wages and Allowances of Corporate office and Regional office as submitted by the petitioner and the balance other expenses for Corporate Office and Regional Office would be considered under Corporate Office and Regional office expenses allocation.

54. Based on the above, the Employee Cost expenses allowed for 2003-08 for normalization of O&M expenses, is as under:

	(₹ in lakh)					
	2003-04	2004-05	2005-06	2006-07	2007-08	
Employee Cost allowed	2788.50	2956.78	3038.36	3270.40	3006.72	

Corporate Office Expenses

55. The petitioner has submitted that as per policy of the petitioner corporation, the Corporate Office expenses allocated to the running generating stations are taken @ 1% of sale of energy for the year excluding taxes and duties and in case of construction projects @ 5% of the project expenditure during the year. The year-wise details of the total Corporate Office expenses incurred and its apportionment to the running generating stations, construction projects and other activities of the petitioner and proportionate corporate expenses charged to the generating station are as under:

Sl. No.	Items	2003-04	2004-05	2005-06	2006-07	2007-08
(A)	Breakup of Corporate expenses (aggregate at Corporate level)					
1	Employee Expenses	6637.00	7652.00	10513.00	10171.00	12411.37
2	Administrative expenses	2683.57	2851.15	2783.09	2704.96	3319.75
3	Security	29.07	38.24	38.22	45.01	70.97
4	Provision	0.00	0.00	6.41	6.89	0.76
5	Others	680.62	551.26	738.79	661.98	713.05
6	Less: Recoveries	10029.8	11092.45	14079.83	13589.88	16515.9
7	Net Corporate expenses (aggregate)	433.51	459.26	469.43	601.46	472.87
(B)	Allocation of Corporate expenses to various functional activities					
1	O&M	1392.91	1575.52	1644.49	1801.33	2171.50
2	Contract & Consultancy	104.44	63.42	68.53	202.78	187.74
3	Construction	8098.94	8994.25	11897.38	10984.31	13683.79
	Total	9596.29	10633.19	13610.4	12988.42	16043.03
(C)	Allocation of Corporate expenses relating to functional activity of power generation to various generating stations					
4	CHAMERA-I (the generating station)	247.19	259.08	297.52	261.06	268.64

56. Some of the components of the employee cost are required to be borne from the profits of the petitioner corporation, as stated above, which have been excluded. Also, after excluding the expenses on ex-gratia and donations paid by the petitioner, the Corporate Office expenses have been allowed as O&M expenses of the generating station for the period 2003-04 to 2004-08 as under:

Sl. No	Items	2003-04	2004-05	2005-06	2006-07	2007-08
	Breakup of Corporate expenses [aggregate at Corporate level]					
1	Employee Expenses	6550.00	7506.00	9007.00	9564.00	11408.00
2	Administrative Expenses	2683.57	2717.054	2710.084	2699.282	3128.764
3	Security	29.07	34.88	38.22	45.01	54.01
4	Donation	0.00	0.00	0.00	0.00	0.00
5	Provision	0.00	0.00	0.00	0.00	0.00
6	Others	680.62	551.26	661.51	661.98	713.05
	Total (1 to 6)	9942.76	10809.098	12416.896	12969.99	15303.97
8	Less: Recoveries	433.51	459.26	469.43	601.46	472.87
9	Net Corporate O&M Expenses (aggregate)	9509.25	10349.84	11947.47	12368.53	14831.10

57. Based on the above, the ratio between the corporate expenses claimed by the petitioner and that allowed is computed as under:

	2003-04	2004-05	2005-06	2006-07	2007-08
Total corporate expenses claimed	9596.29	10633.19	13610.4	12988.42	16043.03
Total corporate expenses allowed	9509.25	10349.84	11947.47	12368.53	14831.10
Total corporate expenses [allowed-v-claimed] ratio (r)	0.99093	0.97335	0.87782	0.95227	0.92446

58. Applying the above ratio, the proportionate corporate office expenses in respect of the generating station is as under:

	2003-04	2004-05	2005-06	2006-07	2007-08
Total corporate expenses claimed for the generating station	247.19	259.08	297.52	261.06	268.64
Total corporate expenses (Proportional) allowed for the generating station.	244.95	252.18	261.17	248.60	248.35
Employee Cost allowed	168.75	182.88	196.90	192.22	191.03
Expenses other than employee cost allowed	76.20	69.30	64.27	56.38	57.32

Regional Office expenses

59. The petitioner has submitted the year-wise details of the total Regional Office (at Benikhet) expenses incurred, its apportionment to the running generating stations, construction projects and other activities of the petitioner and proportionate regional expenses charged to the generating station as stated overleaf:

Sl. No.	Items	2003-04	2004-05	2005-06	2006-07	2007-08
	Net Corporate Expenses (aggregate)	327.37	451.27	600.59	652.42	1030.40
(B)	Allocation of Region-II expenses to various functional activities					
1	O&M	72.12	270.49	265.08	227.32	264.79
2	Contract & Consultancy					
3	Construction	255.25	180.78	335.51	425.10	765.61
	Total	327.37	451.27	600.59	652.42	1030.40
(C)	Allocation of Region-II expenses to power stations/projects falling under Region-II					
1	Chamera-IHEP (the generating station)	247.19	259.08	297.52	261.06	268.64

60. The petitioner has stated that for the years 2003-04 and 2004-05, the Regional Office expenses were shown under the natural head of expenditure by the generating station. Thus, these expenditure forms part of expenses of generating station.

61. The expenditure on account of depreciation and prior period adjustment are not allowed. The expenses under Administrative heads has been restricted to an increase of 20% over the expenses of the previous years, particularly on expenses towards Travelling & Conveyance and others and also where no proper justification has not been submitted by the petitioner. Further, expenses towards Corporate Social Responsibility (CSR) have not been considered as the same is required to be borne by the petitioner from its own resources.

62. Based on the above, Regional office expenses after normalization works out as stated overleaf:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Net Regional Office expenses (aggregate)	315.92	427.12	574.61	597.11	929.87
Employee cost (aggregate)	256.38	351.23	492.13	528.53	807.75

63. Based on the above, the ratio between the regional office expenses claimed and that considered is computed as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Total Regional Office expenses claimed	327.37	451.27	600.59	652.42	1030.40
Total Regional Office expenses allowed	315.92	427.12	574.61	597.11	929.87
Total Regional Office expenses [allowed-v-claimed] ratio (r)	0.95674	0.91522	0.90244	0.95674	0.91522

64. Based on the above, the proportionate Regional Office expenses is worked out as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Total Regional office expenses claimed for the generating station. (A)	327.37	451.27	600.59	652.42	1030.40
Total Regional expenses (proportional) allowed for the generating station (B) = (A * r)	315.92	427.12	574.61	597.11	929.87
Employee Cost Allowed (E)	256.38	351.23	492.13	528.53	807.75
Expenses other than employee cost allowed (B-E)	59.54	75.89	82.48	68.58	122.12

Other (Specific / Administrative) expenses

65. The petitioner's claim for Other administrative expenses is as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Other Expenses	897.11	582.69	151.06	262.09	325.77

66. The expenses claimed towards loss on sale of fixed assets have not been allowed since any loss on sale of assets is required to be borne by the petitioner. Similarly, Stores (written-off) is also required to be borne by the petitioner and has not passed on to the beneficiaries. It is observed that there is significant variation in the expenses

claimed under 'Other Miscellaneous expenses' which includes printing and stationery, consultancy charges, etc. In the absence of proper justification for the expenses on this count, the claims under these heads have been restricted to an increase of 20% over the expenses of the previous year.

67. Based on the above, the other Expenses allowed for the period 2003-08 for calculation of O&M expenses is as under:

	2003-04	2004-05	2005-06	2006-07	2007-08
Other Expenses	95.57	112.98	135.57	165.97	187.94

(₹ in lakhs)

68. Based on the above, the O&M expenses during the period 2003-08 allowed for calculation of O&M expenses for the period 2009-14, is as under:

Sl. No.	Items	2003-04	2004-05	2005-06	2006-07	2007-08
Breakup of O & M expenses						
1	Consumption of Stores and Spares	97.57	117.08	140.50	168.60	471.79
2	Repair and Maintenance	765.81	889.63	788.45	813.90	976.68
3	Insurance (including Self Insurance)	1056.09	1054.11	1056.39	1059.94	1062.84
4	Security	68.51	82.97	86.84	106.23	164.95
5	Administrative Expenses	332.48	311.18	349.32	258.36	303.61
6	Employee Cost	2788.50	2956.78	3038.36	3270.40	3006.72
7	Loss of stores	0.00	0.00	0.00	0.00	0.00
8	Provisions	0.00	0.00	0.00	0.00	0.00
9	Corporate & Regional office expenses allocation other than employee cost	76.20	69.30	78.92	66.38	71.00
10	Other items	112.98	135.58	165.97	187.94	187.94
11	Total (1 to 10)	5221.94	6239.47	5776.22	6169.60	6203.17
12	Revenue/Recoveries, if any	108.38	63.45	94.56	152.78	84.80
13	Net O&M expenses	5113.56	5483.88	5531.27	5712.59	6089.73

(₹ in lakhs)

69. Accordingly, the year-wise O&M expenses for the generating station, after applying escalation @ 5.72% from 2008-09 and 50% increase of employee cost by considering the

percentage of employee cost (54%) of the normalized employee cost during the period 2003-08, for the tariff period 2009-14 is allowed as under:

	(₹ in lakh)						
	2003-04	2004-05	2005-06	2006-07	2007-08	Average normalized at 2007-08 Price level	
Employee cost allowed	2788.50	2956.78	3038.36	3270.40	3006.72		
Average normalized Employee cost at 2007-08 Price level	3411.44	3439.49	3360.65	3439.48	3006.72	3331.56	
O&M expenses allowed	5113.56	5483.88	5531.27	5712.59	6089.73		
Average normalized O&M at 2007-08 Price level	6255.92	6379.16	6117.99	6007.93	6089.73	6170.14	
Escalation rate (Esc) %	5.17	5.17	5.17	5.17	5.17		
Percentage of employee cost	3331.56 / 6170.14*100 = 54 %						

O & M Expenses for 2009-14

70. Accordingly, after applying the escalation @ 5.72% from 2008-09 and the 50% increase of employee cost by considering the percentage of employee cost (74 %) in the year 2009-10, the year-wise O&M expenses for the generating station for the tariff period 2009-14 is allowed as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O&M Expenses	8758.11	9259.07	9788.69	10348.60	10940.54

Interest on Working Capital

71. In accordance with sub-clause (c) of clause (1) of Regulation 18 of the 2009 regulations, working capital in case of hydro generating stations shall cover:

- (i) *Receivables equivalent to two months of fixed cost;*
- (ii) *Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 19;*
- (iii) *Operation and maintenance expenses for one month.*

72. Clauses (3) and (4) of Regulation 18 of the 2009 regulations, the rate of interest on working capital shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the generating station or a unit thereof is declared under commercial operation, whichever is later. Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency.

