

			these pumps which leads to high maintenance cost as well reliability/efficiency of the drainage system. Phased replacement of the VT pumps with submersible pumps is proposed. This will increase the reliability and efficiency of drainage and dewatering system which is quite critical application considering the underground nature of the power house.	efficient operation of the generating station. The gross value of old asset is considered as ₹2.56 lakh.
<b>Total Claimed</b>		<b>240.26</b>		
<b>Total Allowed (after de-capitalization)</b>				<b>225.88</b>

**2016-17**

(₹ in lakh)

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Submersible Drainage Pump with panel and pipeline for Disaster Management Programme	150.00	The petitioner has submitted that, for strengthening of drainage system of the underground Power House, and to handle situations like unexpected increase in water leakages, failure of the existing drainage system, natural calamities / flooding etc. a Disaster Management Plan has been proposed. This plan envisages the installation of 1 No. Submersible Drainage Pump with independent power supply source and control panel/pipeline.	Allowed under Regulation 14(3)(viii) of the 2014 Regulations, since the asset is considered necessary for efficient operation of the generating station.	150.00
2	Fabrication & purchase of additional Draft tube gate Size 5.13x4.6 mtr, 20 ton	58.28	The petitioner has submitted that, considering the underground nature of the Power House and as per requirements of IMS Certification, efficient extraction and	Allowed under Regulation 14(3)(viii) of the 2014 Regulations, since the asset is considered necessary for	58.28



			filtration of generated fumes is essential to ensure safe, hygienic and healthy working environment. With ageing of the Power House, manifold increase in R&M activities in hydro-turbines is inevitable. Such activities involve substantial welding/grinding works in-situ in areas including spiral casing, draft tube etc. Fume Extraction Systems are required to be purchased and used at work sites.	efficient operation of the generating station.	
3	Purchase, Erection & Commissioning of additional Two nos. Draft tube Gantry crane 35 ton	323.57	As per CEA guidelines dated 27.05.2011 to avoid flooding in the Power House, every power station must have a provision of hoisting arrangement for draft tube gate of each unit for quick closing of draft tube gate in case of high flood. At present, there is only one gantry crane for all the three draft tube gates. Therefore two additional gantry cranes are required so that each gate have its own dedicated gantry crane for each Draft tube.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, since the asset is considered necessary for efficient operation of the generating station.	323.57
4	Multipurpose Fire Tender	34.00	The petitioner has submitted that, at present only fire tender is available at power station. As safety of power station is concerned one more fire tender need to be purchased centrally from Corporate Office.	Allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, since the asset/work is considered necessary for efficient operation of the generating station.	34.00
<b>Total Claimed</b>		<b>565.85</b>			
<b>Total Allowed</b>					<b>565.85</b>



**2017-18 and 2018-19**

49. No additional capital expenditure has been claimed by the petitioner for the years 2017-18 and 2018-19.

**Additional capital expenditure allowed for 2014-19**

50. Based on the above, the net projected 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	70.52	237.66	565.85	0.00	0.00
De-capitalization	6.60	11.78	0.00	0.00	0.00
<b>Net additional capital expenditure allowed</b>	<b>63.92</b>	<b>225.88</b>	<b>565.85</b>	<b>0.00</b>	<b>0.00</b>

51. The un-discharged liabilities for the period 2014-19 are as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	18.00	0.00	0.00	0.00	0.00

52. Taking into consideration the un-discharged liabilities, the projected additional capital expenditure allowed for the purpose of tariff is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net additional capital expenditure allowed	63.92	225.88	565.85	0.00	0.00
Un-discharged liabilities	18.00	0.00	0.00	0.00	0.00
<b>Additional Capital expenditure allowed</b>	<b>81.92</b>	<b>225.88</b>	<b>565.85</b>	<b>0.00</b>	<b>0.00</b>

**Capital Cost for 2014-19**

53. As stated, the closing capital cost of ₹200106.10 lakh has been considered as on 31.3.2014 in para 30 of this order. This 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:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	200106.10	200188.02	200413.90	200979.75	200979.75
Additional Capital expenditure allowed	81.92	225.88	565.85	0.00	0.00
<b>Capital Cost as on 31<sup>st</sup> March of the year</b>	<b>200188.02</b>	<b>200413.90</b>	<b>200979.75</b>	<b>200979.75</b>	<b>200979.75</b>



**Debt-Equity**

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

**“19. Debt-Equity Ratio**

(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.”

55. Accordingly, the debt-equity ratio of 70:30 has been considered for the purpose of tariff.

**Return on Equity**

56. 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.





57. 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.”

58. The Base rate 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
Gross Notional Equity	61351.03	61375.61	61443.37	61613.13	61613.13
Addition due to Additional Capitalization	24.58	67.76	169.76	0.00	0.00
Closing Equity	61375.61	61443.37	61613.13	61613.13	61613.13
Average Equity	61363.32	61409.49	61528.25	61613.13	61613.13
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	20.876%	20.876%	20.876%	20.876%	20.876%
<b>Return on Equity</b>	<b>12810.21</b>	<b>12819.84</b>	<b>12844.64</b>	<b>12862.36</b>	<b>12862.36</b>

59. The petitioner is however directed to submit the effective tax rates along with the tax Audit report for the period 2015-19 at the time of revision of tariff based on trueing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

### Interest on Loan

60. 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 up to 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.”*
61. The opening gross normative loan as on COD of each unit has been arrived at in accordance with Regulation 26 of the 2014 Tariff Regulations. The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project. The repayment for the period 2014-19 has been considered equal to the



depreciation allowed for that year. Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest. The calculations for weighted average rate of interest are enclosed as Annexure-I to this order. As such, Interest on loan for the period 2014-19 is worked out as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	138755.07	138812.42	138970.53	139366.63	139366.63
Cumulative Repayment up to Previous Year	106803.21	117124.97	127454.67	129878.40	132313.71
Net Loan-Opening	31951.86	21687.45	11515.86	9488.23	7052.92
Repayment during the year	10321.76	10329.70	2423.73	2435.31	2435.31
Addition due to Additional Capitalization	57.34	158.12	396.10	0.00	0.00
Net Loan-Closing	21687.45	11515.86	9488.23	7052.92	4617.61
Average Loan	26819.66	16601.65	10502.05	8270.57	5835.27
Weighted Average Rate of Interest on Loan	8.433%	10.896%	10.896%	10.896%	10.896%
<b>Interest on loan</b>	<b>2261.75</b>	<b>1808.91</b>	<b>1144.30</b>	<b>901.16</b>	<b>635.81</b>

#### Depreciation

62. 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 up to 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.

(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."

63. The COD of the generating station is 31.3.2004. As the generating station has completed 12 years of operation as on 31.3.2016, the weighted average rate of depreciation calculated in terms of the above regulation is 5.157% and the same has been considered for the years 2014-15 and 2015-16. The remaining depreciable value has been spread over the balance useful life of the project from year 2016-17 onwards till 2018-19. Accordingly, depreciation has been computed as follows:

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block as on 31.3.2014	200106.10	200188.02	200413.90	200979.75	200979.75
Additional capital expenditure during 2014-19	81.92	225.88	565.85	0.00	0.00
Closing gross block	200188.02	200413.90	200979.75	200979.75	200979.75
Average gross block	200147.06	200300.96	200696.83	200979.75	200979.75
Rate of Depreciation	5.157%	5.157%	-	-	-
Depreciable Value	180132.36	180270.87	180627.15	180881.78	180881.78
Balance Useful life of the asset	25.00	24.00	23.00	22.00	21.00
Remaining depreciable value	75891.39	65711.92	55745.84	53576.74	51141.43
<b>Depreciation</b>	<b>10321.76</b>	<b>10329.70</b>	<b>2423.73</b>	<b>2435.31</b>	<b>2435.31</b>

#### O&M Expenses

64. 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
	7256.54	7738.66	8252.82	8801.14	9385.89



**Interest on working capital**

65. 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.”

66. Accordingly, receivables considering two months of fixed cost are worked out and allowed as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
	5605.94	5616.52	4249.86	4309.84	4367.44

(₹ in lakh)

67. Maintenance spares @ 15% of operation and maintenance expenses are worked out and allowed as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
	1088.48	1160.80	1237.92	1320.17	1407.88

(₹ in lakh)

68. O&M Expenses for one month are allowed as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
	604.71	644.89	687.74	733.43	782.16

(₹ in lakh)

**Rate of interest on working capital**

69. 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.”

70. 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

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

	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	1088.48	1160.80	1237.92	1320.17	1407.88
O & M expenses	604.71	644.89	687.74	733.43	782.16
Receivables	5605.94	5616.52	4249.86	4309.84	4367.44
Total	7299.13	7422.21	6175.52	6363.44	6557.48
<b>Interest on working capital @ 13.50%</b>	<b>985.38</b>	<b>1002.00</b>	<b>833.70</b>	<b>859.06</b>	<b>885.26</b>

### Annual Fixed Charges

72. Accordingly, the annual fixed charges approved for the generating station for the period 2014-2019 are as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	12810.21	12819.84	12844.64	12862.36	12862.36
Interest on Loan	2261.75	1808.91	1144.30	901.16	635.81
Depreciation	10321.76	10329.70	2423.73	2435.31	2435.31
Interest on Working Capital	985.38	1002.00	833.70	859.06	885.26
O & M Expenses	7256.54	7738.66	8252.82	8801.14	9385.89
<b>Total</b>	<b>33635.64</b>	<b>33699.12</b>	<b>25499.19</b>	<b>25859.03</b>	<b>26204.62</b>

### Normative Annual Plant Availability Factor

73. 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% for this generating station (being ROR with pondage) has been considered.

### Design Energy

74. The Commission in its order dated 27.1.2012 in Petition No.66/2010 had approved the annual Design Energy (DE) of 1499.89 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	188.65
May	212.04
June	149.31
July	212.04
August	212.04
September	152.23
October	69.95

November	48.98
December	39.55
January	39.29
February	56.43
March	119.38
<b>Total</b>	<b>1499.89</b>

#### Application Fee and Publication Expenses

75. 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 tariff filing fees of ₹1320000/- for the period 2014-15 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The petitioner vide affidavit dated 14.11.2014 has submitted that it has incurred ₹397671/- as charges towards publication of the said tariff petition in the newspapers. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 6.1.2016 in Petition No.232/GT/2014, the petitioner shall be entitled to recover the filing fees for the year 2014-15 and the expenses incurred on publication of notices for the period 2014-19 directly from the respondents. The filing fees for the remaining years of the tariff period 2015-19 shall be recovered pro rata after deposit of the same and production of documentary proof.
76. 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.
77. Petition No. 233/GT/2014 is disposed of in terms of the above.

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

Sd/-  
(A.S Bakshi)  
Member

Sd/-  
(A.K.Singhal)  
Member

Sd/-  
(Gireesh B. Pradhan)  
Chairperson



Annexure-ICalculation of Weighted Average Rate of Interest on Loan

(₹ in lakh)

EDC-LOAN IN INR	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan - Opening	61238.84	61238.84	0.00	0.00	0.00
Cumulative repayments of Loans up to previous year	61915.56	67078.06	0.00	0.00	0.00
Net loan - Opening	10324.94	5162.44	0.00	0.00	0.00
Add: Drawal(s) during the Year	0.00	0.00	0.00	0.00	0.00
ADD: ERV	0.00	0.00	0.00	0.00	0.00
Less: Repayment (s) of Loans during the year	5162.50	5162.44	0.00	0.00	0.00
Net loan - Closing	5162.44	0.00	0.00	0.00	0.00
Weighted Average Loan	7743.69	2581.22	0.00	0.00	0.00
Rate of Interest on Loan	8.433%	10.896%	0.00	0.00	0.00
Interest on loan	529.14	219.3	0.00	0.00	0.00
Financing Charges GF	123.90	61.95	0.00	0.00	0.00
<b>Weighted average Rate of Interest on Loans</b>	<b>8.433%</b>	<b>10.896%</b>			



12/29/2018

JSW Mail - Fwd: Regarding Budgetary offer for Upgrading Existing Generator Protection Relay



Dinesh Mahato &lt;dinesh.mahato@jsw.in&gt;

### Fwd: Regarding Budgetary offer for Upgrading Existing Generator Protection Relay

1 message

Himanshu Puri <himanshu.puri@jsw.in>  
 To: Dinesh Mahato <dinesh.mahato@jsw.in>

Sat, Dec 29, 2018 at 3:07 PM

Best Regards,

Himanshu Puri | Manager (O&amp;M, 300 MW Baspa-II HPS) | JSW Hydro Energy Limited.