73. Working capital has been calculated considering the following elements:

(a) **Receivables:** In terms of the provisions of the above regulations, receivables equivalent to two months of fixed cost, considered for the purpose of tariff, is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Receivables	4054.30	4151.82	4257.93	4365.31	4468.56

(b) **Maintenance Spares:** In terms of the provisions of the above regulations, maintenance spares considered for the purpose of tariff, is as stated below:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	1313.72	1388.86	1468.30	1552.29	1641.08

(c) **O&M Expenses:** In terms of the provisions of the above regulations Operation and maintenance expenses for one month considered for the purpose of tariff, is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses	729.84	771.59	815.72	862.38	911.71

74. In terms of Clauses (3) and (4) of Regulation 18 of the 2009 regulations, the SBI PLR as on 1.4.2009 was 12.25%. This has been considered by the petitioner. The same interest rate has been considered in the calculations, for the purpose of tariff.

75. Necessary computations in support of calculation of interest on working capital is as under:

Particulars	₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	1313.72	1388.86	1468.30	1552.29	1641.08
O & M expenses (1 month)	729.84	771.59	815.72	862.38	911.71
Receivables	4054.30	4151.82	4257.93	4365.31	4468.56
Total	6097.86	6312.27	6541.96	6779.98	7021.35
Rate of interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on working capital	746.99	773.25	801.39	830.55	860.12

Annual Fixed Charges

76. The annual fixed charges approved for the generating station for the period from 1.4.2009 to 31.3.2014 is as under:

Particulars	₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	10803.07	10832.26	10867.21	10893.56	10891.64
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	4017.64	4046.32	4090.31	4119.14	4119.06
Interest on Working Capital	746.99	773.25	801.39	830.55	860.12
O & M Expenses	8758.11	9259.07	9788.69	10348.60	10940.54
Total	24325.81	24910.90	25547.60	26191.85	26811.36

77. The petitioner shall be entitled to compute and recover the annual fixed charges and energy charges in accordance with Regulation 22 of the 2009 regulations.

78. The recovery of the annual fixed charges shall be subject to truing up, in terms of Regulation 6 of the 2009 regulations.

Design Energy

79. The month-wise details of design energy in respect of the generating station is indicated in the table as under:

Month	Design Energy (MUs)
April	99.02
May	184.54
June	183.46
July	279.62
August	340.25
September	168.17
October	96.93
November	65.91
December	59.93

January	64.45
February	58.13
March	64.15
Total	1664.55

80. Monthly energy charges shall be computed in terms of the provisions contained in Regulation 22 of the 2009 regulations.

Application fee and the publication expenses

81. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition for determination of tariff for the generating station. However, the details of the actual expenditure incurred for publication of notice in the newspapers, has not been submitted by the petitioner.

82. Regulation 42 of the 2009 regulations provides as under:

“The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company or the transmission licensee, as the case may be, directly from the beneficiaries or the transmission customers, as the case may be.”

83. The Commission in its order dated 11.1.2010 in Petition No.109/2009 (pertaining to approval of tariff for SUGEN power plant for the period from DOCO to 31.3.2014) had decided that filing fees in respect of main petitions for determination of tariff and the expenses on publication of notices are to be reimbursed.

84. Accordingly, the expenses incurred by the petitioner on application filing fees amounting to ₹10.80 lakh each for the years 2009-10 and 2010-11 respectively, in connection with the present petition, shall be directly recovered from the beneficiaries, on *pro rata* basis. The reimbursement of charges towards the publication of notices in newspapers shall be recovered on *pro rata* basis, on submission of documentary proof of the same.



85. The difference between the provisional annual fixed charges already recovered by the petitioner and the annual fixed charges determined by this order shall be payable by the respondents in installments within a period of six months, in terms of the proviso to Clause (3) of Regulation 5 of the 2009 regulations.

86. Petition No.84/2010 is disposed of in terms of the above.

Sd/-
[M.DEENA DAYALAN]
MEMBER

Sd/-
[V.S.VERMA]
MEMBER

Sd/-
[S. JAYARAMAN]
MEMBER

Sd/-
[DR.FRAMOD DEO]
CHAIRPERSON





Himachal Baspa Power Company Limited,
Baspa - II H. K. Project,
Sheela Colony, P.O. Tejni - 172104,
Distt. Kinnaur (Himachal Pradesh)

Date: 01-12-2017

Minutes of Meeting
Between M/s DQAP and HBPCL at Baspa HPS site
Inspection of Fire Smoke Detector System

Following were present

HBPCL

Ravindra Rana (DGM)

Himanshu Puri (Manager)

Navinder Rawat (Engineer)

M/s DQAP Systems PVT LTD, New Delhi

Mr. Updesh Verma

Mr. Girdish Sharma

Background

Baspa plant has Honeywell Notifier Make; AFP Series Fire Detection System with 120 Nos. of Smoke detectors for detection of fire in Control room and Offices of Control block. The system was supplied and Installed by M/S Technico India Pvt. Ltd and are incorporation since commissioning 2003.

Recently a problem has been observed in Smoke detectors viz. D-104,105,142,116,136 which are not working and false alarm is appearing in control room panel. Now as we are using new smoke detectors instead of faulty ones but multiple "invalid device" alarms are appearing on main alarm panel.

As Such it is proposed to arrange service of vendor to attend the above problem and condition.

Following was observed and shared by DQAP Systems:

1. Multiple "invalid device" alarms being generated by panel essentially because of non-compatible device (5 Nos.) introduction in the field.
2. Repeater panel not communicating with the main panel.
3. Continuous use of invalid device or open path may cause system to generate false alarm.

Following recommendations were made by DQAP Systems in the same context:

1. The current AFP series of Notifier is obsolete and should be upgraded to Notifier "NFS series" fire alarm systems.
2. Existing hooters, MCP,s along with wiring can be utilized in the new system.
3. All sensors, modules shall be replaced in the new system along with main and repeater panel.
4. JSW Energy is known for high standards of industrial fire safety hence it is also suggested that Emergency Message Broadcast System should be implemented at BASPA plant. This will enable automatic pre-recorded and/or telephonic messages broadcast in the plant or pre-selected/pre-defined zones in the plant. Such System should be inbuilt to the Fire Alarm Panel to have seamless integration.





dqap systems

Proposal for Supply of Fire Detection System for JSW

S No	Description	Unit	Qty	Make/Model No.	Indigenous Supply	
					Unit Rate INR	Amount INR
1	2 loop, Addressable, Intelligent Fire Detection and Alarm Panel for automatic fire detection & annunciation of alarms for various types of detectors installed like multi sensor, heat detectors, response indicators, loop isolators, manual call points, hooters etc installed in plant area and various buildings.	Nos.	1	Notifier NFS2-640E	180,000.00	180,000.00
2	Repeater Panel	Nos.	1	FDU-80	35,000.00	35,000.00
3	Addressable Rate of Rise Heat Detectors for safe area along with all mounting & other accessories	Nos.	25	FST-851R	2,250.00	56,250.00
4	Multi sensor detectors (addressable type) along with all mounting & other accessories	Nos.	60	FAPT-851	2,350.00	141,000.00
5	Manual Call Point (Weather Proof) for outdoor areas along with all mounting & other accessories including monitor modules	Nos.	1	SAI/BALIIGA+PM M101	10,500.00	10,500.00
6	Manual Call Point for hazardous areas along with all mounting & other accessories including monitor modules	Nos.	1	SAI/BALIIGA+PM M101	15,800.00	15,800.00
7	Isolators for isolating of signalling loop in case of any fault along with all mounting & other accessories	Nos.	1	ISO/X	2,410.00	2,410.00
8	Response Indicators along with all mounting & other accessories	Nos.	1	AGNI	65.00	65.00
9	Indoor Hooters cum Strobe (for safe area) along with all mounting & other accessories including control modules	Nos.	1	PR-L+FCM-1	6,120.00	6,120.00
10	Outdoor Hooters cum Strobe (for safe area) along with all mounting & other accessories including control modules	Nos.	1	P2R-K+FCM-1	6,980.00	6,980.00
11	Hooters cum Strobe (for hazardous area) along with all mounting & other accessories including control modules	Nos.	1	SAI/BALIIGA+FCM-1	19,100.00	19,100.00
12	Monitor modules along with all mounting & other accessories for third party interface	Nos.	1	FMM/1	2,295.00	2,295.00
13	Relay modules along with all mounting & other accessories for third party interface	Nos.	1	FRM/1	1,990.00	1,990.00
14	Systems Installation, testing & commissioning Services	Lot	1		200,000.00	200,000.00
GRAND TOTAL						677,510.00

Terms & Conditions

- The prices quoted are exclusive of GST or other taxes as applicable as per actual
- Supply Payment Terms: 30 days from the date of supply of material**
- Services Payment Terms: 100% on system commissioning**
- Validity: 30 Days from the date of submission
- System Delivery time shall be 6-8 weeks from the date of Commercial Clearance
- Warranty: 12 Months from the date of installation or 18 Months from the date of supply which ever is earlier

Boarding/Lodging, To & Fro ZAC rail travel in client scope





Otis Elevator Company (India) Limited
(Northern Region)
Unit No. 171, 172, 173 & 271, 272
Aggarwal Cyber Plaza - II
Plot No C-7, Netaji Subhash Place
Pitampura, Delhi - 110034
CIN : U29150MH1953PLC009158
Tel. : (91-11) 4606 9000 / 4606 9100
Fax : (91-11) 4606 9111
www.otis.com

To,

The Manager,
HBPCL,
BASPA, KINNOURE (H.P.)

Dated: 12-11-2018

**Sub:- G-5 Drive to L-1000 Drive , Add on VF for Door & Car operating Panel / Hall Button for your Lift At
JSW BASPA Cont. No. MJ2140.**

Dear Sir,

This in reference to your lift calls back, attended on Dated 1-11-2018. In this regards we wish to Inform you that, the Drive of the lift was malfunctioning so we have replaced the same.

But it must also be realized that in spite of our best efforts, systems can malfunction owing to many reasons that lie beyond our control. Although it remains our priority and constant endeavor to keep ready stock available for all the active units in our Service portfolio, but it does not remain possible every time; especially due to discontinuation of certain parts and spares from production due to its obsolescence.

Here, we wish to apprise you the fact, that your Elevator is equipped with Traditional "G5" as VVVF Drive for the Controller. Since the G5 Drive has now got obsolete and is out of production now, therefore we strongly recommend you to get your upgraded L-1000VVVF Drive. Kindly note that although our market price of each L-1000 Drive system is substantially much higher, we are offering a special discounted price only exclusively for our customers having comprehensive maintenance Contract with us. By this upgradation we assured of replacement availability in case of its failure in the future.

We are also attaching our proposal for the upgradation of L-1000Drive, Add on VF for Door Operation & replacement of Car operating Panel/ Hall operating button. So we request you to sign and return one copy to us along with 100% payment in advance, to enable us to book the order.

Please feel free to contact the undersigned in case of any further clarification.

Thanking you and assuring you of best OTIS attention always.

Yours Truly,

For OTIS ELEVATOR COMPANY (I) LTD.





Otis Elevator Company (India) Limited
(Northern Region)
Unit No. 171, 172, 173 & 271, 272
Aggarwal Cyber Plaza - II
Plot No C-7, Netaji Subhash Place
Pitampura, Delhi - 110034

4th Floor, So-Sheril Vihar, Netaji Subhash Place, Pitampura, Delhi - 110034
Shimla-171009

CIN : U29150MH1953PLC009158

Ref. No. N18TN0840

GST No : 02AAAC0049ME2322

Fax : (91-11) 4606 9111

Contract No. MJ2140

Date 01 Nov 2018

To,

THE Manager

HBPCL

BASPA ,

BASPA,0

GST No : 02AADCH3821L1ZU

PAN No : AADCH3821L

Subject : SUPPLY & INSTALLATION OF FOLLOWING MATERIAL

Ref. Machine No : J002140

Dear Sir/Madam,

We are pleased to submit the following proposal to be carried out at your premises located at HBPCL in relation to the subject Machine No. J002140

Description of goods	Quantity
G5/L7 to L1000, 15KW, open loop to close l	1,000

- A. The above quotations are effective for 30 days from the date of proposal and are subject to change thereafter at our sole discretion and without notice.
- B. Our price quotation is exclusive of all taxes. The price quoted shall be subject to change from time to time at our absolute discretion. If any other tax (including but not limited to levies under GST) applicable to this transaction is levied after the date of this proposal, this will be to your account. The taxes applicable as on date would be as under;

We propose to supply and install the following material(s) in relation to repair of aforesaid machine as per the Terms and conditions as Specified hereunder for the sum of Rs. 203842.00 exclusive of taxes (Rupees Two Lacs Three Thousand Eight Hundred Forty Two Rupees only)

Particulars	Amount (Rs)
Value of Material(s) and Service(s)	203842.27
CGST @ 9.00%	18345.80
SGST @ 9.00%	18345.80
Total	240534.00

- C. You would be required to make the full payment in advance along with the order by way of crossed cheque or demand draft, favoring OTIS ELEVATOR COMPANY (INDIA) LTD. Payment by cash will not be accepted.
- D. You hereby undertake to send the TDS deduction certificate under the applicable laws (including but not limited to GST) within 30 days from hereafter
- E. Delivery: We can complete the work in 10 number of days/weeks from the date of receipt of your order, advance payment, layout approval on technical details whichever is later, subject to your handling one elevator at time 1 days, prior to the above completion period.

OTIS

CUSTOMER :

Pages 1 OF 3



**OTIS ELEVATOR COMPANY
(INDIA) LIMITED
CONDITIONS OF CONTRACT**

1. You hereby confirm that our workmen shall be given a safe place in which to work and we reserve the right to discontinue our work in the building as and when, in our opinion this provision is being violated.
2. Unless otherwise expressly agreed in writing, it is understood that the work will be performed during our regular working hours of our regular working days. If overtime work mutually agreed upon and performed, additional charges therefore, at our usual rate for such work, shall be added to the contract price.
3. We shall not be liable for any loss, damage, or delay, due to any cause beyond our reasonable control, including, but not limited to, lack of shipping space, embargoes, acts of government, strikes, lockouts, fire, accident, explosion, theft, flood, riots, civil commotion, war, mischief delay in supplies of raw material and components either at our suppliers' works or at our works due to any or all of the reasons such as energy crisis, electricity cut, rail/road transporters strike, go slow, bandhs, non-availability of essential raw material (iron & steel, pig iron, aluminum, copper, silver, brass stainless steel various alloys, electrical grade steel, etc.), act of God or of the State's enemies or act of third party. Should damage occur to our material, tools or works on the premises from any such cases, you shall compensate us for the same. You agree that we will not be liable to you for any loss or damage by reason of any act, neglect or default on our part or on the part of our agents, servants, or workmen, suffered by yourself or by any other person in the event that any such person or persons files a suit or claim for damages or compensation against you. Without in any way limiting the operation of the foregoing provisions, under no circumstances, whether based on contract, warranty, negligence, strict liability, or otherwise, shall Otis or its affiliates be liable for any special, consequential, indirect, incidental or punitive damages of any kind or character, including but not limited, to loss of profits or revenues, loss of product, loss of use, cost of capital and the like, arising out of or related to any performance under or breach of this agreement.
4. Wherever either in our quotation or in our correspondence a separate price is stated, for labour or erection, the same is done for the facility of recovering advances adjusting the price of the entire contract. The breakup of the contract price into its various components at any stage does not signify any divisibility of this contract involving sale of moveables at any stage.
5. This contract being works contract for supply and erection/installation, any packing cases, or left over material or tools tackles, instruments etc., brought to site are dismantled old materials shall remain our property. A suitable rebate for the dismantled old materials has already been allowed in our proposed contract price.
6. We hereby guarantee the workmanship of the apparatus furnished by us under this contract and we will make good any defects not due to ordinary wear and tear or to improper use or care which may develop within one year from date of completion, provided elevator is under our maintenance contract.
7. If any drawings, illustrations or descriptive matter are furnished with this proposal, they are approximate and submitted only to show the general style, arrangement and dimensions of the machinery. In case of any variation between your specifications, terms and conditions and our quotation/ correspondence, our quotation will prevail.
8. The prices quoted are exclusive of GST as currently applicable, should there be any amendments or variation in the rate or methodology for charging the applicable taxes (not limited to levies under GST), the same would be claimed by us as soon as the amount thereof is ascertained and shall be payable by you immediately.
9. In compliance with Section 171 of CGST Act 2017, the contract price has been determined after due consideration of the applicable taxes as on the relevant date (including but not limited to GST) on input side as well as on output side along with the available benefit of input tax credit as per the law.
10. If you cancel the contract or commit a breach of the contract or the contract remains dormant for 54 weeks from signing the contract, we shall be entitled to claim damages and /or compensation including the cost of materials and the loss of profits / administrative expenses at actual or at the rate of 10% of the value of the contract, whichever, is higher.
11. To the extent applicable, you shall be exclusively responsible for procuring permits/licenses from Statutory/ Regulatory Authorities, including but not limited to Lift Inspectorate/ PWD Office and pay all necessary fees for such licenses/ permits and inspection fees. Otis may however at your request provide necessary support towards technical documentation and respond to and clarify technical queries as may be raised by the statutory authorities.
12. Our aggregate liability under contract or law will be limited to 25% of the contract amount. Under no circumstances, whether based on contract, warranty, negligence, strict liability, or otherwise, shall Otis or its affiliates be liable for any special, consequential, indirect, incidental or punitive damages of any kind or character, including but not limited, to loss of profits or revenues, loss of product, loss of use, cost of capital and the like, arising out of or related to any performance under or breach of this agreement.
13. This proposal when accepted by you and approved by our authorized official shall constitute a binding contract between us, and all prior representations or arrangements not incorporated herein shall be superseded.)
14. All our employees are covered under the provision of ESI Act, if applicable (ESIC code no.31-7123-A-66) or under the Workmen's Compensation Act or the Company's Group Personal Accident Insurance Scheme as the case may be.

OTIS



OTIS ELEVATOR COMPANY (INDIA) LIMITED

15. Your company and its branches and accordingly hold the GST Registration (INDIA) LIMITED. In case the said clause does not apply. By mentioning 'NOT APPLICABLE' you confirm that you are not a registered dealer as per the GST laws.

This order is deemed to be concluded at Mumbai/Delhi/Kolkata/Bangalore (strikeout whatever is Not applicable) and only courts in this place shall have jurisdiction in the event of any dispute whatsoever.

Note: If you wish to place an order on us, kindly sign and return to us both copies of our estimate with requisite amount. On receipt of the same, one copy will be returned to you duly signed by our authorised representative, for your records.

Ref.No. : N18TN0840
 Contract No. : MJ2140

Your Faithfully
 OTIS ELEVATOR COMPANY (INDIA) LTD.