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

M +91 8894289616 |+91 1786 261696 Ext 203



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

From: **Suri, Deepak (GE Power)** <deepak.suri@ge.com>  
 Date: Thu, Dec 27, 2018 at 3:34 PM

Subject: RE: Regarding Budgetary offer for Upgrading Existing Generator Protection Relay  
 To: Himanshu Puri <himanshu.puri@jsw.in>

Cc: Ravindra Rana <ravindra.rana@jsw.in>, Satyanarain Sharma <marketing@shashiengicon.com>, rahulsharma@shashiengicon.com <rahulsharma@shashiengicon.com>

Dear Sir

We thank you for showing interest in GE-ALSTOM Make protection scheme, in this regard we wish to submit our technological offer as enclosed with the email.

For any doubt/clarification, you may contact undersigned.

Best Regards

Deepak Suri



GE T&amp;D India Limited

(Formerly Alstom T&amp;D India Limited) | Manager - Automation Sales | GA

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

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

From: Himanshu Puri &lt;himanshu.puri@jsw.in&gt;

Sent: Thursday, December 20, 2018 3:33 PM

To: Suri, Deepak (GE Power) &lt;deepak.suri@ge.com&gt;

<https://mail.google.com/mail/u/0/?ik=31570f6c03&view=pt&search=all&permthid=thread-f%3A1621178485124424553&siml=msg-f%3A162117848512...> 1/2



12/29/2018

JSW Mail - Fwd: Regarding Budgetary offer for Upgrading Existing Generator Protection Relay

**Cc:** Ravindra Rana <ravindra.rana@jsw.in>

**Subject:** EXT: Regarding Budgetary offer for Upgrading Existing Generator Protection Relay

Dear Mr Deepak,

Good Afternoon !!!

As discussed earlier, we are using Siemens "S/PROTEC" relays in Generator and Transformer Protection scheme. These relays were commissioned in year 2003 and since then are in continuous operation. Further with these relays windows 2000 based interface / PG station were provided which are not functional any more because of which we can't extract Disturbance Records (DR Report) from the relay in event of any faulty condition / tripping. As of which we are not able to re-produce DR reports to OEM experts, statutory bodies (i.e. NRLDC, PGCL, SLDC etc.) if / when required by them for further fault analysis. Moreover, change in technology and obsolescence of existing relays is also a challenge which we face in our day to day operational activity.

Further, in view of above and as per the recommendations of your representative who visited our plant, Kindly provide your budgetary quote to upgrade existing protection scheme at the earliest.

Detail of relays used in unit protection scheme along with its photographs is attached herein for your better understanding and ready references.

Best Regards,

**Himanshu Puri | Manager (O&M, 300 MW Baspa-II HPS) | JSW Hydro Energy Limited.**

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

M +91 8894289616 | +91 1786 261696 Ext 203



Confidentiality Notice

The information contained in this electronic message and any attachments to this message are intended for the exclusive use of the addressee(s) and may contain confidential or privileged information. If you are not the intended recipient, please notify the sender at JSW or System Manager ( admin@jsw.in ) immediately and destroy all copies of this message and any attachments. Recipients must check this email and its attachments for the presence of viruses before downloading them. JSW Group accepts no liability for any damage caused by any virus transmitted by this email.

**Technical offer.pdf**

314K







**GE T&D India Limited**  
(formerly ALSTOM T&D India Limited)

**END CUSTOMER : JSW Hydro Energy Limited, Himachal Pradesh**

**PROJECT: SUPPLY, INSTALLATION/TESTING/COMMISSIONING  
OF GENERATOR PROTECTION RELAY**

**Tender Reference : Your email reference dated Thursday, December 20,  
2018 3:33 PM**



Ref: DS/JSWH/01  
Date: 27/12/2018



Reference : DS/JSWH/01  
Version : A  
Date : 27/12/2018  
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SL NO	CIRCUIT NAME	CIRCUIT TOTAL QTY
1	<b>GENERATOR RELAY PANEL</b> Design, Engineering, Manufacturing & Supply, installation, testing, commissioning of Microprocessor Based Generator Protection Numerical relay/s duly mounted in fully wired free standing panel	1 SETS

#### B. PANELS/SETS DESCRIPTION

ITEM	DESIGNATION	QTY/ PANEL
1	<b>GENERATOR RELAY PANEL</b>	
	SIMPLEX PANEL comprises of	2 NOS.
	GE Make MICOM Agile P345 - NUMERICAL MAIN-1 GENERATOR PROTECTION RELAY (87G1) WITH BUILT-IN FUNCTIONS: 1. 100% STATOR EARTH FAULT PROTECTION BASED ON LOW FREQUENCY INJECTION PRINCIPLE(64G1) 2. 95% STATOR EARTH FAULT PROTECTION (64G2). 3. GENERATOR DIFFERENTIAL 4. DIRECTIONAL & NON-DIRECTIONAL OVERCURRENT & EARTHFAULT 5. LOSS OF FIELD PROTECTION (40G1)&(40G2) 6. ROTOR EARTH FAULT BASED ON INJECTION PRINCIPLE USING P391 7. BACKUP IMPEDANCE PROTECTION(21G) 8. NEGATIVE SEQUENCE CURRENT PROTECTION(46G) 9. THERMAL OVERLOAD 10. LOW FORWARD/REVERSE POWER PROTECTION(37/32G1) & (37/32G2) 11. 2 STAGE UNDER & OVER VOLTAGE PROTECTION (59G) 12. UNDER & OVER FREQUENCY PROTECTION(81G) 13. OVER FLUXING PROTECTION (99) 14. DEAD MACHINE PROTECTION(50GDM) 15. POLE SLIPPING PROTECTION (98G) 16. CHECK SYNCHROIZATION 17. PT SUPERVISION 18. 8 CT inputs and 4 PT Inputs 19. 24DI/24DO 20. TIME SYNCHRONIZATION ON IRIG-B AND SNTP	1 NO.
	MICOMP391 - ROTOR EARTH FAULT PROTECTION(2 STAGE) (64R) WITH REPEATER	1 NO.
	Micom P64x - OVERALL DIFFERENTIAL PROTECTION INCLUDING REF PROTECTION	1 NO.
	MICOM P14x - GT Backup Earth Fault Protection	1 NO.
	MICOM P14x - Auxiliary Trafo Overcurrent Protection	1 NO.
	MICOM P14x - Excitation Trafo Overcurrent Protection	1 NO.



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ITEM	DESIGNATION	QTY/ PANEL
	MICOM P14x – Shaft current protection	1 NO.
	GPM-5 – FREQUENCY INJECTION UNIT FOR 100% STATOR EARTH FAULT PROTECTION	1 NO.
	MVAJM25 – HIGH SPEED TRIPPING RELAY WITH ELECTRICAL/HAND RESET	3 NOS.
	MVAAM11 - DC SUPPLY SUPERVISION RELAY	2 NOS.
	MVAPM32 - VOLTAGE BALANCING RELAY	If required
	MVAAM21 – AUX. RELAY	2 NOS.
	MPG – TEST BLOCK & MPB – TEST PLUG	1 Set
	MVAJM – CONTACT MULTIPLICATION RELAY	If required
	METROSILS & STABILIZING RESISTORS	If required
	<b>ADDITIONAL REQUIRED ACCESSORIES</b>	
	INDUSTRIAL GRADE PC WITH LATEST WINDOWS COMPATIBLE WITH AGILE SOFTWARE	1 NO.
	LASER PRINTER A4	1 No.
	ETHERNET SWITCH AND CABLE OF REPUTED MAKE	1 SET.
	SOFTWARE FOR RELAY PARAMETERIZATION	1 NO.
	LAPTOP WITH LATEST CONFIGURATIONS & WINDOWS	1 No.
	GLOBAL POSITIONING SYSTEM ( GPS ) GE / SERTEL MAKE	1 No.
	<b>SERVICE PART COMPRISES OF</b>	
1.	ERECTION, TESTING, COMMISSIONING & INSTALLATION OF NEW SUPPLIED PANEL.	1 No.
2.	TRAINING TO JSW ENGINEERS	1 Day
3.	INTEGRATION OF RELAYS WITH SUPPLIED GPS & INDUSTRIAL GRADE PC.	1 No.

### C. COMMENTS

#### INCLUSION IN SCOPE

- Supply, erection, testing, installation and commissioning of Panel.
- All offered Numerical Relays are on IEC 61850 with ONE RJ45 PORT & ONE FIBRE PORT.
- Integration of relays with supplied GPS & Industrial grade PC.
- Supply of laptop with relay software S1 Agile.

#### EXCLUSION FROM SCOPE

- AC/DC supply during panel charging, exsiting panel drawings.
- Power source is in owner's scope for each cabinet to be supplied by GE.
- JSW Shall provide hydra crane for shifting of New/Old relay panels from warehouse to site and vice-versa for retrofitting job.
- Lodging and boarding for the vendor's team shall be provided on chargeable basis, subject to availability at JSW Township/ guest house.
- Civil work of any kind.
- Any statutory clearance like local electrical license, work permit etc. at site shall be in customer's scope.
- Transducers, power factor controller relay



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- We have not considered supply of Marshalling box & AC Kiosk.
- We have not considered supply, laying & terminations of Power/Control/FO cables.
- Supply of Furniture is not in scope.

**.PRICE OFFER**

Sl.No	DESCRIPTION	Qty	Unit Price in INR	Total Price in INR
1	Design, Engineering, Manufacturing & Supply, installation, testing, commissioning of Microprocessor Based Generator Protection Numerical relay/s duly mounted in fully wired free standing panel	1	2,334,298	2,334,298
2	WORKSTATION	1	515,818	515,818
<b>Total Price in INR</b>				<b>2,850,116</b>

PRICE : Prices are firm.