Sign: _____
 Name: _____
 Title: _____
 Contact No.: _____
 Email ID: _____
 Date: _____
 Acceptance On: _____ 20____

Customer
 Name _____
 Title _____
 Signature _____
 Contact No. _____
 Email Id _____

OTIS
 Name _____
 Title _____
 Signature _____
 Contact No. _____
 Email Id _____
 Customer Promised Date _____





Otis Elevator Company (India) Limited
(Northern Region)
Unit No. 171, 172, 173 & 271, 272
Aggarwal Cyber Plaza - II
Plot No C-7, Netaji Subhash Place
Pitampura, Delhi - 110034
CIN : U29150MH1953PLC009156
Tel : (91-11) 4606 9000 / 4606 9100
Fax : (91-11) 4606 9111

4th Floor, So-Sheril Vihar, Ghat - Hotel, NH-22, Panthegathi,
Shimla-171009

GST No : 02AAACO0481E2Z2

Ref. No. N18TN0858

Contract No. MJ2140
Date 11 Nov 2018

To,

THE Manager

HBPCL

BASPA,

BASPA,0

GST No : 02AADCH3821L1ZU

PAN No : AADCH3821L

Subject : SUPPLY & INSTALLATION OF FOLLOWING MATERIAL

Ref. Machine No : J002140

Dear Sir/Madam,

We are pleased to submit the following proposal to be carried out at your premises located at HBPCL in relation to the subject Machine No. J002140

Description of goods	Quantity
FULL LENGTH COP, WITH BRAIL GEAN TYPE BUTTOM	1.000
UP HB PLATES	1.000
DN HB PLATES	1.000
HB PLATES WITH WIRING	4.000

- A. The above quotations are effective for 30 days from the date of proposal and are subject to change thereafter at our sole discretion and without notice.
- B. Our price quotation is exclusive of all taxes. The price quoted shall be subject to change from time to time at our absolute discretion. If any other tax (including but not limited to levies under GST) applicable to this transaction is levied after the date of this proposal, this will be to your account. The taxes applicable as on date would be as under:

We propose to supply and install the following material(s) in relation to repair of aforesaid machine as per the Terms and conditions as Specified hereunder for the sum of Rs. 116175.00 exclusive of taxes (Rupees One Lacs Sixteen Thousand One Hundred Seventy Five Rupees only)

Particulars	Amount (Rs)
Value of Material(s) and Service(s)	116174.90
CGST @ 9.00%	10455.74
SGST @ 9.00%	10455.74
Total	137086.00

- C. You would be required to make the full payment in advance along with the order by way of crossed cheque or demand draft, favoring OTIS ELEVATOR COMPANY (INDIA) LTD. Payment by cash will not be accepted.
- D. You hereby undertake to send the TDS deduction certificate under the applicable laws (including but not limited to GST) within 30 days from hereafter
- E. Delivery: We can complete the work in 12 number of days/weeks from the date of receipt of your order, advance payment, layout approval on technical details whichever is later, subject to your handling one elevator at time 2 days, prior to the above completion period.

OTIS:

CUSTOMER :

Pages 1 OF 3



**OTIS ELEVATOR COMPANY
(INDIA) LIMITED**

CONDITIONS OF CONTRACT

1. You hereby confirm that our workmen shall be given a safe place in which to work and we reserve the right to discontinue our work in the building as and when, in our opinion this provision is being violated.
2. Unless otherwise expressly agreed in writing, it is understood that the work will be performed during our regular working hours of our regular working days. If overtime work mutually agreed upon and performed, additional charges therefore, at our usual rate for such work, shall be added to the contract price.
3. We shall not be liable for any loss, damage, or delay, due to any cause beyond our reasonable control, including, but not limited to, lack of shipping space, embargoes, acts of government, strikes, lockouts, fire, accident, explosion, theft, flood, riots, civil commotion, war, mischief delay in supplies of raw material and components either at our suppliers' works or at our works due to any or all of the reasons such as energy crisis, electricity cut, rail/road transporters strike, go slow, bandhs, non-availability of essential raw material (iron & steel, pig iron, aluminum, copper, silver, brass stainless steel various alloys, electrical grade steel, etc.), act of God or of the State's enemies or act of third party. Should damage occur to our material, tools or works on the premises from any such cases, you shall compensate us for the same. You agree that we will not be liable to you for any loss or damage by reason of any act, neglect or default on our part or on the part of our agents, servants, or workmen, suffered by yourself or by any other person in the event that any such person or persons files a suit or claim for damages or compensation against you. Without in any way limiting the operation of the foregoing provisions, under no circumstances, whether based on contract, warranty, negligence, strict liability, or otherwise, shall Otis or its affiliates be liable for any special, consequential indirect, incidental or punitive damages of any kind or character, including but not limited, to loss of profits or revenues, loss of product, loss of use, cost of capital and the like, arising out of or related to any performance under or breach of this agreement.
4. Wherever either in our quotation or in our correspondence a separate price is stated, for labour or erection, the same is done for the facility of recovering advances adjusting the price of the entire contract. The breakup of the contract price into its various components at any stage does not signify any divisibility of this contract involving sale of moveables at any stage.
5. This contract being works contract for supply and erection/installation, any packing cases, or left over material or tools tackles, instruments etc., brought to site are dismantled old materials shall remain our property. A suitable rebate for the dismantled old materials has already been allowed in our proposed contract price.
6. We hereby guarantee the workmanship of the apparatus furnished by us under this contract and we will make good any defects not due to ordinary wear and tear or to improper use or care which may develop within one year from date of completion, provided elevator is under our maintenance contract.
7. If any drawings, illustrations or descriptive matter are furnished with this proposal, they are approximate and submitted only to show the general style, arrangement and dimensions of the machinery. In case of any variation between your specifications, terms and conditions and our quotation/ correspondence, our quotation will prevail.
8. The prices quoted are exclusive of GST as currently applicable, should there be any amendments or variation in the rate or methodology for charging the applicable taxes (not limited to levies under GST), the same would be claimed by us as soon as the amount thereof is ascertained and shall be payable by you immediately.
9. In compliance with Section 171 of CGST Act 2017, the contract price has been determined after due consideration of the applicable taxes as on the relevant date (including but not limited to GST) on input side as well as on output side along with the available benefit of input tax credit as per the law.
10. If you cancel the contract or commit a breach of the contract or the contract remains dormant for 54 weeks from signing the contract, we shall be entitled to claim damages and /or compensation including the cost of materials and the loss of profits / administrative expenses at actual or at the rate of 10% of the value of the contract, whichever, is higher.
11. To the extent applicable, you shall be exclusively responsible for procuring permits/licenses from Statutory/ Regulatory Authorities, including but not limited to Lift Inspectorate/ PWD Office and pay all necessary fees for such licenses/ permits and inspection fees. Otis may however at your request provide necessary support towards technical documentation and respond to and clarify technical queries as may be raised by the statutory authorities.
12. Our aggregate liability under contract or law will be limited to 25% of the contract amount. Under no circumstances whether based on contract, warranty, negligence, strict liability, or otherwise, shall Otis or its affiliates be liable for any special, consequential, indirect, incidental or punitive damages of any kind or character, including but not limited, to loss of profits or revenues, loss of product, loss of use, cost of capital and the like, arising out of or related to any performance under or breach of this agreement.
13. This proposal when accepted by you and approved by our authorized official shall constitute a binding contract

OTIS

OTIS



OTIS ELEVATOR COMPANY (INDIA) LIMITED

14. All our employees are covered under the provision of ESJ-Act, if applicable (ESJ code no:31-7123-A-66) or under the Workmen's Compensation Act or the Company's Group Personal Accident Insurance Scheme as the case may be number.

15. You confirm that you are registered with GST Authorities and accordingly hold the GST Registration number. (Please mention 'NOT APPLICABLE' in case the said clause does not apply. By mentioning 'NOT APPLICABLE' you confirm that you are not a registered dealer as per the GST laws).

This order is deemed to be concluded at Mumbai/Delhi/Kolkata/Bangalore (strikeout whatever is Not applicable) and only courts in this place shall have jurisdiction in the event of any dispute whatsoever.

Note: If you wish to place an order on us, kindly sign and return to us both copies of our estimate with requisite amount. On receipt of the same, one copy will be returned to you duly signed by our authorised representative, for your records.

Ref.No. : N18TN0668
Contract No. : MJ2140

Your's Faithfully
OTIS ELEVATOR COMPANY (INDIA) LTD.

Sign _____
Name : _____
Title : _____
Contact No. : 9805638004
Email ID: _____
Date : _____
Acceptance On _____ 20____

Customer
Name _____
Title _____
Signature _____
Contact No. _____
Email Id _____

OTIS
Name _____
Title _____
Signature _____
Contact No. _____
Email Id _____
Customer Promised Date _____

OTIS

CUSTOMER





Otis Elevator Company (India) Limited
(Northern Region)
Unit No. 171, 172, 173 & 271, 272
Aggarwal Cyber Plaza - II
Plot No C-7, Netaji Subhash Place
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CIN : U29150MH1953PLC009158
Tel. : (91-11) 4606 9000 / 4606 9100
Fax : (91-11) 4606 9111
www.otis.com

4th Floor, So-Sheril Villa, Near East - Hotel, NH-22, Panthagathi,
Shimla-171009

Ref. No. N18TN0857

GST No : 02AAACO0481E2Z2

Contract No. MJ2140

Date 11 Nov 2018

To,

THE Manager

HBPCL

BASPA,

BASPA,0

GST No : 02AADCH3821L1ZU

PAN No : AADCH3821L

Subject : SUPPLY & INSTALLATION OF FOLLOWING MATERIAL

Ref. Machine No : J002140

Dear Sir/Madam,

We are pleased to submit the following proposal to be carried out at your premises located at HBPCL in relation to the subject Machine No. J002140

Description of goods	Quantity
Kit for Reed Switch	1,000
Kit for Mafnet Vane Conduilt	1,000
J1000 DO DRV CIMR-JTBA0003BAA	1,000
T-PKG.9550CC DOOR CONTROL DRV.	1,000
MAG. SWITCH (INTERRUPTOR)	2,000
VARISTOR 240V/ 14 DIA	1,000

A. The above quotations are effective for 30 days from the date of proposal and are subject to change thereafter at our sole discretion and without notice.

B. Our price quotation is exclusive of all taxes. The price quoted shall be subject to change from time to time at our absolute discretion. If any other tax (including but not limited to levies under GST) applicable to this transaction is levied after the date of this proposal, this will be to your account. The taxes applicable as on date would be as under;

We propose to supply and install the following material(s) in relation to repair of aforesaid machine as per the Terms and conditions as Specified hereunder for the sum of Rs. 74933.00 exclusive of taxes (Rupees Seventy Four Thousand Nine Hundred Thirty Three Rupees only)

Particulars	Amount (Rs)
Value of Material(s) and Service(s)	74932.56
CGST @ 9.00%	6743.93
SGST @ 9.00%	6743.93
Total	88420.00

C. You would be required to make the full payment in advance along with the order by way of crossed cheque or demand draft, favoring OTIS ELEVATOR COMPANY (INDIA) LTD. Payment by cash will not be accepted.

D. You hereby undertake to send the TDS deduction certificate under the applicable laws (including but not limited to GST) within 30 days from hereafter

E. Delivery: We can complete the work in 12 number of days/weeks from the date of receipt of your order, advance payment, layout approval on technical details whichever is later, subject to your handling one elevator at time 1 days, prior to the above completion period.