GST : 18%

P&F Inclusive

F&I Charges INCLUSIVE

Commissioning INCLUSIVE

1. The above prices shall NOT be used for any additions & deletion in base scope of works. Any change to the scope of works, BOC, relay list shall call for additional commercial impact.
3. Also please note that our offer excludes any Transportation charges to site, unloading charges, site storage charges, charges for Legalization of documentation and customs. The above indicated prices are Ex-works price from Chennai.
4. Drawings shall be submitted 4-6 weeks from date of purchase order with interest free advance & clear technical inputs
5. Panels shall be dispatched within 3-4 months from date of receipt of drawing approval.
6. Our panels/relays come with a warrantee of 18 months from date of commissioning or 12 months from date of dispatch, whichever is earlier.
7. Please refer our " standard terms & conditions" document

**2. TERMS & CONDITIONS:**

PRICE	PRICES ARE FIRM. THE PRICES ARE EX-WORKS CHENNAI. TAXED & DUTIES ARE EXTRA, WHICH WILL BE APPLICABLE AT THE RATES PREVAILING AT THE TIME OF DISPATCH. THE CURRENT RATES ARE. GST : 18%
MAKE & TYPE	OFFERED C&R PANELS & RELAYS ARE GE MAKE & MANUFACTURED IN GE CHENNAI, INDIA





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DRAWING	DRAWING WILL BE SUBMIT WITHIN 8 WEEKS FROM THE DATE OF RECEIPT OF TECHNICALLY AND COMMERCIALY CLEAR PO
DELIVERY	12-16 WEEKS FROM THE DATE OF DRAWING APPROVAL
WARRANTY	18 MONTHS FROM THE DATE OF SUPPLY. OR 12 MONTHS FROM THE DATE OF COMMISSIONING, WHICH EVER IS EARLIER.
COMMISSIONING	COMMISSIONING INCLUSIVE
SCOPE OF SUPPLY	THE SCOPE WILL INCLUDE DESIGN, MANUFACTURING, TESTING (AT SELLER'S WORKS) & PACKING AS QUOTED IN THE OFFER
OFFER VALIDITY	THE OFFER SHALL BE INITIALLY VALID FOR 30 DAYS FROM THE ISSUE DATE OF THE OFFER. IF ANY CHANGES IN THE BOQ./ RELAY MODEL NUMBER, PRICE IMPLICATION WILL BE THERE
TERMS OF PAYMENT	20% ADVANCE AGAINST SUBMISSION OF DRAWINGS BALANCE 80% AGAINST PI AFTER INSPECTION BEFORE DESPATCH.
CD	CONSEQUENTIAL DAMAGES WILL NOT BE APPLICABLE FOR M/S GE SCOPE OF SUPPLY
FAT	ONLY AT GE CHENNAI WORKS
BANK GUARANTEE	NOT APPLICABLE
LD	NOT APPLICABLE
<b>IN THE EVENT OF ORDER, PLEASE PLACE THE SAME ON OUR AUTHORIZED CHANNEL PARTNER.</b>	

### 3. COMMENTS AND CLARIFICATION:

The offered quantity is as per BOQ. If anything extra, it will be at price implication.  
i.e. Any change in above given Equipment List at any point of Order Execution might have price implications.

### **D. TERMS AND CONDITIONS FOR THE SALE OF PRODUCTS AND SERVICES (EM104)**

**NOTICE:** Sale of any Products or Services is expressly conditioned on Buyer's assent to these Terms and Conditions. Any acceptance of Seller's offer is expressly limited to acceptance of these Terms and Conditions and Seller expressly objects to any additional or different terms proposed by Buyer. No facility entry form shall modify these Terms and Conditions even if signed by Seller's representative. Any order to perform work and Seller's performance of work shall constitute Buyer's assent to these Terms and Conditions. Unless otherwise specified in the quotation, Seller's quotation shall expire 30 days from its date and may be modified or withdrawn by Seller before receipt of Buyer's conforming acceptance.

#### 1. Definitions

"Buyer" means the entity to which Seller is providing Products or Services under the Contract.

"Contract" means either the contract agreement signed by both parties, or the purchase order signed by Buyer and accepted by Seller in writing, for the sale of Products or Services, together with these Terms and Conditions, Seller's final quotation, the agreed scope(s) of work, and Seller's order acknowledgement. In the event of any conflict, the Terms and Conditions shall take precedence over other documents included in the Contract.

"Contract Price" means the agreed price stated in the Contract for the sale of Products and Services, including adjustments (if any) in accordance with the Contract.

"Hazardous Materials" means any toxic or hazardous substance, hazardous material, dangerous or hazardous waste, dangerous good, radioactive material, petroleum or petroleum-derived products or by-products, or any other



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chemical, substance, material or emission, that is regulated, listed or controlled pursuant to any national, state, provincial, or local law, statute, ordinance, directive, regulation or other legal requirement of the United States ("U.S.") or the country of the Site.

"Insolvent/Bankrupt" means that a party is insolvent, makes an assignment for the benefit of its creditors, has a receiver or trustee appointed for it or any of its assets, or files or has filed against it a proceeding under any bankruptcy, insolvency dissolution or liquidation laws.

"Products" means the equipment, parts, materials, supplies, software, and other goods Seller has agreed to supply to Buyer under the Contract.

"Seller" means the entity providing Products or performing Services under the Contract.

"Services" means the services Seller has agreed to perform for Buyer under the Contract.

"Site" means the premises where Products are used or Services are performed, not including Seller's premises from which it performs Services.

"Terms and Conditions" means these "Terms and Conditions for Sale of Products and Services", including any relevant addenda pursuant to Article 18, together with any modifications or additional provisions specifically stated in Seller's final quotation or specifically agreed upon by Seller in writing.

## 2. Payment

2.1 Buyer shall pay Seller for the Products and Services by paying all invoiced amounts in Indian Rupees, without set-off for any payment from Seller not due under this Contract, within thirty (30) days from the invoice date. If the Contract Price is less than Indian Rupees One Crore Twenty-Five Lacs Only (INR 1,25,00,000), Seller shall issue invoices upon shipment of Products and as Services are performed. If the Contract Price is Indian Rupees One Crore Twenty Five Lacs( INR 1,25,00,000) or more, progress payments shall be invoiced starting with twenty-five percent (25%) of the Contract Price for Products and Services upon the earlier of Contract signature or issuance of Seller's order acknowledgement and continuing such that ninety percent (90%) of the Contract Price for Products is received before the earliest scheduled Product shipment and Services are invoiced as performed ("Progress Payments"). For each calendar month, or fraction thereof, that payment is late, Buyer shall pay a late payment charge computed at the rate of 1.5% per month on the overdue balance, or the maximum rate permitted by law, whichever is less.

2.2 As and if requested by Seller, Buyer shall at its expense establish and keep in force payment security in the form of an irrevocable, unconditional, sight letter of credit or bank guarantee allowing for pro-rata payments as Products are shipped and Services are performed, plus payment of cancellation and termination charges, and all other amounts due from Buyer under the Contract ("Payment Security"). The Payment Security shall be (a) in a form, and issued or confirmed by a bank acceptable to Seller, (b) payable at the counters of such acceptable bank or negotiating bank, (c) opened at least sixty (60) days prior to both the earliest scheduled shipment of Products and commencement of Services, and (d) remain in effect until the latest of ninety (90) days after the last scheduled Product shipment, completion of all Services and Seller's receipt of the final payment required under the Contract. Buyer shall, at its expense, increase the amount(s), extend the validity period(s) and make other appropriate modifications to any Payment Security within ten (10) days of Seller's notification that such adjustment is necessary in connection with Buyer's obligations under the Contract.

2.3 Seller is not required to commence or continue its performance unless and until any required Payment Security is received, operative and in effect and all applicable Progress Payments have been received. For each day of delay in receiving Progress Payments or acceptable Payment Security, Seller shall be entitled to a matching extension of the schedule. If at any time Seller reasonably determines that Buyer's financial condition or payment history does not justify continuation of Seller's performance, Seller shall be entitled to require full or partial payment in advance or otherwise restructure payments, request additional forms of Payment Security, suspend its performance or terminate the Contract.

## 3. Taxes and Duties

Seller shall be responsible for all corporate taxes measured by net income due to performance of or payment for work under this Contract ("Seller Taxes"). Buyer shall be responsible for all taxes, duties, fees, or other charges of any nature (including, but not limited to, consumption, gross receipts, import, property, sales, stamp, turnover, use, or value-added taxes, and all items of withholding, deficiency, penalty, addition to tax, interest, or assessment related thereto, imposed by any governmental authority on Buyer or Seller or its subcontractors) in relation to the



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Contract or the performance of or payment for work under the Contract other than Seller Taxes ("Buyer Taxes"). The Contract Price does not include the amount of any Buyer Taxes. If Buyer deducts or withholds Buyer Taxes, Buyer shall pay additional amounts so that Seller receives the full Contract Price without reduction for Buyer Taxes. Buyer shall provide to Seller, within one month of payment, official receipts from the applicable governmental authority for deducted or withheld taxes.

**4. Deliveries; Title Transfer; Risk of Loss; Storage**

4.1 For shipments that do not involve export, including shipments from one European Union ("EU") country to another EU country, Seller shall deliver Products to Buyer FCA Seller's facility or warehouse (Incoterms 2010). For export shipments, Seller shall deliver Products to Buyer FCA Port of Export (Incoterms 2010). Buyer shall pay all delivery costs and charges or pay Seller's standard shipping charges plus up to twenty-five (25%) percent. Partial deliveries are permitted. Seller may deliver Products in advance of the delivery schedule. Delivery times are approximate and are dependent upon prompt receipt by Seller of all information necessary to proceed with the work without interruption. If Products delivered do not correspond in quantity, type or price to those itemized in the shipping invoice or documentation, Buyer shall so notify Seller within ten (10) days after receipt.

4.2 For shipments that do not involve export, title to Products shall pass to Buyer upon delivery in accordance with Section 4.1. For export shipments from a Seller facility or warehouse outside the U.S., title shall pass to Buyer upon delivery in accordance with Section 4.1. For shipments from the U.S. to another country, title shall pass to Buyer immediately after each item departs from the territorial land, seas and overlying airspace of the U.S. The 1982 United Nations Convention of the Law of the Sea shall apply to determine the U.S. territorial seas. For all other shipments, title to Products shall pass to Buyer the earlier of (i) the port of export immediately after Products have been cleared for export or (ii) immediately after each item departs from the territorial land, seas and overlying airspace of the sending country. When Buyer arranges the export or intercommunity shipment, Buyer will provide Seller evidence of exportation or intercommunity shipment acceptable to the relevant tax and custom authorities. Notwithstanding the foregoing, Seller grants only a license, and does not pass title, for any software provided by Seller under this Contract, and title to any leased equipment remains with Seller.

4.3 Risk of loss shall pass to Buyer upon delivery pursuant to Section 4.1, except that for export shipments from the U.S., risk of loss shall transfer to Buyer upon title passage.

4.4 If any Products to be delivered under this Contract or if any Buyer equipment repaired at Seller's facilities cannot be shipped to or received by Buyer when ready due to any cause attributable to Buyer or its other contractors, Seller may ship the Products and equipment to a storage facility, including storage at the place of manufacture or repair, or to an agreed freight forwarder. If Seller places Products or equipment into storage, the following apply: (i) title and risk of loss immediately pass to Buyer, if they have not already passed, and delivery shall be deemed to have occurred; (ii) any amounts otherwise payable to Seller upon delivery or shipment shall be due; (iii) all expenses and charges incurred by Seller related to the storage shall be payable by Buyer upon submission of Seller's invoices; and (iv) when conditions permit and upon payment of all amounts due, Seller shall make Products and repaired equipment available to Buyer for delivery.

4.5 If repair Services are to be performed on Buyer's equipment at Seller's facility, Buyer shall be responsible for, and shall retain risk of loss of, such equipment at all times, except that Seller shall be responsible for damage to the equipment while at Seller's facility to the extent such damage is caused by Seller's negligence.

**5. Warranty**

5.1 Seller warrants that Products shall be delivered free from defects in material, workmanship and title and that Services shall be performed in a competent, diligent manner in accordance with any mutually agreed specifications.

5.2 The warranty for Products shall expire one (1) year from first use or eighteen (18) months from delivery, whichever occurs first, except that software is warranted for ninety (90) days from delivery. The warranty for Services shall expire one (1) year after performance of the Service, except that software-related Services are warranted for ninety (90) days.

5.3 If Products or Services do not meet the above warranties, Buyer shall promptly notify Seller in writing prior to expiration of the warranty period. Seller shall (i) at its option, repair or replace defective Products and (ii) re-perform defective Services. If despite Seller's reasonable efforts, a non-conforming Product cannot be repaired or replaced, or non-conforming Services cannot be re-performed, Seller shall refund or credit monies paid by Buyer for such non-conforming Products and Services. Warranty repair, replacement or re-performance by Seller shall





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not extend or renew the applicable warranty period. Buyer shall obtain Seller's agreement on the specifications of any tests it plans to conduct to determine whether a non-conformance exists.