OTIS

CUSTOMER:

Pages 1 OF 3



OTIS ELEVATOR COMPANY (INDIA) LIMITED

CONDITIONS OF CONTRACT

1. You hereby confirm that our workmen shall be given a safe place in which to work and we reserve the right to discontinue our work in the building as and when, in our opinion this provision is being violated.
2. Unless otherwise expressly agreed in writing, it is understood that the work will be performed during our regular working hours of our regular working days. If overtime work mutually agreed upon and performed, additional charges therefore, at our usual rate for such work, shall be added to the contract price.
3. We shall not be liable for any loss, damage, or delay, due to any cause beyond our reasonable control, including, but not limited to, lack of shipping space, embargoes, acts of government, strikes, lockouts, fire, accident, explosion, theft, flood, riots, civil commotion, war, mischief delay in supplies of raw material and components either at our suppliers' works or at our works due to any or all of the reasons such as energy crisis, electricity cut, railroad transporters strike, go slow, bandhs, non-availability of essential raw material (iron & steel, pig iron, aluminum, copper, silver, brass, stainless steel various alloys, electrical grade steel, etc.), act of God or of the State's enemies or act of third party. Should damage occur to our material, tools or works on the premises from any such cases, you shall compensate us for the same. You agree that we will not be liable to you for any loss or damage by reason of any act, neglect or default on our part or on the part of our agents, servants, or workmen, suffered by yourself or by any other person in the event that any such person or persons files a suit or claim for damages or compensation against you. Without in any way limiting the operation of the foregoing provisions, under no circumstances, whether based on contract, warranty, negligence, strict liability, or otherwise, shall Otis or its affiliates be liable for any special, consequential, indirect, incidental or punitive damages of any kind or character, including but not limited, to loss of profits or revenues, loss of product, loss of use, cost of capital and the like, arising out of or related to any performance under or breach of this agreement.
4. Wherever either in our quotation or in our correspondence a separate price is stated, for labour or erection, the same is done for the facility of recovering advances adjusting the price of the entire contract. The breakup of the contract price into its various components at any stage does not signify any divisibility of this contract involving sale of moveables at any stage.
5. This contract being works contract for supply and erection/installation, any packing cases, or left over material or tools tackles, instruments etc., brought to site are dismantled old materials shall remain our property. A suitable rebate for the dismantled old materials has already been allowed in our proposed contract price.
6. We hereby guarantee the workmanship of the apparatus furnished by us under this contract and we will make good any defects not due to ordinary wear and tear or to improper use or care which may develop within one year from date of completion, provided elevator is under our maintenance contract.
7. If any drawings, illustrations or descriptive matter are furnished with this proposal, they are approximate and submitted only to show the general style, arrangement and dimensions of the machinery. In case of any variation between your specifications, terms and conditions and our quotation/ correspondence, our quotation will prevail.
8. The prices quoted are exclusive of GST as currently applicable, should there be any amendments or variation in the rate or methodology for charging the applicable taxes (not limited to levies under GST), the same would be claimed by us as soon as the amount thereof is ascertained and shall be payable by you immediately.
9. In compliance with Section 171 of CGST Act 2017, the contract price has been determined after due consideration of the applicable taxes as on the relevant date (including but not limited to GST) on input side as well as on output side along with the available benefit of input tax credit as per the law.
10. If you cancel the contract or commit a breach of the contract or the contract remains dormant for 54 weeks from signing the contract, we shall be entitled to claim damages and /or compensation including the cost of materials and the loss of profits / administrative expenses at actual or at the rate of 10% of the value of the contract, whichever, is higher.
11. To the extent applicable, you shall be exclusively responsible for procuring permits/licenses from Statutory/ Regulatory Authorities, including but not limited to Lift Inspectorate/ PWD Office and pay all necessary fees for such licenses/ permits and inspection fees. Otis may however at your request provide necessary support towards technical documentation and respond to and clarify technical queries as may be raised by the statutory authorities.
12. Our aggregate liability under contract or law will be limited to 25% of the contract amount. Under no circumstances whether based on contract, warranty, negligence, strict liability, or otherwise, shall Otis or its affiliates be liable for any special, consequential, indirect, incidental or punitive damages of any kind or character, including but not limited to, loss of profits or revenues, loss of product, loss of use, cost of capital and the like, arising out of or related to any performance under or breach of this agreement.

OTIS



**OTIS ELEVATOR COMPANY
(INDIA) LIMITED**

- 13. This proposal when accepted by you and approved by our authorized official shall constitute a binding contract between us, and all prior representations or arrangements not incorporated herein shall be superseded.)
- 14. All our employees are covered under the provision of ESI Act, if applicable (ESIC code no.31-7123-A-66) or under the Workmen's Compensation Act or the Company's Group Personal Accident Insurance Scheme as the case may be.
- 15. You confirm that you are registered with GST Authorities and accordingly hold the GST Registration number.....

(Please mention 'NOT APPLICABLE' in case the said clause does not apply. By mentioning 'NOT APPLICABLE' you confirm that you are not a registered dealer as per the GST laws).

This order is deemed to be concluded at Mumbai/Delhi/Kolkata/Bangalore (strikeout whatever is Not applicable) and only courts in this place shall have jurisdiction in the event of any dispute whatsoever.

Note: If you wish to place an order on us, kindly sign and return to us both copies of our estimate with requisite amount. On receipt of the same, one copy will be returned to you duly signed by our authorised representative, for your records.

Ref.No. : N18TN0857
Contract No. : MJ2140

Your's Faithfully
OTIS ELEVATOR COMPANY (INDIA) LTD.

Sign _____
Name : _____
Title : _____
Contact No. : 9805335104
Email ID: _____
Date : _____
Acceptance On _____ 20 _____

Customer
Name _____
Title _____
Signature _____
Contact No. _____
Email Id _____

OTIS
Name _____
Title _____
Signature _____
Contact No. _____
Email Id _____
Customer Promised Date _____

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**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 264/GT/2014

Coram:

Shri Gireesh B. Pradhan, Chairperson
Shri A.K.Singhal, Member
Shri A. S. Bakshi, Member
Dr. M. K. Iyer, Member

Date of Hearing: 22.9.2015

Date of Order: 26.5.2016

In the matter of

Approval of tariff of Omkareshwar Hydroelectric Project (520 MW) for the period from 1.4.2014 to 31.3.2019.

AND

In the matter of

NHDC Limited
(A JV of NHPC & GOMP)
NHDC Parisar,
Shyamla Hills
Bhopal - 462013 (M.P)

.....Petitioner

Vs

1. Madhya Pradesh Power Management Company Ltd,
Shakti Bhawan, Vidyut Nagar
Jablapur (M.P)

2. Narmada Valley Development Department,
Govt. of Madhya Pradesh,
Mantralaya, Vallabh Bhawan,
Bhopal (M.P)

.....Respondents

Parties Present:

Shri S. Sanyal, NHDC
Shri Ashish Jain, NHDC
Shri Y.N. Rao, NHDC
Shri V.K. Singh, NHDC
Shri Prabhakar Rai, NHDC
Shri Sarthak Lazarus, MPPMCL
Shri M.L. Agrawal, NVDD



ORDER

This petition has been filed by the petitioner, NHDC Ltd for approval of generation tariff of Omkareshwar Hydroelectric Project (520 MW) (the generating station) for the period from 1.4.2014 to 31.3.2019 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (the 2014 Tariff Regulations).

2. This multipurpose project has been constructed by the petitioner, which is joint venture between NHPC and the State Government of Madhya Pradesh. It comprises of 520 MW (8 x 65 MW) of generating capacity for providing annual energy generation of 1167 MUs in a 90% dependable year. Unit I consists of Dam and appurtenant works, Unit-II consists of irrigation system of canals and distributaries being executed by the Government of Madhya Pradesh, Unit-III includes Power house and water conductor system along with allied works in power generation. Thus, Units I and III are essentially for power generation, named as power component and Unit II for irrigation system named as irrigation component. Since Unit-I contributes for power generation as well as for irrigation purpose, its costs is apportioned for power generation and irrigation system depending upon the proportion of water utilization for two systems. The irrigation component is apportioned @16.75% of cost of Unit-I and the balance cost is accounted towards cost of power generation. The State of Madhya Pradesh is the only beneficiary of the project.

The dates of commercial operation of all the machines are as under:

	Actual date of commissioning
Machine 1	20.8.2007
Machine 2	25.8.2007
Machine 3	11.9.2007
Machine 4	26.9.2007
Machine 5	19.10.2007
Machine 6	30.10.2007
Machine 7	10.11.2007
Machine 8	15.11.2007



3. The Commission by order dated 9.5.2013 in Petition No. 248/GT/2012 had determined the Annual Fixed Charges of the generating station for the period from 1.4.2009 to 31.3.2014 based on the projected additional capital expenditure during the respective years of the tariff period. Thereafter, by Commission's order dated 10.5.2016 in Petition No. 460/GT/2014, the tariff of the generating station for the period 2009-14 was revised based on the actual capital expenditure incurred during the period 2009-14 after truing-up exercise. Accordingly, the revised annual fixed charges approved by order dated 10.5.2016 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	11504.93	11995.03	12058.88	12320.11	14017.91
Interest on Loan	15451.99	14342.20	12397.62	11015.06	11100.30
Depreciation	10152.53	10170.97	10224.64	9489.05	10281.76
Interest on Working Capital	1019.39	1020.92	997.72	974.74	1045.04
O & M Expenses	4916.79	5198.03	5495.35	5809.69	6142.00
Total	43045.62	42727.15	41174.20	39608.65	42587.01

4. The annual fixed charges claimed by the petitioner for the period 2014-19 are as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	11023.07	11090.26	11140.45	11239.91	11286.93
Interest on Loan	10742.02	9569.61	8498.79	7495.90	6459.28
Depreciation	15082.76	15198.60	15262.04	15391.22	15497.63
Interest on Working Capital	1097.60	1091.40	1087.04	1088.07	1087.84
O & M Expenses	4515.31	4815.30	5135.23	5476.42	5840.27
Total	42460.77	41765.18	41123.55	40691.52	40171.96

5. Reply to the petition has been filed by the respondent Nos.1 & 2. The matter was heard on 22.9.2015 and the Commission after directing the petitioner to file certain additional information, reserved its orders in the petition. In response, the petitioner vide affidavit dated 4.12.2015 has filed the additional information with copy to the respondents. Reply has been filed by the respondents and the petitioner has filed its rejoinder to the said replies.
6. Based on the submissions of the parties and the documents available on record, we proceed to determine the tariff of the generating station for the period 2014-19, on prudence check, as stated in the subsequent paragraphs.