5.4 Buyer shall bear the costs of access for Seller's remedial warranty efforts (including removal and replacement of systems, structures or other parts of Buyer's facility), de-installation, decontamination, re-installation and transportation of defective Products to Seller and back to Buyer.

5.5 The warranties and remedies are conditioned upon (a) proper storage, installation, use, operation, and maintenance of Products, (b) Buyer keeping accurate and complete records of operation and maintenance during the warranty period and providing Seller access to those records, and (c) modification or repair of Products or Services only as authorized by Seller in writing. Failure to meet any such conditions renders the warranty null and void. Seller is not responsible for normal wear and tear.

5.6 This Article 5 provides the exclusive remedies for all claims based on failure of or defect in Products or Services, regardless of when the failure or defect arises, and whether a claim, however described, is based on contract, warranty, indemnity, tort/extra-contractual liability (including negligence), strict liability or otherwise. The warranties provided in this Article 5 are exclusive and are in lieu of all other warranties, conditions and guarantees whether written, oral, implied or statutory. **NO IMPLIED OR STATUTORY WARRANTY, OR WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLIES.**

#### **6. Confidentiality**

6.1 Seller and Buyer (as to information disclosed, the "Disclosing Party") may each provide the other party (as to information received, the "Receiving Party") with Confidential Information in connection with this Contract. "Confidential Information" means (a) information that is designated in writing as "confidential" or "proprietary" by Disclosing Party at the time of written disclosure, and (b) information that is orally designated as "confidential" or "proprietary" by Disclosing Party at the time of oral or visual disclosure and is confirmed to be "confidential" or "proprietary" in writing within twenty (20) days after the oral or visual disclosure. In addition, prices for Products and Services shall be considered Seller's Confidential Information.

6.2 Receiving Party agrees: (i) to use the Confidential Information only in connection with the Contract and use of Products and Services, (ii) to take reasonable measures to prevent disclosure of the Confidential Information to third parties, and (iii) not to disclose the Confidential Information to a competitor of Disclosing Party. Notwithstanding these restrictions, (a) Seller may disclose Confidential Information to its affiliates and subcontractors in connection with performance of the Contract, (b) a Receiving Party may disclose Confidential Information to its auditors, (c) Buyer may disclose Confidential Information to lenders as necessary for Buyer to secure or retain financing needed to perform its obligations under the Contract, and (d) a Receiving Party may disclose Confidential Information to any other third party with the prior written permission of Disclosing Party, and in each case, only so long as the Receiving Party obtains a non-disclosure commitment from any such subcontractors, auditors, lenders or other permitted third party that prohibits disclosure of the Confidential Information and provided further that the Receiving Party remains responsible for any unauthorized use or disclosure of the Confidential Information. Receiving Party shall upon request return to Disclosing Party or destroy all copies of Confidential Information except to the extent that a specific provision of the Contract entitles Receiving Party to retain an item of Confidential Information. Seller may also retain one archive copy of Buyer's Confidential Information.

6.3 The obligations under this Article 6 shall not apply to any portion of the Confidential Information that: (i) is or becomes generally available to the public other than as a result of disclosure by Receiving Party, its representatives or its affiliates; (ii) is or becomes available to Receiving Party on a non-confidential basis from a source other than Disclosing Party when the source is not, to the best of Receiving Party's knowledge, subject to a confidentiality obligation to Disclosing Party; (iii) is independently developed by Receiving Party, its representatives or affiliates, without reference to the Confidential Information; (iv) is required to be disclosed by law or valid legal process provided that the Receiving Party intending to make disclosure in response to such requirements or process shall promptly notify the Disclosing Party in advance of such disclosure and reasonably cooperate in attempts to maintain the confidentiality of the Confidential Information.

6.4 Each Disclosing Party warrants that it has the right to disclose the information that it discloses. Neither Buyer nor Seller shall make any public announcement about the Contract without prior written approval of the other party. As to any individual item of Confidential Information, the restrictions under this Article 6 shall expire five (5) years after the date of disclosure. Article 6 does not supersede any separate confidentiality or nondisclosure agreement signed by the parties.



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#### **7. Intellectual Property**

7.1 Seller shall defend and indemnify Buyer against any claim by a non-affiliated third party (a "Claim") alleging that Products or Services furnished under this Contract infringe a patent in effect in the U.S., an EU member state or the country of the Site (provided there is a corresponding patent issued by the U.S. or an EU member state), or any copyright or trademark registered in the country of the Site, provided that Buyer (a) promptly notifies Seller in writing of the Claim, (b) makes no admission of liability and does not take any position adverse to Seller, (c) gives Seller sole authority to control defense and settlement of the Claim, and (d) provides Seller with full disclosure and reasonable assistance as required to defend the Claim.

7.2 Section 7.1 shall not apply and Seller shall have no obligation or liability with respect to any Claim based upon (a) Products or Services that have been modified, or revised, (b) the combination of any Products or Services with other products or services when such combination is a basis of the alleged infringement, (c) failure of Buyer to implement any update provided by Seller that would have prevented the Claim, (d) unauthorized use of Products or Services, or (e) Products or Services made or performed to Buyer's specifications.

7.3 Should any Product or Service, or any portion thereof, become the subject of a Claim, Seller may at its option (a) procure for Buyer the right to continue using the Product or Service, or applicable portion thereof, (b) modify or replace it in whole or in part to make it non-infringing, or (c) failing (a) or (b), take back infringing Products or Services and refund the price received by Seller attributable to the infringing Products or Services.

7.4 Article 7 states Seller's exclusive liability for intellectual property infringement by Products and Services.

7.5 Each party shall retain ownership of all Confidential Information and intellectual property it had prior to the Contract. All new intellectual property conceived or created by Seller in the performance of this Contract, whether alone or with any contribution from Buyer, shall be owned exclusively by Seller. Buyer agrees to deliver assignment documentation as necessary to achieve that result.

#### **8. Indemnity**

Each of Buyer and Seller (as an "Indemnifying Party") shall indemnify the other party (as an "Indemnified Party") from and against claims brought by a third party, on account of personal injury or damage to the third party's tangible property, to the extent caused by the negligence of the Indemnifying Party in connection with this Contract. In the event the injury or damage is caused by joint or concurrent negligence of Buyer and Seller, the loss or expense shall be borne by each party in proportion to its degree of negligence. For purposes of Seller's indemnity obligation, no part of the Products or Site is considered third party property.

#### **9. Insurance**

During the term of the Contract, Seller shall maintain for its protection the following insurance coverage: (i) Worker's Compensation, Employer's Liability and other statutory insurance required by law with respect to work related injuries or disease of employees of Seller in such form(s) and amount(s) as required by applicable laws; (ii) Automobile Liability insurance with a combined single limit of Indian Rupees Twelve Crores and Fifty Lacs Only (INR 12,50,00,000); and (iii) Commercial General Liability or Public Liability insurance for bodily injury and property damage with a combined single limit of Indian Rupees Twelve Crores and Fifty Lacs Only (INR 12,50,00,000);. If required in the Contract, Seller shall provide a certificate of insurance reflecting such coverage.

#### **10. Excusable Events**

Seller shall not be liable or considered in breach of its obligations under this Contract to the extent that Seller's performance is delayed or prevented, directly or indirectly, by any cause beyond its reasonable control, or by armed conflict, acts or threats of terrorism, epidemics, strikes or other labor disturbances, or acts or omissions of any governmental authority or of the Buyer or Buyer's contractors or suppliers. If an excusable event occurs, the schedule for Seller's performance shall be extended by the amount of time lost by reason of the event plus such additional time as may be needed to overcome the effect of the event. If acts or omissions of the Buyer or its contractors or suppliers cause the delay, Seller shall also be entitled to an equitable price adjustment.

#### **11. Termination and Suspension**

11.1 Buyer may terminate the Contract (or the portion affected) for cause if Seller (i) becomes Insolvent/Bankrupt, or (ii) commits a material breach of the Contract which does not otherwise have a specified contractual remedy, provided that: (a) Buyer shall first provide Seller with detailed written notice of the breach and of Buyer's intention





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to terminate the Contract, and (b) Seller shall have failed, within 30 days after receipt of the notice, to commence and diligently pursue cure of the breach.

11.2 If Buyer terminates the Contract pursuant to Section 11.1, (i) Seller shall reimburse Buyer the difference between that portion of the Contract Price allocable to the terminated scope and the actual amounts reasonably incurred by Buyer to complete that scope, and (ii) Buyer shall pay to Seller (a) the portion of the Contract Price allocable to Products completed, (b) lease fees incurred, and (c) amounts for Services performed before the effective date of termination. The amount due for Services shall be determined in accordance with the milestone schedule (for completed milestones) and rates set forth in the Contract (for work toward milestones not yet achieved and where there is no milestone schedule), as applicable or, where there are no milestones and/or rates in the Contract, at Seller's then-current standard time and material rates.

11.3 Seller may suspend or terminate the Contract (or any affected portion thereof) immediately for cause if Buyer (i) becomes Insolvent/Bankrupt, or (ii) materially breaches the Contract, including, but not limited to, failure or delay in Buyer providing Payment Security, making any payment when due, or fulfilling any payment conditions.

11.4 If the Contract (or any portion thereof) is terminated for any reason other than Seller's default under Section 11.1, Buyer shall pay Seller for all Products completed, lease fees incurred and Services performed before the effective date of termination, plus expenses reasonably incurred by Seller in connection with the termination. The amount due for Services shall be determined in accordance with the milestone schedule (for completed milestones) and rates set forth in the Contract (for work toward milestones not yet achieved and where there is no milestone schedule), as applicable or, where there are no milestones and/or rates in the Contract, at Seller's then-current standard time and material rates. In addition, Buyer shall pay Seller a cancellation charge equal to 80% of the Contract Price applicable to uncompleted made-to-order Products and 15% of the Contract Price applicable to all other uncompleted Products.

11.5 Either Buyer or Seller may terminate the Contract (or the portion affected) upon twenty (20) days advance notice if there is an excusable event (as described in Article 10) lasting longer than one hundred and twenty (120) days. In such case, Buyer shall pay to Seller amounts payable under Section 11.4, excluding the cancellation charge for uncompleted Products.

11.6 Buyer shall pay all reasonable expenses incurred by Seller in connection with a suspension, including, but not limited to, expenses for repossession, fee collection, demobilization/remobilization, and costs of storage during suspension. The schedule for Seller's obligations shall be extended for a period of time reasonably necessary to overcome the effects of any suspension.

#### 12. Compliance with Laws, Codes and Standards

12.1 Seller shall comply with laws applicable to the manufacture of Products and its performance of Services. Buyer shall comply with laws applicable to the application, operation, use and disposal of the Products and Services.

12.2 Seller's obligations are conditioned upon Buyer's compliance with all U.S. and other applicable trade control laws and regulations. Buyer shall not trans-ship, re-export, divert or direct Products other than in and to the ultimate country of destination declared by Buyer and specified as the country of ultimate destination on Seller's invoice.

12.3 Notwithstanding any other provision, Buyer shall timely obtain, effectuate and maintain in force any required permit, license, exemption, filing, registration and other authorization, including, but not limited to, building and environmental permits, import licenses, environmental impact assessments, and foreign exchange authorizations, required for the lawful performance of Services at the Site or fulfillment of Buyer's obligations, except that Seller shall obtain any license or registration necessary for Seller to generally conduct business and visas or work permits, if any, necessary for Seller's personnel. Buyer shall provide reasonable assistance to Seller in obtaining such visas and work permits.

#### 13. Environmental, Health and Safety Matters

13.1 Buyer shall maintain safe working conditions at the Site, including, without limitation, implementing appropriate procedures regarding Hazardous Materials, confined space entry, and energization and de-energization of power systems (electrical, mechanical and hydraulic) using safe and effective lock-out/tag-out ("LOTO") procedures including physical LOTO or a mutually agreed upon alternative method.

13.2 Buyer shall timely advise Seller in writing of all applicable Site-specific health, safety, security and environmental requirements and procedures. Without limiting Buyer's responsibilities under Article 13, Seller has



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the right but not the obligation to, from time to time, review and inspect applicable health, safety, security and environmental documentation, procedures and conditions at the Site.

13.3 If, in Seller's reasonable opinion, the health, safety, or security of personnel or the Site is, or is apt to be, imperiled by security risks, terrorist acts or threats, the presence of or threat of exposure to Hazardous Materials, or unsafe working conditions, Seller may, in addition to other rights or remedies available to it, evacuate some or all of its personnel from Site, suspend performance of all or any part of the Contract, and/or remotely perform or supervise work. Any such occurrence shall be considered an excusable event. Buyer shall reasonably assist in any such evacuation.

13.4 Operation of Buyer's equipment is the responsibility of Buyer. Buyer shall not require or permit Seller's personnel to operate Buyer's equipment at Site.

13.5 Buyer will make its Site medical facilities and resources available to Seller personnel who need medical attention.

13.6. Seller has no responsibility or liability for the pre-existing condition of Buyer's equipment or the Site. Prior to Seller starting any work at Site, Buyer will provide documentation that identifies the presence and condition of any Hazardous Materials existing in or about Buyer's equipment or the Site that Seller may encounter while performing under this Contract. Buyer shall disclose to Seller industrial hygiene and environmental monitoring data regarding conditions that may affect Seller's work or personnel at the Site. Buyer shall keep Seller informed of changes in any such conditions.

13.7 Seller shall notify Buyer if Seller becomes aware of: (i) conditions at the Site differing materially from those disclosed by Buyer, or (ii) previously unknown physical conditions at Site differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract. If any such conditions cause an increase in Seller's cost of, or the time required for, performance of any part of the work under the Contract, an equitable adjustment in price and schedule shall be made.

13.8 If Seller encounters Hazardous Materials in Buyer's equipment or at the Site that require special handling or disposal, Seller is not obligated to continue work affected by the hazardous conditions. In such an event, Buyer shall eliminate the hazardous conditions in accordance with applicable laws and regulations so that Seller's work under the Contract may safely proceed, and Seller shall be entitled to an equitable adjustment of the price and schedule to compensate for any increase in Seller's cost of, or time required for, performance of any part of the work. Buyer shall properly store, transport and dispose of all Hazardous Materials introduced, produced or generated in the course of Seller's work at the Site.

13.9 Buyer shall indemnify Seller for any and all claims, damages, losses, and expenses arising out of or relating to any Hazardous Materials which are or were (i) present in or about Buyer's equipment or the Site prior to the commencement of Seller's work, (ii) improperly handled or disposed of by Buyer or Buyer's employees, agents, contractors or subcontractors, or (iii) brought, generated, produced or released on Site by parties other than Seller.

#### 14. Changes

14.1 Each party may at any time propose changes in the schedule or scope of Products or Services. Seller is not obligated to proceed with any change until both parties agree upon such change in writing. The written change documentation will describe the changes in scope and schedule, and the resulting changes in price and other provisions, as agreed.

14.2 The scope, Contract Price, schedule, and other provisions will be equitably adjusted to reflect additional costs or obligations incurred by Seller resulting from a change, after Seller's proposal date, in Buyer's Site-specific requirements or procedures, or in industry specifications, codes, standards, applicable laws or regulations. However, no adjustment will be made on account of a general change in Seller's manufacturing or repair facilities resulting from a change in laws or regulations applicable to such facilities. Unless otherwise agreed by the parties, pricing for additional work arising from such changes shall be at Seller's time and material rates.

14.3 It shall be acceptable and not considered a change if Seller delivers a Product that bears a different, superseding or new part or version number compared to the part or version number listed in the Contract.

#### 15. Limitations of Liability

15.1 The total liability of Seller for all claims of any kind arising from or related to the formation, performance or breach of this Contract, or any Products or Services, shall not exceed the (i) Contract Price, or (ii) if Buyer places





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multiple order(s) under the Contract, the price of each particular order for all claims arising from or related to that order and Five Lac Indian Rupees (INR 5,00,000) for all claims not part of any particular order.

15.2 Seller shall not be liable for loss of profit or revenues, loss of use of equipment or systems, interruption of business, cost of replacement power, cost of capital, downtime costs, increased operating costs, any special, consequential, incidental, indirect, or punitive damages, or claims of Buyer's customers for any of the foregoing types of damages.

15.3 All Seller liability shall end upon expiration of the applicable warranty period, provided that Buyer may continue to enforce a claim for which it has given notice prior to that date by commencing an action or arbitration, as applicable under this Contract, before expiration of any statute of limitations or other legal time limitation but in no event later than one year after expiration of such warranty period.

15.4 Seller shall not be liable for advice or assistance that is not required for the work scope under this Contract.

15.5 If Buyer is supplying Products or Services to a third party, or using Products or Services at a facility owned by a third party, Buyer shall either (i) indemnify and defend Seller from and against any and all claims by, and liability to, any such third party in excess of the limitations set forth in this Article 15, or (ii) require that the third party agree, for the benefit of and enforceable by Seller, to be bound by all the limitations included in this Article 15.

15.6 For purposes of this Article 15, the term "Seller" means Seller, its affiliates, subcontractors and suppliers of any tier, and their respective employees. The limitations in this Article 15 shall apply regardless of whether a claim is based in contract, warranty, indemnity, tort/extra-contractual liability (including negligence), strict liability or otherwise, and shall prevail over any conflicting terms, except to the extent that such terms further restrict Seller's liability.

#### **16. Governing Law and Dispute Resolution**

16.1 This Contract shall be governed by and construed in accordance with the laws of India, without giving effect to any choice of law rules that would cause the application of laws of any other jurisdiction (the "Governing Law").

16.2 All disputes arising in connection with this Contract, including any question regarding its existence or validity, shall be resolved in accordance with this Article 16. If a dispute is not resolved by negotiations, either party may, by giving written notice, refer the dispute to a meeting of appropriate higher management, to be held within twenty (20) business days after the giving of notice. If the dispute is not resolved within thirty (30) business days after the giving of notice, or such later date as may be mutually agreed, either party may commence arbitration in accordance with the Indian Arbitration and Conciliation Act, 1996. Three arbitrators shall be appointed.

Each party shall appoint one arbitrator, and those two shall appoint the third within thirty (30) days, who shall be the Chairman. The seat, or legal place, of arbitration, shall be exclusively in Delhi. The arbitration shall be conducted in English. In reaching their decision, the arbitrators shall give full force and effect to the intent of the parties as expressed in the Contract, and if a solution is not found in the Contract, shall apply the governing law of the Contract. The decision of the arbitrator(s) shall be final and binding upon both parties, and neither party shall seek recourse to a law court or other authority to appeal for revisions of the decision.

16.3 Notwithstanding the foregoing, each party shall have the right at any time, at its option and where legally available, to immediately commence an action or proceeding in a court of competent jurisdiction, subject to the terms of this Contract, to seek a restraining order, injunction, or similar order to enforce the confidentiality provisions set forth in Article 6 and/or the nuclear use restrictions set forth in Section 19.1, or to seek interim or conservatory measures. Monetary damages shall only be available in accordance with Section 16.2.

#### **17. Inspection and Factory Tests**

Seller will apply its normal quality control procedures in manufacturing Products. Seller shall attempt to accommodate requests by Buyer to witness Seller's factory tests of Products, subject to appropriate access restrictions, if such witnessing can be arranged without delaying the work.

#### **18. Software, Leased Equipment, Remote Diagnostic Services, PCB Services**

If Seller provides any software to Buyer, the Software License Addendum shall apply. If Seller leases any of Seller's equipment or provides related Services to Buyer, including placing Seller's equipment at Buyer's site to provide remote Services, the Lease Addendum shall apply. If Seller provides remote diagnostic services to Buyer, the Remote Diagnostic Services Addendum shall apply. If Seller provides PCB Services to Buyer, the PCB Services Addendum shall apply. If there is any conflict between these "Terms and Conditions for the Sale of Products and





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Services" and the terms of any addendum incorporated pursuant to this Article 18, the terms of the addendum shall take precedence with respect to the applicable scope.

**19. General Clauses**

19.1 Products and Services sold by Seller are not intended for use in connection with any nuclear facility or activity, and Buyer warrants that it shall not use or permit others to use Products or Services for such purposes, without the advance written consent of Seller. If, in breach of this, any such use occurs, Seller (and its parent, affiliates, suppliers and subcontractors) disclaims all liability for any nuclear or other damage, injury or contamination, and, in addition to any other rights of Seller, Buyer shall indemnify and hold Seller (and its parent, affiliates, suppliers and subcontractors) harmless against all such liability. Consent of Seller to any such use, if any, will be conditioned upon additional terms and conditions that Seller determines to be acceptable for protection against nuclear liability.

19.2 Seller may assign or novate its rights and obligations under the Contract, in whole or in part, to any of its affiliates or may assign any of its accounts receivable under this Contract to any party without Buyer's consent. Buyer agrees to execute any documents that may be necessary to complete Seller's assignment or novation. Seller may subcontract portions of the work, so long as Seller remains responsible for it. The delegation or assignment by Buyer of any or all of its rights or obligations under the Contract without Seller's prior written consent (which consent shall not be unreasonably withheld) shall be void.

19.3 Buyer shall notify Seller immediately upon any change in ownership of more than fifty percent (50%) of Buyer's voting rights or of any controlling interest in Buyer. If Buyer fails to do so or Seller objects to the change, Seller may (a) terminate the Contract, (b) require Buyer to provide adequate assurance of performance (including but not limited to payment), and/or (c) put in place special controls regarding Seller's Confidential Information.

19.4 If any Contract provision is found to be void or unenforceable, the remainder of the Contract shall not be affected. The parties will endeavor to replace any such void or unenforceable provision with a new provision that achieves substantially the same practical and economic effect and is valid and enforceable.

19.5 The following Articles shall survive termination or cancellation of the Contract: 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 18, 19 and 20.

19.6 The Contract represents the entire agreement between the parties. No oral or written representation or warranty not contained in this Contract shall be binding on either party. Buyer's and Seller's rights, remedies and obligations arising from or related to Products and Services sold under this Contract are limited to the rights, remedies and obligations stated in this Contract. No modification, amendment, rescission or waiver shall be binding on either party unless agreed in writing.

19.7 Except as provided in Article 15 (Limitations of Liability) and in Section 19.1 (no nuclear use), this Contract is only for the benefit of the parties, and no third party shall have a right to enforce any provision of this Contract.

19.8 This Contract may be signed in multiple counterparts that together shall constitute one agreement.

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**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

No.L-1/18/2010-CERC

New Delhi 5<sup>th</sup> March, 2012

**NOTIFICATION**

In exercise of powers conferred under clause (h) of sub-section (1) of Section 79 read with clause (g) of sub-section (2) of Section 178 of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, the Central Electricity Regulatory Commission hereby makes the following regulations to amend the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010, hereinafter referred to as "the Principal Regulations".

**1. Short title, extent and commencement**

(1) These Regulations may be called the Central Electricity Regulatory Commission (Indian Electricity Grid Code) (First Amendment) Regulations, 2012.

(2) These Regulations shall come into force with effect from 2<sup>nd</sup> of April 2012.

**2. Amendment in Regulation 2.3.2 of Principal Regulations:**

In sub-regulation (d) of Regulation 2.3.2 of Principal Regulations, the words "Metering and data collection" shall be substituted by the words "Meter data processing".

**3. Amendment in Regulation 2.5.1 of Principal Regulations:**

The sub-regulation (2) of Regulation 2.5.1 of Principal Regulations shall stand deleted.