Capital Cost

7. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. Clause (3) of Regulation 9 provides as under:

“9(3) The Capital cost of an existing project shall include the following:

(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;

(b) xxxx

(c) xxxx

8. The petitioner has claimed the opening capital cost of ₹238618 lakh as on 1.4.2014 for the purpose of tariff for Power component. The closing capital cost for the purpose of tariff as on 31.3.2009 is ₹238286.93 lakh as per Commission's order dated 10.5.2016 in Petition No.460/GT/2014. Accordingly, this amount has been considered as the opening capital cost as on 1.4.2014 for the purpose of tariff of the generating station.

Additional Capital Expenditure

9. Clause (3) of Regulation 7 of the 2014 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted upto 31.3.2014 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2014-15 to 2018-19. Clause 3 of Regulation 14 of the 2014 Tariff Regulations, provides as under:

“14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
- (ii) Change in law or compliance of any existing law;*



- (iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;
- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;
- (vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;
- (viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;
- (ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and
- (x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station: Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:
- Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:



Provided also that if any expenditure has been claimed under Renovation and Modernization (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.”

10. The petitioner vide affidavit dated 19.8.2014 has claimed the projected additional capital expenditure for the period 2014-19 as under:

a) Gross Projected Additional Capital expenditure on Dam (before adjustment of Irrigation Component@ 16.73 %) & Power Station (100% attributable to Power component) :

Year	Unit-I (Dam)	Unit-III (Power Station)	Additions	Projected expenditure under Regulations			capital Tariff
				14(3) (i)	14(3) (ii)	14(3) (iii)	
2014-15	2407.05	1183.28	3590.33	1702.00	281.00	14(3) (viii)	1607.33
2015-16	600.13	790.45	1390.58	0.00	68.00		1322.57
2016-17	366.39	430.61	797.00	30.00	157.00		610.00
2017-18	2090.59	1649.42	3740.01	0.00	3500.00		240.00
2018-19	10.00	0.00	10.00	0.00	0.00		10.00
Total Projected additional capital expenditure claimed	5474.16	4053.76	9527.92	1732.00	4006.00		3789.90

b) Net Projected Additional Capital expenditure claimed for Power Component i.e. Dam (after adjustment of Irrigation Component) & Power Station:

Year	Unit-I	Unit-III	Unit-III (Power Station)	Additions
2014-15	586.95	1183.28		1770.23
2015-16	499.61	790.45		1290.06
2016-17	305.02	430.61		735.63
2017-18	1740.42	1649.42		3389.84
2018-19	8.33	0.00		8.33
Total Projected Additional capital expenditure claimed (Power component)	3140.32	4053.76		7194.08

c) The petitioner has submitted the details of projected un-discharged liabilities in Power component as on 31st March of the financial year of the tariff period 2014-19 as under:

	Carried Forward as on 1.4.2014	Projected as on					
		31.3.2015	31.3.2016	31.3.2017	31.3.2018	31.3.2019	
		29410.54	29410.54	29410.54	29410.54	29410.54	
Un-discharged liabilities attributable to Power component	30049.61						

- d) Net Projected additional capital expenditure claimed by the petitioner for power component considering liabilities is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Projected additional capital expenditure claimed against Unit-I (a)	586.95	499.61	305.02	1740.42	8.33
Projected additional capital expenditure claimed against Unit-III (b)	1183.28	790.45	430.61	1649.42	0.00
Total Projected additional capital expenditure claimed for power component before adjustment of un-discharged /discharged liabilities (c)=(a)+(b)	1770.23	1290.06	735.63	3389.84	8.33
Un-discharged liabilities discharged (d)	639.07	0.00	0.00	0.00	0.00
Net projected additional capital expenditure (Power Component) claimed (e)=(c)+(d)	2409.30	1290.06	735.63	3389.84	8.33

11. Some of the assets/works claimed by the petitioner during 2014-19 inter-alia includes, Initial spares to the tune of ₹1043.40 lakh, Extension of DCR (Dam Control Room) building, Installation of Dam & Power House Civil instrumentation system, Construction of Office, Transit camp, Canteen, 33 kV additional bay/spare transformer, CB, CT, PT, Widening of existing approach road to main dam, Purchase of Hydraulic Cylinder of Radial Gates, Air ventilation System, Protection work for stabilization of hill slopes, online monitoring system, Up gradation of Software of automation, safety related works, etc.

12. The respondent MPPMCL has submitted that many of the projected additional capital expenditure claimed under Regulation 14 (3) (iii) and 14 (3) (viii) are of routine nature and are not covered under expenditure allowed under such regulation. It has also submitted that the petitioner



has not furnished proper documents regarding expenses on account of higher safety and security of the plant. The respondent has further submitted that the petitioner has not submitted the calculations on how the efficiency in plant operations would be achieved and how the benefit of tariff would be provided. Accordingly, it has prayed for the disallowance of the expenditure.

13. The respondent NVDD, GOMP has submitted that an amount of ₹339.90 crore has been deposited towards CAMPA fund under protest and the capitalization of the same may be considered subject to the decision of the Hon'ble Supreme Court. In response the reply of MPPMCL, the petitioner in its rejoinder has clarified that it has given proper justification in Form-9 of the original tariff petition and has also enclosed documents for claims under Regulation 14 (3) (iii) of the 2014 Tariff Regulations.

14. We have examined the matter. It is noticed that the petitioner in its original petition and in the additional submissions vide affidavit dated 4.12.2015 has submitted justifications in respect of the additional capital expenditure under Regulation 14(3) (iii) and 14 (3) (viii) of the 2014 Tariff Regulations. The submissions made by the parties have been considered and the additional capital expenditure has been allowed on prudence check in the table below. It is also observed that some of the assets/works claimed by the petitioner on projected basis under this head were earlier disallowed by the Commission. However, considering the fact that these assets which are necessary for efficient operation have been put to use and the benefits of the same have been repeated by the respondents by way of supply of power from the generating station, the same is examined on prudence check, as stated below. Accordingly, the expenditure claimed against individual assets/works is examined on prudence check and their admissibility is discussed as under:



2014-15

15. The additional capital expenditure claimed as against those allowed

Sl. No.	Work	Unit-I (Dam)	Unit-III (Power House)	Additions	Reason for admissibility
A. Admitted Capital Expenditure Spilled over from previous tariff period 2009-14					
1	Purchase of Hydraulic Cylinder of Intake Gates	0.00	223.00	223.00	
2	Purchase of Distributor servomotors, TGB coolers, Servo valve for Governor, facing plate for bottom ring and head cover				
	i) Distributor Servomotor No. 1 & 2	0.00	108.67	108.67	These assets/works claimed were allowed on projection basis vide Commission's order dated 9.5.2013 in Petition No. 248/GT/2012. The petitioner has submitted that these assets have been procured as initial spares and even after including these expenditures, the cost of initial spares procured is within the ceiling limit of 1.5%. Considering the fact that these assets/works are considered necessary for successful and efficient operation of the plant, the expenditure on these assets/works is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
	ii) Procurement of Turbine Guide Bearing Cooler	0.00	43.77	43.77	
3	Purchase of Turbine Guide Bearing pads & labyrinth for head cover.				
	i) Purchase of Turbine Guide Bearing pads	0.00	86.49	86.49	
	ii) Labyrinth for head cover	0.00	13.90	13.90	
4	Purchase of Motor & pump for power pack of radial gates and motor for stop log & bulkhead gantry crane	10.00	0.00	10.00	
5	Purchase of spares Generator, Excitation system and Automation etc (Configuration of Workstations of Power house automation system, Procurement of T400 Card for Excitation system)	0.00	55.00	55.00	
6	Purchase of constant voltage current generator and accessories--	0.00	5.00	5.00	



	Multifunction Calibrator					
7	Portable vibration meter	0.00	6.00	6.00		The asset claimed is in the nature of tools and tackles. Moreover, such asset was not allowed vide Commission's order dated 9.5.2013 in Petition no. 248/GT/2012. Hence, the expenditure is not allowed .
8	Fire protection system of admin building and other building at OSP	11.95	8.05	20.00		The asset/work claimed under this head was allowed on projection basis vide Commission's order dated 9.5.2013 in Petition No. 248/GT/2012. Considering the fact that these assets/works are considered necessary for safety and security of the plant, the expenditure on the said asset/work is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations
9	Purchase of SF6 evacuating and filtration machine & dew point meter	0.00	25.00	25.00		These assets/works claimed were allowed on projection basis vide Commission's order dated 9.5.2013 in Petition No. 248/GT/2012. Considering the fact that these assets/works are considered necessary for successful and efficient operation of the plant, the expenditure on these assets/works is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
10	Study and assessment for performance and commissioning test on FRL	0.00	32.00	32.00		As the work/asset will facilitate the successful and efficient operation of plant after achieving complete reservoir filling, the same is allowed under Regulation 14 (3) (viii) of the 2014 Tariff Regulations.
11	Purchase of accessories for installation of CCTV system and erection and commissioning of cameras and interconnection of Power House with Admin Block through OFC based network.	23.91	16.09	40.00		The asset/work claimed under this head was allowed on projected basis vide Commission's order dated 9.5.2013 in Petition No. 248/GT/2012. Considering the fact that these assets/works are considered necessary for safety and security of the plant, the expenditure on these assets/works is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.



	Amount claimed	45.86	622.97	668.83
	Amount allowed	45.86	616.97	662.83
B. Projected additional capital expenditure in 2014-15				
12	Special Package as announced by GoMP	1702.00	0.00	1702.00
The petitioner has submitted that out of total announced special package of ₹224.52 crore, the demand of ₹207.50 crore have already been received up to March 2014 and the balance demand of Respondent NVDD, GOMP for ₹17.02 crore is expected in 2014-15. Further, the Special Package announced by GOMP is a further liberalization of R&R Package and as per the terms of CCEA, such capitalization on account of Special Package will not have any impact on the Power Tariff being recoverable as 100% Subvention from GOMP. Considering the fact that the expenditure is on account of 100% subvention from GOMP, the same has been deducted for the purpose of tariff.				
13	Extension of DCR (Dam Control Room) building of Omkareshwar Power Station including construction of Inspection Hall at EL 200 M opposite of DCR.	49.00	0.00	49.00
The petitioner has submitted that hindrance has been experienced in previous years in smooth operation of Radial Gates of Dam due to space constraints and accordingly, in order to create the adequate space for smooth Gate Operation and also for adequate parking space, the instant work is necessary. Considering the fact that these assets/works are considered necessary for successful and efficient operation of the plant, the expenditure on these assets/works have been allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations				
14	Installation of Dam & Power House Civil instrumentation system.	11.95	8.05	20.00
The petitioner has submitted that, in order to monitor the behavior of Dam and Power House Civil Structure under dynamic loading conditions, the instrumentations have been provided and some of the instruments need to be replaced on account of their erroneous performance. Accordingly, the replacement of various instruments with latest features along-with compatible software is necessary for the successful operation of the				



					Power Station. Since the petitioner has not furnished proper details and the replacement value of the old assets, the capital expenditure claimed has not been allowed . However, the petitioner is at liberty to claim the same at the time of truing up which may be considered as per Regulations.
15	Construction of Watch Tower on Left Bank of Dam and Shed for security check at Right Bank barrier at OSPS.	8.97	6.03	15.00	The petitioner has submitted that the security of the project is at the disposal of CISF and as per their recommendation, construction of Watch Tower on Left Bank of Dam near their security check posts and also a shed in front of security check post on right bank side and these works are necessary from security point of view. Considering the fact that this asset/work is considered necessary for the safety of the plant, the same is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
16	Protection and Development of distribution point of Switch-Yard at OSPS.	4.78	3.22	8.00	The petitioner has submitted that the distribution point (Six Pole structure) is situated at right bank near to Switch Yard of OSPS. It is the alternative route of power supply to main dam & power house. This distribution point is installed over a hill edge which has a tendency of sliding due to fractured / loose terrain as such its strengthening by construction of retaining wall with suitable protection by stone pitching is necessary. Considering the fact that the work is of O&M nature, the capitalization is not allowed .
17	Construction of Parking Shed near Power House at EL 190m at OSPS.	0.00	25.00	25.00	The petitioner has submitted that the temperature of the generating station in summer reaches very high i.e. near about 47 degree celsius. Parking facility for fire tender, water tanker, shift vehicles and vehicles of staff is not available at power house which is essentially required. To overcome such problems and for security and safety of all vehicles suitable parking facility is to be developed near power house of OSPS. Considering the fact that these asset/work will facilitate the



18	Construction of Store building at Switch Yard of OSPS.	17.93	12.07	30.00	<p>successful and efficient operation of the plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.</p> <p>The petitioner has submitted that at present, store building is not available at switch yard. The equipments, tools/ tackles, spares required for smooth operation and maintenance of various component of Switch Yard are to be stored in Switch Yard area itself. Hence, for proper storage of these items, it is necessary to construct a store building at Switch Yard.</p> <p>Considering the fact that these asset/work will facilitate successful and efficient operation of plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.</p>
19	Providing and laying Epoxy self leveling flooring on generator floor at El.170.296m of PH at OSPS	0.00	55.00	55.00	<p>The petitioner has submitted that Cement Concrete Flooring work on generator floor at EL 170.296 Mtr. has been carried out during construction of project. It is damaged due to movement of heavy equipment and regular use. To strengthen the floor with modern technology and also to have better aesthetic appearance, it is proposed to lay the Epoxy based self leveling flooring at Generator Floor and Erection Bay at EL 170.296 Mtr. in power house.</p> <p>Considering the fact that the work is of O&M nature, capitalization is not allowed.</p>
20	Construction of Work Shop cum Store Shed at Omkareshwar power station.	23.91	16.09	40.00	<p>The petitioner has submitted that for smooth operation of various component of Power Station viz, turbine, generator, control panel, radial gate, draft tube gates etc., frequent maintenance is being carried out by maintenance division of power station. In this connection various expensive and necessary tools-tackles, equipments/ spares etc. are being utilized, which in absence of proper storage space, kept in open space. For maintenance and storage of important and costly tools/ tackles, equipments, spares, it is necessary to construct workshop-cum-store at Omkareshwar Power</p>



					Station. Considering the fact that the asset/work will facilitate successful and efficient operation of the plant, the same has been allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
21	Providing & fixing of M.S. pipe railing at top of piers at u/s side.	10.00	0.00	10.00	The petitioner has submitted that these works are essential for the safety of the operational staff. Considering the fact that the assets/works are of O&M nature, capitalization of the same is not allowed .
22	Providing and fixing of railing at roof of machine hall of Power House.	0.00	9.00	9.00	
23	Pump for dewatering of Dam Gallery	25.00	0.00	25.00	The petitioner has submitted that Narmada Basin has observed heavy to very heavy rainfall during last three consecutive years and the existing dewatering capabilities have been found insufficient and thus augmentation of dewatering capabilities have been felt necessary so as to have reliable dewatering system in Dam Gallery. Considering the fact that the asset is considered necessary for the successful and efficient performance of the generating station, hence the same has been allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
24	Sliding Ring & Sealing Ring insert along with other accessories for Shaft Seal System	0.00	25.00	25.00	The petitioner has submitted that Shaft Seal is the main part of the turbine which prevents water leakage from turbine during static as well as in dynamic state of machine. Failure of Shaft seal can lead to stoppage of machine operation. Thus, the existing Sliding Rings and Sealing Rings of Shaft Sealing System are required to be replaced with new one, so as to ensure the efficient and successful operation of the machines. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the plant, the same is allowed . De-capitalization value of ₹17.77 lakh for old replaced assets/works is considered under ' assumed deletions '. As such, allowed amount is ₹ 7.23 lakh.



25	Purchase of tan delta test kit	0.00	30.00	30.00	The petitioner has submitted that monitoring of insulation health of HV equipment is very essential to predict the fault and thereby avoid the outage of equipment and improve the machine availability for generation. Accordingly, the Tan Delta Test Kit, which is useful for determining healthiness of insulation of generator, transformers and switchyard equipments etc. are required to be purchased so as to predict the fault in advance and thereby to enhance the availability of the machines. Considering the fact that the asset is in the nature of tools & tackles, the same is not allowed
26	Energy Conservation measures through renewable energy (Solar)	23.91	16.09	40.00	The petitioner has submitted that under Energy Conservation Measures, a 40KW PV Solar plant is proposed to be installed at rooftop of power house, so as to reduce the O&M Expenses of the Generating Station, besides fulfilling the mandate of MNRE, GoI for promoting the Solar Power Generation, wherever possible. The reduced O&M Expenses will ultimately benefit the beneficiary in long term. The asset will reduce the O&M expenses of the generating station. Considering the fact that the O&M expenses for power station has been calculated and allowed on normative basis and this benefit in reduced O&M consumption will not be directly shared with the beneficiary, capitalization of this is not allowed even though it indirectly impacted the efficient operation of the generating station.
27	Purchase and installation of APFC Panels	0.00	15.00	15.00	The petitioner has submitted that improvement of Power Factor will ultimately result into lesser energy consumption charges and thereby, will reduce the O&M Expenses of the Generating Station. The reduced O&M Expenses will ultimately benefit the Beneficiary in long term. Considering the fact that the O&M expenses for power station has been calculated and allowed on normative basis and this benefit in reduced O&M consumption will not be directly shared with the beneficiary,



					capitalization of this is not allowed even though it indirectly impacted the efficient operation of the generating station.
28	Purchase of moisture proof illumination fittings for dam and power house gallery	5.38	3.62	9.00	The petitioner has submitted that as per recommendations of the Dam Safety Committee, moisture proof lights has been proposed to be installed at dam and power house galleries. Considering the fact that the work is of O&M nature, the capitalization of the same is not allowed .
29	Purchase of search light for dam	5.00	0.00	5.00	The petitioner has submitted that as per recommendations of Dam Safety Committee, the search light to be installed at dam top and claimed this expenditure under Regulation 14(3)(viii) of the Tariff Regulations,2014. Considering the fact that the asset is considered necessary for safety of plant, the same has been allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
30	Implementation of AMR for ABT Meter	0.00	12.00	12.00	The petitioner has submitted that as per the recommendation of MPOCC/ MPSLDC the implementation of AMR facility is required to be carried out in 10 nos. ABT meters of Elster make installed at five nos. 220 KV transmission lines for metering purposes so that the meter reading may be exported to MPSLD on real time basis through Mobile Network. As such, the Capital Expenditure has been necessitated to comply with the Grid Requirements. Considering the fact that the asset/work is considered necessary for the successful operation of the generating station, hence the same has been allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
31	Purchase of electrical drives for EOT Cranes	0.00	10.00	10.00	The petitioner has submitted that as per OEM, the existing Electric Drives of EoT Cranes has become obsolete and on account of their obsolescence, the availability of spare parts may become difficult and



					thus, in order to keep the EoT Cranes of Power House in healthy conditions, the existing 4 No. faulty Drives need to be replaced so as to ensure the smooth and efficient operation of the generating station. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the plant, the same is allowed . De-capitalization value of ₹7.11 lakh for old replaced assets/works is considered under 'assumed deletions'. As such, allowed amount is ₹2.89 lakh.
32	Construction of Office, Transit camp & Canteen at Omkareshwar Power Station, Siddhwarkut for CISF	89.66	60.34	150.00	The petitioner has submitted that security of Omkareshwar Power Station is being looked after by CISF. For smooth functioning of their activities, these buildings are required to be constructed. Since the expenditure is for the benefit of employees of CISF working in the power station and the assets/works will facilitate safety of the plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
33	Connectivity of telephone exchange of Urja Vihar and CISF colony through OFC cables.	7.17	4.83	12.00	The petitioner has submitted that the CISF Camp and the Power House / Office Complex are situated across the Banks of River Narmada and the existing connectivity through Mobile / Landline Networks is not very reliable. As such, on the recommendation of CISF, the connectivity between CISF Camp and the Office Complex situated on two banks of the river is necessary by installation of OFC Cables, so as to have a reliable communication system with the Security Agency to ensure the safety and security of the Project. Since the expenditure necessary for smooth functioning of CISF deputed in the power station and the asset/work will facilitate safety of the plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.