**4. Amendment in Regulation 3.4 of Principal Regulations:**

The last sentence of the sub-regulation (c) of Regulation 3.4 of Principal Regulations shall be substituted as under:

*"In case of associated transmission system where all PPAs have not been signed, and where agreement could not be reached in respect of system strengthening schemes, the CTU may approach the Commission for the regulatory approval in accordance with Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) Regulations, 2010."*



**5. Amendment of Regulation 5.2 of Principal Regulations:**

- (1) At the beginning of the sub-regulation (e) of Regulation 5.2 of Principal Regulations, following sentence shall be added:
- "Maintenance of their respective power system elements shall be carried out by users, STUs and CTU in accordance with the provisions in Central Electricity Authority ( Grid Standards ) Regulations,2010."*
- (2) After clause (iii) of sub-regulation (f) of Regulation 5.2 of Principal Regulations, following proviso shall be inserted.
- "Provided that if a generating unit cannot be operated under restricted governor mode operation, then it shall be operated in free governor mode operation with manual intervention to operate in the manner required under restricted governor mode operation."*
- (3) In sub-regulation (i) of Regulation 5.2 of Principal Regulations, the words and figures "49.7 Hz." shall be substituted with the words and figures "49.8 Hz."
- (4) In sub-regulation (j) of Regulation 5.2 of Principal Regulations, the words and figures "49.5 Hz." shall be substituted with words and figures "49.7 Hz."
- (5) In sub-regulation (j) of Regulation 5.2 of Principal Regulations, the following provisions shall be added at the end:
- "All users and SEBs shall ensure that temporary over voltage due to sudden load rejection and the maximum permissible values of voltage unbalance shall remain within limits specified under Central Electricity Authority (Grid Standards) Regulations, 2010."*
- (6) In sub-regulation (l) of Regulation 5.2 of Principal Regulations, following provisions shall be added at the end:
- "RPC shall also prepare islanding schemes and ensure its implementation in accordance with Central Electricity Authority (Grid Standards) Regulations, 2010. All users and SEBs shall ensure that installation and operation of protection system shall comply with the provisions of Central Electricity Authority (Grid Standards) Regulations, 2010."*
- (7) In sub-regulation (m) of Regulation 5.2 of Principal Regulations, the words and figures "49.5-50.2 Hz." shall be substituted with the words and figures "49.7-50.2 Hz."
- (8) Sub-regulation (p) of Regulation 5.2 of Principal Regulations shall be





substituted as under, namely:

*“(p) Procedures shall be developed to recover from partial/total collapse of the grid in accordance with Central Electricity Authority (Grid Standards) Regulations, 2010 and to periodically update the same in accordance with the requirements given under Regulation 5.8. These procedures shall be followed by all the Users, STU/SLDC, CTU, RLDC and NLDC to ensure consistent, reliable and quick restoration.”*

(9) In sub-regulation (r) of Regulation 5.2 of Principal Regulations, the words “one week” shall be substituted with the words and figures “24 hours.”

(10) In sub-regulation (t) of Regulation 5.2 of Principal Regulations, the following shall be added at the end:

*“Voltage fluctuation limits and voltage wave-form quality shall be maintained as specified in Central Electricity Authority (Grid Standards) Regulations, 2010.”*

#### **6. Amendment in Regulation 5.4.2 of Principal Regulations:**

(1) In sub-regulation (a) of Regulation 5.4.2 of Principal Regulations, the words and figures “49.7 Hz.” shall be substituted with the words and figures “49.8 Hz.”

(2) In sub-regulation (b) of Regulation 5.4.2 of Principal Regulations, the words and figures “49.5 Hz.” shall be substituted with the words and figures “49.7 Hz.”

#### **7. Amendment in 5.6.2 of Principal Regulations:**

After the last clause of the sub-regulation (b) of Regulation 5.6.2 of Principal Regulations, the following clause shall be added:

*“All operational instructions given by RLDC and SLDC shall have unique codes which shall be recorded and maintained as specified in Central Electricity Authority (Grid Standards) Regulations, 2010.”*

#### **8. Amendment in Regulation 5.7.4 of Principal Regulations:**

(1) Sub-Regulation (a) of the Regulation 5.7.4 of Principal Regulation shall be substituted as under, namely:

*“The RPC Secretariat shall be primarily responsible for finalization of the Annual Load Generation Balance Report (LGBR) and the annual outage plan for the following financial year by 31st December of each year. The LGBR shall be prepared by the respective RPC secretariat for peak as well as off-peak*



scenarios."

(2) The Sub-Regulation (b) of Regulation 5.7.4 of Principal Regulations, shall be substituted as under, namely:

*"(b) All SEBs/STUs, transmission licensees, CTU, ISGS, IPPs, MPPs and other generating stations shall provide to the respective RPC Secretariat their proposed outage plan in writing for the next financial year by 31<sup>st</sup> October of each year. These shall contain identification of each generating unit/transmission line/CT etc., the preferred date for each outage and its duration and where there is flexibility, the earliest start date and latest finishing date. Each SLDC shall submit LGBR for its control area, for peak as well as off-peak scenario, by 31<sup>st</sup> October for the next financial year, to respective RPC Secretariat. The annual plans for managing deficits/surpluses in respective control areas shall clearly be indicated in the LGBR submitted by SLDCs."*

(3) Sub-Regulation (c) of Regulation 5.7.4 of Principal Regulations shall be substituted as under:

*"(c) RPC Secretariat shall compile LGBR for peak as well as off peak scenario and also prepare annual outage plan in the respective region. RPC Secretariat shall then come out with the draft LGBR and draft outage plan for the next financial year by 30<sup>th</sup> November of each year for the regional grid taking into account the utilization of available resources in an optimal manner and to maintain security standards. This will be done after carrying out necessary system studies and, if necessary, the outage plan shall be rescheduled and LGBR shall be modified, accordingly. Adequate balance between generation and load requirement shall be ensured while finalising outage plan. The draft LGBR and draft outage plan shall be uploaded by the RPCs on their websites."*

(4) Sub-Regulation (d) of Regulation 5.7.4 of Principal Regulations shall be substituted as under, namely:

*"(d) The outage plan shall be finalized in consultation with NLDC and RLDCs. The final LGBR after considering comments/observations of the stakeholders shall be prepared by RPC secretariat by 31<sup>st</sup> December of each year. The final outage plan and the final LGBR shall be intimated to NLDC, Users, STUs, CTU, other generating stations connected to the ISTS and the RLDC by 31<sup>st</sup> December of each year for implementation. The final outage plan and the final LGBR shall be made available on the websites of the respective utilities and on the websites of RPCs, RLDCs and NLDC."*

#### **9. Amendment of Regulation 6.3 of Principal Regulations :**

The third para of this Regulation shall be substituted as under, namely:



*“Similarly, the scheduling and despatch procedure for the generating stations of Sardar Sarovar Project (SSP) shall be as per the procedure formulated by Narmada Control Authority (NCA) in consultation with the Western Regional Load Despatch Centre (WRLDC).”*

**10. Amendment in Regulation 6.4 of Principal Regulations:**

- (1) In sub-regulation 1 of Regulation 6.4 of Principal Regulations, the words “metering and energy accounting, issuance of UI accounts within the control area” shall be substituted by the words “ meter data processing” .
- (2) Sub-regulation 6 of Regulation 6.4 of Principal Regulations shall be substituted as under:

“6. The system of each regional entity shall be treated and operated as a notional control area. The algebraic summation of scheduled drawal from ISGS and from contracts through long-term access, medium-term and short-term open access arrangements shall provide the drawl schedule of each regional entity, and this shall be determined in advance on day-ahead basis. The regional entities shall regulate their generation and/or consumers’ load so as to maintain their actual drawal from the regional grid close to the above schedule. Deviation, if any, from the drawl schedule, shall be within the limits specified by the Central Commission in UI Regulations and it shall not cause system parameters to deteriorate beyond permissible limits and shall not lead to unacceptable line loading. Such deviation from net drawal schedule shall be priced through the Unscheduled Interchange (UI) mechanism as specified by the Central Commission from time to time.”

- (3) In the first sentence of sub-regulation 7 of the Regulation 6.4 of the Principal Regulations, the words and figures “49.7 Hz.” shall be substituted with words and figures “49.8 Hz.” and in second and third sentences, the words and figures “49.5 Hz.” shall be substituted with words and figures “49.7 Hz.” .
- (4) A new sub-regulation 10 (a) shall be added after sub-regulation 10 of the Regulation 6.4 of the Principal Regulations as under:

*“10(a). The treatment of injection of infirm power by generating stations during testing shall be in accordance with Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009, and the Central Electricity Regulatory Commission (Unscheduled Inter-Change Charges and related matters) Regulations, 2009, amended time to time.”*



(5) In sub-regulation 11 of Regulation 6.4 of the Principal Regulations, the words and figures "49.7 Hz." shall be substituted with words and figures "49.8 Hz."

**11. Amendment in Regulation 6.5 of Principal Regulations:**

(1) The sub-regulation 19 of the Regulation 6.5 of Principal Regulations shall be replaced by following:

*"19. Notwithstanding anything contained in Regulation 6.5.18, in case of forced outage of a unit of a generating station (having generating capacity of 100 MW or more) and selling power under Short Term bilateral transaction (excluding collective transactions through power exchange), the generator or electricity trader or any other agency selling power from the unit of the generating station shall immediately intimate the outage of the unit along with the requisition for revision of schedule and estimated time of restoration of the unit, to SLDC/RLDC, as the case may be. The schedule of beneficiaries, sellers and buyers of power from this generating unit shall be revised accordingly. The revised schedules shall become effective from the 4<sup>th</sup> time block, counting the time block in which the forced outage is declared to be the first one. The SLDC/RLDC as the case may be shall inform the revised schedule to the seller and the buyer. The original schedule shall become effective from the estimated time of restoration of the unit. However, the transmission charges as per original schedule shall continue to be paid for two days.*

*Provided that the schedule of the buyers and sellers shall be revised after forced outage of a unit, only if the source of power for a particular transaction has clearly been indicated during short-term open access application and the said unit of that generating station goes under forced outage.*

*Provided also that the provisions of this sub-regulation in respect of revision of schedule by electricity traders and any other agency (except the generating station) shall be operative with effect from 1<sup>st</sup> July 2012."*

(2) A new sub-regulation shall be added as 6.5.19A after sub-regulation 6.5.19 as under, namely:

*"6.5.19 A. In case of revision of schedule of a generating unit, the schedules of all transactions under the long-term access, medium-term open access and short-term open access (except collective transactions through power exchange), shall be reduced on pro-rata basis."*

(3) In the sub-regulation 23 (i) of the Regulation 6.5 of Principal Regulations, last three sentences shall be substituted as under:





*"The schedule by wind power generating stations (excluding collective transactions) may be revised by giving advance notice to SLDC/RLDC, as the case may be. Such revisions by wind power generating stations shall be effective from 6th time block, the first being the time-block in which notice was given. There may be one revision for each time slot of 3 hours starting from 00:00 hours of a particular day subject to maximum of 8 revisions during the day."*

**12. Amendment in Annexure-1 of Principal Regulations (Complementary Commercial Mechanism):**

(1) Para 4 (ii) of Annexure-1 of the Principal Regulations shall be substituted as under, namely:

*"(ii) The schedule by such wind power generating stations supplying inter-state power under long-term access, medium-term and short-term open access (excluding collective transactions) may be revised by giving advance notice to respective SLDC/RLDC. Such revisions by wind power generating stations shall be effective from 6th time-block, the first being the time-block in which notice is given. There may be one revision for each time slot of 3 hours starting from 00:00 hours of a particular day subject to maximum of 8 revisions during the day."*

(2) The last sentences of para 5 and 7 i.e. "Illustrative calculations in respect of above mechanism are given in Appendix" shall be deleted.