34	33 KV additional bay/spare transformer, CB, CT, PT etc at OSP	38.85	26.15	65.00	The petitioner has submitted that in order to have redundancy in Power Supply System of power house, Dam, project offices etc., an additional bay/equipment at 33kV Sub-Station at Urja Vihar is necessary, so as to ensure the smooth and efficient operation of Generating Station. Petitioner has not submitted any kind of recommendation from CTU/CEA or any other competent authority/committee for creation of such additional bay. As such, considering the asset to be "spares" in nature, the same is not allowed . However, petitioner is directed to submit proper justification and recommendations of CTU/CEA or any other competent authority/committee, if any, at the time of truing up.
35	Electrical Fittings viz. fans, exhaust, geyser, tube lights etc for new F type quarters	2.99	2.01	5.00	The petitioner has submitted that new 'F' type quarters are under construction. All electrical fittings viz. fans, exhaust, geyser, tube lights, street lights etc shall be required in these new quarters. Considering the fact that the assets are of minor in nature, the same is not allowed .
36	Augmentation of Storage Facility by Heavy duty Store Racks	0.00	10.00	10.00	The petitioner has submitted that the existing storage capacity needs to be augmented so as to ensure safe storage of material with proper staking in racks. Accordingly, instant work is necessitated for the successful operation of generating station.
37	Construction of 12 nos. F-Type Quarters (Phase - I) at Omkareshwar Power Station, Siddhwarkut	119.54	80.46	200.00	Considering the fact that the work is of O&M nature, capitalization is not allowed . The petitioner has submitted that available nos. of quarter are less than sanctioned strength of E-3 & E-4 level officers, hence additional quarters are required to be constructed for E-3 & E-4 level officers as per norms of the corporation. There was provision for 16 nos. Permanent F-Type quarters and 10 nos. Temporary F type quarters in Revised cost estimate of Omkareshwar Power Station, but could not be constructed. The work



					has since been awarded and, is in progress, which will ensure the successful operation of the generating station. Considering the fact that the expenditure is for the benefit of the employees working in the power plant which will facilitate efficient and successful operation of the plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
38	Construction of One additional room in I-Type Quarters at OSP	89.66	60.34	150.00	The petitioner has submitted that I-Type Quarters are mainly meant for the workers / contract staff and consequent to their growing family, there has been a demand for one additional room in these quarters, as the existing space is found to be insufficient for catering to their family needs. Considering the fact that the expenditure is for the benefit of the employees working in the power plant which will facilitate efficient and successful operation of the plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
39	Construction of watch tower at central store.	11.95	8.05	20.00	The petitioner has submitted that construction of watch tower at central store is essential for strict vigil, ensuring safety and security of the central store. Considering the fact that the expenditure necessary for smooth functioning CISF deputed in the power station and the asset/work will facilitate safety and security of the plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.



40	Widening of existing approach road to main dam on left bank at OSP	46.02	30.98	77.00	<p>The petitioner has submitted that this work is basically a deferred work of original scope which so far could not be completed due to ongoing construction activities by GoMP for the Canal emitting from the left bank of the dam. Now, the work of canal has since been completed by the GoMP, hence this work is being taken-up to ensure smooth approach to Main Dam, Power House and Colony Area. The widening of approach road has also been necessitated so as to ensure smooth movement of CISF personnel from their Camp located at left bank of dam to the main Project Area located on right bank side.</p> <p>Considering the fact that the asset/work will facilitate successful and efficient operation of plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.</p>
41	Development of children park at Urja Vihar Parisar, Siddhwarkut	11.95	8.05	20.00	<p>The petitioner has submitted that on demand of the residents of Colony, the recreational facilities are being augmented by developing a Children Park at Urja Vihar Parisar, so as to keep the dependents of the Operation Staff residing in the remote area of Project Colony, motivated.</p> <p>Considering the fact that the expenditure is for the benefit of the employees working at remote area which eventually will facilitate efficient and successful operation of the plant, the same expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.</p>
42	Acoustic treatment of multipurpose hall of Vrindavan Manoranjan Parisar at OSP	4.18	2.82	7.00	<p>The petitioner has submitted that Vrindavan Manoranjan Parisar situated at Urja Vihar Colony is being used for various official functions and ceremonies. One hall inside the Vrindavan Manoranjan Parisar is required acoustic treatment, so that echo effect can be minimized and function can be organized smoothly. Though the work has been completed in 2014-15, the same is not allowed as the expenditure is of O&M nature.</p>



43	Protection work for approach road to main dam at left bank (Phase-I)	29.89	20.11	50.00	The petitioner has submitted that embankment constructed for approach road to main dam in left bank is required to be protected up to EL 185.00 M because flood water level may reach up to this level and in absence of protection work, the embankment may get eroded. Considering the fact that the protection work is of recurring nature and should be met out of O&M expenses, the same is not allowed . The petitioner has submitted that existing two nos. faulty absolute encoders of Radial Gates are required to be replaced for successful operation of the Gates. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, 2014. De-capitalization value of ₹15.28 lakh of old replaced assets/works is considered under 'assumed deletions'. As such, the amount allowed is ₹6.22 lakh.
44	Purchase of obsolete encoders for Radial Gates of Omkareshwar Power Station	21.50	0.00	21.50	
	Amount claimed	2361.19	560.31	2921.50	
	Amount Allowed	511.98	334.36	846.34	
	Total Amount claimed in 2014-15	2407.05	1183.28	3590.33	
	Total Amount Allowed in 2014-15	557.84	951.33	1509.17	

2015-16

Sl. No.	Work	UNIT-I	UNIT-III	Additions	Reason for admissibility
A. Admitted Capital Expenditure Spilled over from previous tariff period 2009-14					
1	Purchase of Generator coolers, Servo valve for Governor, facing plate for bottom ring and head cover				The assets/works claimed under this head were allowed on projection basis vide order dated 9.5.2013 in Petition No. 248/GT/2012. Considering the fact that the assets/works are considered necessary to facilitate efficient and successful operation of plant, hence, capitalisation of these assets/works is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. Moreover the assets have been procured as initial spares and even
	i) Generator Coolers	0.00	192.00	192.00	
2	Purchase of labyrinth for bottom ring, Upper wicket gate bearings				
	i) labyrinth for bottom ring	0.00	29.00	29.00	
	ii) Upper wicket gate	0.00	116.57	116.57	

(₹ in lakh)



	bearing carrier					after including these expenditures, the cost of initial spares procured is within the ceiling limit of 1.5% as observed in the order itself.
3	Purchase of Servo valve for Governor, facing plate for bottom ring and head cover					
	i) Servo valve for Governor,	0.00	100.00			100.00
	ii) Facing plate for bottom ring and head cover	0.00	10.00			10.00
4	Purchase of 800 Amp. CT for 220 KV Line	0.00	50.00			50.00
5	FRL testing	0.00	50.00			50.00
	Amount claimed	0.00	547.57			547.57
	Amount Allowed	0.00	547.57			547.57

B. Fresh additional capital expenditure projected during 2015-16

6	Providing and fixing filter plant for water treatment for drinking water supply for Dam & Power house.	5.98	4.02	10.00	The petitioner has submitted that the slow sand filter installed during construction of project for filtered water supply to power house and Dam control Room became obsolete and needs to be replaced with latest filter plant to give hygienic drinking water free from impurities to the staff working in power house and Dam area. Considering the fact that the expenditure is for the benefit of the employees working in power plant which eventually will facilitate efficient and successful operation of the plant, hence the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. De-capitalization value of ₹6.77 lakh of old replaced assets/works is considered under 'assumed deletions'. As such, allowed amount is ₹3.23 lakh (₹1.93 lakh for Unit-I and ₹1.30 lakh for Unit-III).
7	Construction of lunchroom cum canteen for workers near Power house of OSPS.	0.00	40.00	40.00	The petitioner has submitted that at present, there is no lunch room/ rest room/ sitting space is available for staff of power house and switchyard for taking meals etc. during lunch



					hours. This is a mandatory requirement from labour welfare angle also. Considering the fact that the expenditure is for the benefit of the employees working in power plant which eventually will facilitate efficient and successful operation of the plant, hence the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
8	Construction of Shed for security check at left Bank barrier at OSPS.	4.78	3.22	8.00	The petitioner has submitted that, on requirement of CISF for Security of Dam & Power House, construction of shed at Left and Right banks was required. At right bank the work of construction of shed has already been taken up and in left bank it is proposed to be constructed in the year 2015-16. Considering the fact that the asset/work is considered necessary for the safety of the plant, hence the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
9	Construction of guard wall along D/s apron of Dam of OSPS.	85.00	0.00	85.00	The petitioner has submitted that Energy Dissipation Arrangement is a vital component of the Dam. Omkareshwar Dam has been provided with Stilling Basin type EDA. The Narmada Basin has experienced very heavy rains in last three consecutive years and consequently, floods were also passed through Dam Radial Gates on continuous basis for prolonged periods. On inspection of Apron, it is observed that the filter material below Apron has been damaged and a portion along edge of the Apron has also been washed away endangering the stability of Stilling Basin. Hence, in order to strengthen the affected area, a Guard Wall all along the apron is necessary for the safety and stability of EDA of Dam. Considering the fact that the asset/work is considered necessary for successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations.



10	Interior & furnishing work of DCR building and power house control room of OSPS.	23.92	16.08	40.00	The petitioner has submitted that the work of extension for DCR building is already awarded. After completion of this work, its internal development/interior work will be taken up. Likewise, similar work is also required in power house control room for smooth functioning of operation of power house and for safety of various computers and online monitoring systems installed in power house control room. Considering the fact that the petitioner has not submitted the details of Interior and furnishing works, the same is not allowed . However, the petitioner is directed to submit the details of such expenditure with proper justification at the time of true-up.
11	Purchase of Hydraulic Cylinder of Radial Gates.	250.00	0.00	250.00	The petitioner has submitted that the Radial Gates of Dam have been provided with Hydraulic Hoisting System. Being a vital component for the operation of Dam Radial Gates, one No. Hydraulic Cylinder as spare has been felt necessary, so as to meet any eventuality, especially at the time of high floods. Considering the fact that the asset is in nature of spare, the capitalization of the same is not allowed .
12	Back flushing Filter	0.00	25.00	25.00	The petitioner has submitted that it has been found that during Monsoon period, unit No.8 gets tripped very frequently due to chocking of automatic back flush filter. Dismantling and cleaning of filter takes longer time and causes generation losses. Therefore, additional filter will reduce downtime of machine and avoid generation loss. Considering the fact that the asset is in nature of spare, the capitalization of the same is not allowed .
13	Air ventilation System for Dam & Power Dam Gallery	20.00	0.00	20.00	The petitioner has submitted that as per the recommendation of Dam Safety Committee, these works have been necessitated. Since the assets are considered necessary for the safety of the plant, the same is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations.
14	Fire Fighting Equipments in Dam & Power Dam Gallery	40.00	0.00	40.00	