(3) Para 15 of Annexure-1 of the Principal Regulations shall be substituted as under:

*"15. The RLDC shall place the complete statement of the regional UI account, the regional Reactive Energy pool account and Congestion Charge Account before the RPC's Commercial Committee meeting, on a quarterly basis, for audit."*

(4) In para 16 of Annexure-1 of the Principal Regulations, the words "Interfaces for Scheduling and UI Accounting In Inter-regional Exchanges" shall be substituted with the words "Interfaces for Scheduling of Inter-regional Exchanges".

(5) In sub-para 1 of para 16 of Annexure-1 of Principal Regulations, the words "and UI accounting" shall be deleted.





13. Appendix to the Principal Regulations shall be deleted.

**Sd/-  
(Rajiv Bansal)  
Secretary**

**Note:** The Principal Regulations were notified in the Gazette of India Extraordinary, Part III Section 4 Ser No.115 on 28.4.2010. Addendum to the Principal Regulations was issued in Gazette of India Extraordinary, Part-III Section 4 at Ser No. 168 on 3.7.2010 and Corrigendum to the Principal Regulations was issued in Gazette of India Extraordinary, Part-III Section 4 at Ser No. 10 on 19.1.2011.



1/17/2019

JSW Mail - Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.



Himanshu Puri &lt;himanshu.puri@jsw.in&gt;

**Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.****Himanshu Puri** <himanshu.puri@jsw.in>  
**To:** Atri Sandeep <Sandeep.Atri@andritz.com>**Cc:** Aggarwal Ajay <Ajay.Aggarwal@andritz.com>, Ravindra Rana <ravindra.rana@jsw.in>, Perveen Puri <perveen.puri@jsw.in>, Anshul.Gupta@andritz.com, Mehra Adesh <Adesh.Mehra@andritz.com>

Thu, Dec 6, 2018 at 12:08 PM

Dear Sandeep Ji,

Your reply is still awaited...

Kindly expedite the case, we can not afford more delays on the issue.

Best Regards,

**Himanshu Puri** | Manager (O&M, 300 MW Baspa-II HPS) | JSW Hydro Energy Limited.

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

M +91 8894289616 |+91 1786 261696 Ext 203



On Mon, Oct 29, 2018 at 2:43 PM Atri Sandeep &lt;Sandeep.Atri@andritz.com&gt; wrote:

Dear Sir,

Regret for delay in response, we are working on the enquiry will revert you with some input after Diwali festival

Kind regards

**Sandeep ATRI**

Sales &amp; Marketing –Service &amp; Rihab

**ANDRITZ HYDRO Private Limited**

A-24/3, Mohan Co-operative Industrial area

Mathura Road, New Delhi – 110044, INDIA

Phone: +91 (011) 49372319

Fax: +91 (1275) 262055

Mobile: +91 8743087888

sandeep.atri@andritz.com

www.andritz.com

**From:** Himanshu Puri [mailto:himanshu.puri@jsw.in]**Sent:** 29 October 2018 14:28**To:** Mehra Adesh; Atri Sandeep**Cc:** Aggarwal Ajay; Raj Deepak; Ravindra Rana; Perveen Puri**Subject:** Re: Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.**E-MAIL FROM A NON-ANDRITZ SOURCE: AS A SECURITY MEASURE, PLEASE EXERCISE CAUTION WITH E-MAIL CONTENT AND ANY LINKS OR ATTACHMENTS.**<https://mail.google.com/mail/u/07ik=dcad368e06&view=pt&search=all&permmsgid=msg-a%3Ar3975263881850709858&dsqt=1&simpl=msg-a%3Ar39...> 1/6

1/17/2019

JSW Mail - Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.

**Reminder !!!!!**

Issue is pending since long, urgent reply is requested.

Best Regards,

**Himanshu Puri** | Manager (O&M, 300 MW Baspa-II HPS) | JSW Hydro Energy Limited.

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

M +91 8894289616 |+91 1786 261696 Ext 203



On Fri, Sep 28, 2018 at 4:55 PM Himanshu Puri <himanshu.puri@jsw.in> wrote:

Dear Adesh Ji,

As discussed and in reference to the trailing mails, kindly provide budgetary offer for carrying out machine vibration and alignment checks at Baspa-II HPS.

Kindly treat the matter as urgent. An early reply will be highly appreciable.

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 203



On Fri, Aug 31, 2018 at 11:06 AM Himanshu Puri <himanshu.puri@jsw.in> wrote:

Dear Mr. Sandeep,

Please provide updates in reference to trailing mails.

Kindly treat the matter as urgent

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 203

[https://mail.google.com/mail/u/07ik=dcad368e06&view=pt&search=all&permmsgid=msg-a%3Ar3975263881850709858&dsq=1&simpl=msg-a%3Ar39... 2/6](https://mail.google.com/mail/u/07ik=dcad368e06&view=pt&search=all&permmsgid=msg-a%3Ar3975263881850709858&dsq=1&simpl=msg-a%3Ar39...)



On Sat, Aug 11, 2018 at 2:27 PM Himanshu Puri <himanshu.puri@jsw.in> wrote:

Dear Mr. Sandeep,

As required, Please find our point wise reply as below:-

- 1) Detail of existing vibration measurement (Vibro-meter, Model- VM600) meter like schematic drawing , installed location along with the photos:- **Existing vibration measurement (Vibro-meter, Model- VM600) user manuals, Vibrations sensors location schematic, Sensor and Panel location photographs etc. are attached herein.**
- 2) Log sheet of minimum 06 month having temperature and vibration readings:- **Unit 1,2 & 3 Bearing Temperatures & Vibration details in hourly format for last Six months (i.e. Starting Feb'18) are attached herein.**
- 3) Any operation problems if faced in past kindly share:- **No operational problem is faced in reference to Vibration analysis system as yet.**
- 4) Last Captive Maintenance detail:- **Baspa-II HPS units were commissioned in 2003 and are in continuous operation since then. In year 2015-16 Upper Combined Bearing (UCB), Lower Guide bearing (LGB) and at Turbine Guide Bearing (TGB) assembly for all three units was unpacked in a phased manner and visual inspection of bearing segments were done. Further, no significant ageing / abnormality was observed in the bearings and afterwards units were boxed up accordingly. Unit Vibrations readings post inspection and boxing up remained in the same range as before.**
- 5) Generator drawing , longitudinal & latitudinal:- **Turbine-Generator Cross section drawing attached.**
- 6) UCB & LGB drawing:-..... **Under Discussion, will be shared later.**
- 7) Last shaft line measurement report if possible- ..... **Under Discussion, will be shared later.**

Due to big size of attachments its shared in Successive mails. (This mail Covers S.No 1, Successive mail (Part-2) Covers S.No 2 to 5)

For any further query please feel free to contact.

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 203

On Thu, Aug 2, 2018 at 10:43 AM, Atri Sandeep <Sandeep.Atri@andritz.com> wrote:

Dear Mr Puri,

Refer to yesterday discussion on phone; we are working on below enquiry

We are proposing to follow the enquiry as per below



1. Step 1<sup>st</sup> →
  - i. Measurement of Vibration & analysis at UCB, LGB and TGB Segments
  - ii. Preparation of Vibration analysis report and submission to JSW
2. Step 2<sup>nd</sup>

Shaft centring and alignment of all three machines if required depend upon the Step 1<sup>st</sup> report
3. Step 3<sup>rd</sup>
  - i. Design , engineering & procurement of latest online vibration measurement device for UCB, LGB and TGB Segments
  - ii. Erection and commissioning of the supplied instruments

As discussion, we request you to kindly provide below information for our budgetary offer preparation for step 1<sup>st</sup>

- Detail of existing vibration measurement (Vibro-meter, Model- VM600) meter like schematic drawing , installed location along with the photos
- Log sheet of minimum 06 month having temperature and vibration readings
- Any operation problems if faced in past kindly share
- Last Captive Maintenance detail
- Generator drawing , longitudinal & latitudinal
- UCB & LGB drawing
- Last shat line measurement report if possible
- 

We appreciate your prompt response to enable us to work on the enquiry

Thanks & assuring our best service and attention always

Kind regards

**Sandeep ATRI**

Sales & Marketing –Service & Rehub

**ANDRITZ HYDRO Private Limited**

A-24/3, Mohan Co-operative Industrial area  
Mathura Road, New Delhi – 110044, INDIA

Phone: +91 (011) 49372319

Fax: +91 (1275) 262055

Mobile: +91 8743087888





1/17/2019

JSW Mail - Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.

sandeep.atri@andritz.com  
www.andritz.com

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

**Sent:** 27 July 2018 12:41

**To:** Mehra Adesh

**Cc:** Ravindra Rana; Atri Sandeep

**Subject:** Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.

**E-MAIL FROM A NON-ANDRITZ SOURCE: AS A SECURITY MEASURE, PLEASE EXERCISE CAUTION WITH E-MAIL CONTENT AND ANY LINKS OR ATTACHMENTS.**

Dear Adesh Ji,

Greetings of the day.

In reference to our telephonic discussion, Please provide technical and budgetary proposals for carrying out following works:-

1) Vibration Analysis for Turbine & Generator (TG) Complete Assembly.

Preamble:- At 3x100 MW Baspa-II HPS we only have (TG) shaft "Relative Vibration" measurements (in Microns), shaft vibrations are measured at Upper Combined Bearing (UCB), Lower Guide bearing (LGB) and at Turbine Guide Bearing (TGB) segments. Two perpendicular sensors are installed in each segment and their S-max value is displayed at DCS end. We don't have any absolute measurement of displacement / vibration for bearing and housing arrangements for UCB, LGB & TGB.

Specification of installed Vibration System are:- Make- Vibro-meter, Model- VM600.

2) Shaft centering and machine alignment checks and its correction if in case required.

3) Installation, testing & commissioning of "On-Line" Absolute Vibration Analyzing system for bearing and housing arrangements for UCB, LGB and TGB Segments.

(Note:- S.No 1 to 3 is applicable for all three units of Baspa-II HPS)

For any further query please feel free to contact.

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.

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JSW Mail - Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.

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**Thank you****6 attachments**

 **Energy** 2K **image002.jpg**  
 **Energy** 2K **image003.jpg**  
 **Energy** 2K **image002.jpg**  
 **Energy** 2K **image003.jpg**  
 **Energy** 2K **image002.jpg**  
 **Energy** 2K **image003.jpg**



1/17/2019

JSW Mail - Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.



Himanshu Puri &lt;himanshu.puri@jsw.in&gt;

**Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.****From:** Saurabh <Saurabh.Gupta1@voith.com>**To:** Himanshu Puri <himanshu.puri@jsw.in>**Cc:** "Vidyarthi, Raj" <Raj.Vidyarthi@voith.com>, "Saini, Namita" <Namita.Saini@voith.com>

Thu, Oct 18, 2018 at 6:28 PM

Dear Sir,

As per our discussion, please find attached herewith Techno-commercial offer for vibration checks at Baspa-II.

Best regards

Saurabh Gupta  
Voith GroupManager  
Division Hydro  
Business Line VH Other**From:** Gupta, Saurabh**Sent:** Tuesday, October 9, 2018 3:18 PM**To:** 'Himanshu Puri' <himanshu.puri@jsw.in>**Cc:** Ravindra Rana <ravindra.rana@jsw.in>; Perveen Puri <perveen.puri@jsw.in>; Vidyarthi, Raj <Raj.Vidyarthi@voith.com>**Subject:** RE: Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.

Dear Sir,

As discussed, kindly share the vibration values data to us.

Best regards

Saurabh Gupta  
Voith GroupManager  
Division Hydro  
Business Line VH OtherVoith Hydro Private Limited  
AMB and Modernization - AMB & MOD  
A-20 & 21, Sector 59  
201 301 Noida, IndiaPhone +91 120 307318  
Fax +91 120 3074243  
Mobile +91 9971122309Saurabh.Gupta1@voith.com  
www.voith.comwww.voith.com/hydro  
[https://twitter.com/voith\\_hydro](https://twitter.com/voith_hydro)

1/17/2019

JSW Mail - Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.  
A Voith and Siemens Company

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**From:** Himanshu Puri [mailto:himanshu.puri@jsw.in]  
**Sent:** Friday, September 28, 2018 4:59 PM  
**To:** Vidyarthi, Raj <Raj.Vidyarthi@voith.com>  
**Cc:** Goyal, Sharad <sharad.goyal@voith.com>; Pattanayak, Dilip <Dilip.Pattanayak@Voith.com>; Gupta, Saurabh <Saurabh.Gupta1@voith.com>; Dhara, Dibyendu <Dibyendu.Dhara@Voith.com>; Ravindra Rana <ravindra.rana@jsw.in>; Perveen Puri <perveen.puri@jsw.in>  
**Subject:** Re: Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.

Dear Sir,

As discussed and in reference to the trailing mails, kindly provide budgetary offer for carrying out machine vibration and alignment checks at Baspa-II HPS.

Kindly treat the matter as urgent. An early reply will be highly appreciable.

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 203



On Fri, Aug 31, 2018 at 11:45 AM Vidyarthi, Raj <Raj.Vidyarthi@voith.com> wrote:

Dear Mr Puri,

We are working on the subject based on the telecom last week, and will come back to you shortly.

Freundliche Grüße / Best regards

Raj Vidyarthi  
Vice President

HyService™

Keep your energy flowing

---

Voith Hydro Private Limited  
AMB and Modernization – AMB & MOD  
A-20 & 21, Sector 59  
201 301 Noida, India

Tel +91 120 3074242  
Fax +91 120 3074243  
Mobile +91 971 717 6301

Raj.Vidyarthi@voith.com  
www.voith.com  
www.voith.com/hydro  
https://twitter.com/voith\_hydro

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1/17/2019

JSW Mail - Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.

A Voith and Siemens Company

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**From:** Himanshu Puri [mailto:himanshu.puri@jsw.in]  
**Sent:** Friday, August 31, 2018 11:09 AM  
**To:** Pattanayak, Dilip  
**Cc:** Vidyarathi, Raj; Goyal, Sharad; Ravindra Rana  
**Subject:** Re: Technical and Budgetary Proposals required for carrying out machine vibration and alignment checks at Baspa-II HPS.

Dear Sir,

Please provide updates in reference to trailing mails.

Kindly treat the matter as urgent.

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 203

On Sat, Aug 18, 2018 at 2:19 PM Himanshu Puri &lt;himanshu.puri@jsw.in&gt; wrote:

Dear Sir,

A Gentle Reminder for follow up of trailing mail.

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 203

On Thu, Jul 26, 2018 at 10:42 AM, Himanshu Puri &lt;himanshu.puri@jsw.in&gt; wrote:

Dear Sir,

Greetings of the day.

In reference to our telephonic discussion, Please provide technical and budgetary proposals for carrying out following works:-

<https://mail.google.com/mail/u/0/?ik=dcad368e06&view=pt&search=all&permmsgid=msg-f%3A1614668098901375011&dsqt=1&simpl=msg-f%3A1614...> 3/4

1) Vibration Analysis for Turbine & Generator (TG) Complete Assembly.

Preamble:- At 3x100 MW Baspa-II HPS we only have (TG) shaft "Relative Vibration" measurements (in Microns), shaft vibrations are measured at Upper Combined Bearing (UCB), Lower Guide bearing (LGB) and at Turbine Guide Bearing (TGB) segments. Two perpendicular sensors are installed in each segment and their S-max value is displayed at DCS end. We don't have any absolute measurement of displacement / vibration for bearing and housing arrangements for UCB, LGB & TGB.

Specification of installed Vibration System are:- Make- Vibro-meter, Model- VM600.

2) Shaft centering and machine alignment checks and its correction if in case required.

3) Installation, testing & commissioning of "On-Line" Absolute Vibration Analyzing system for bearing and housing arrangements for UCB, LGB and TGB Segments.

(Note:- S.No 1 to 3 is applicable for all three units of Baspa-II HPS)

For any further query please feel free to contact.

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.

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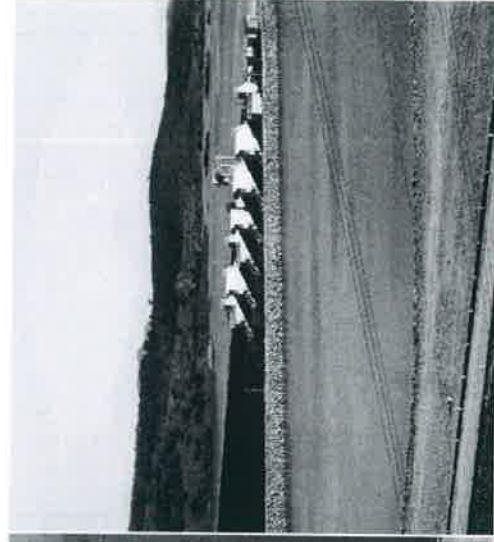
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**VOITH**

# HyCon™ MD Monitoring, Analysis and Diagnosis



The Voith HyCon™ MD Monitoring, Analysis and Diagnosis system combines our engineering and manufacturing expertise with your operational experience and knowledge to design a powerful preventive maintenance tool tailored to your individual hydropower plant.

A power plant's one and only objective is to fully meet the electricity demands for a maximum of time at the lowest possible cost. Therefore, efficiency, reliability and availability are crucial and it is of highest importance that the machines are kept operating under optimum conditions. A key factor to meet these demands is to be able to support early fault detection and preventive maintenance techniques.

This is the focus of HyCon MD, which is designed to obtain early detection of incipient damages, reduction of inspection and repair work, and clear planning options for timely inspections.

Among series of monitoring and evaluation methods for probable root causes in machine behavior, vibration diagnosis and air gap analysis are examples of well-known and acknowledged machine monitoring methods in the hydropower industry.

Both – being essential elements of the HyCon MD diagnosis techniques – have gained importance and have become part of condition-based maintenance for hydroelectric equipment, and match today's needs with respect to measuring technology, data processing and evaluation procedures.



HyCon MD is an online monitoring, analysis and diagnosis system developed by Voith Hydro, combining the know-how and experience of international hydropower operation and Voith Hydro's deep knowledge and experience of hydropower layout and design.

To meet various demands for different types, sizes and operation modes of hydropower machines, we offer:

- Highly scalable systems
- Custom-tailored solutions regarding protection, monitoring, analysis and diagnosis
- Predefined standard configurations for sensors to assure reliable and safe measurement.

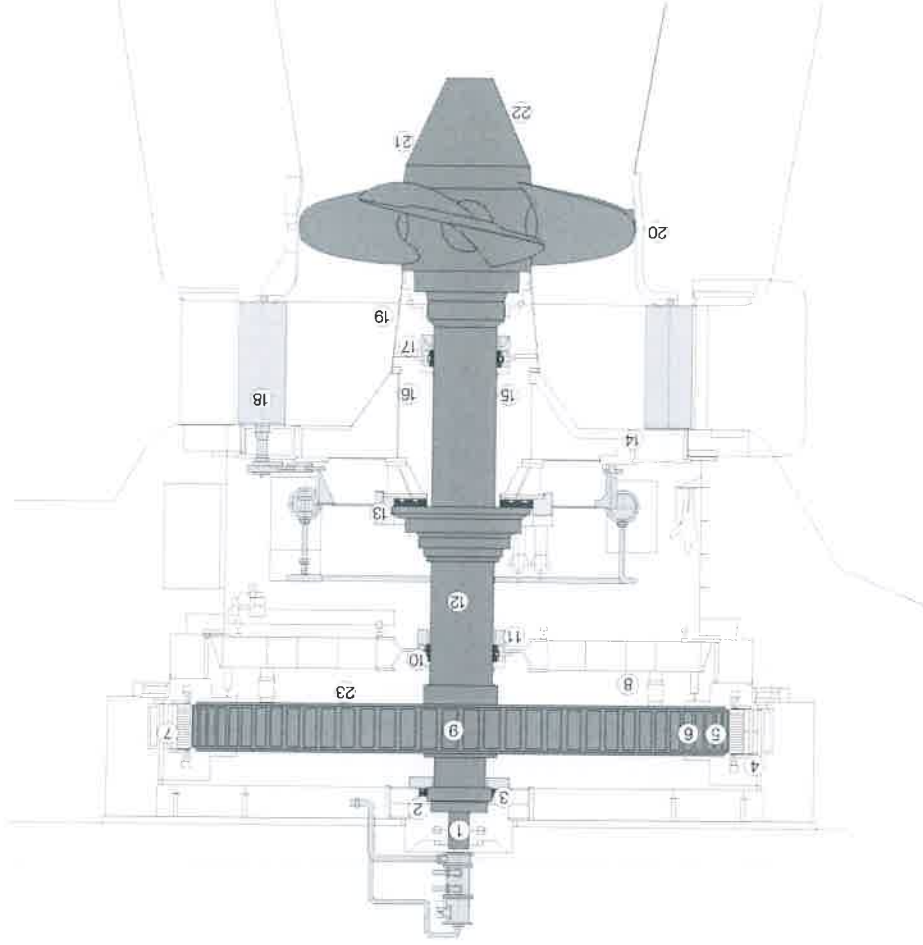
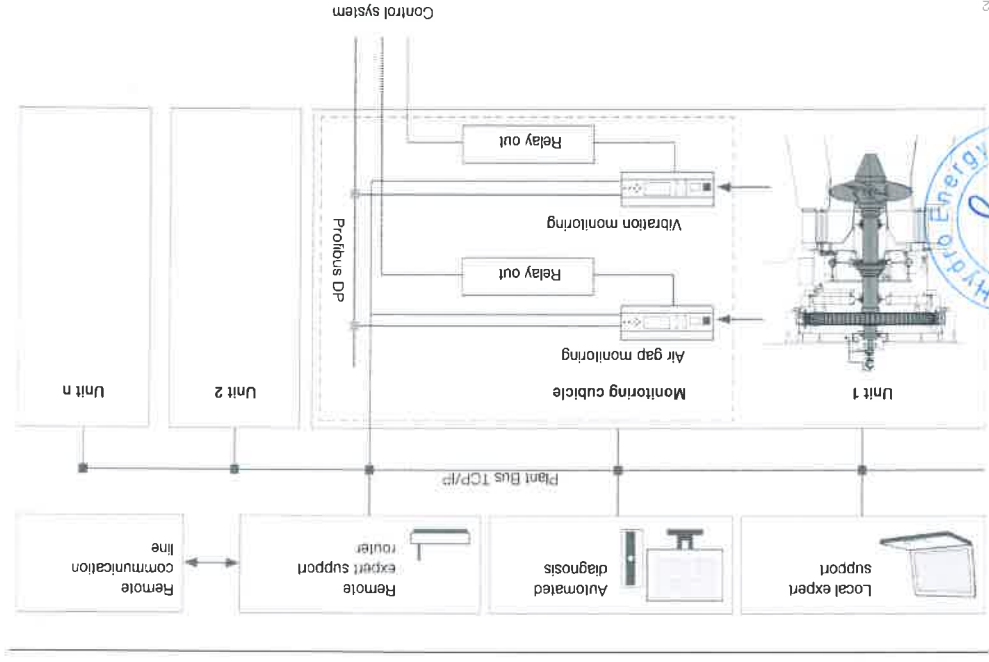
We also offer flexible solutions for hardware configuration and integration to be implemented into your existing plant control system.

Our modules are designed as an integral part of our HyCon control system family making it more beneficial, because no interfaces have to be clarified or information already available in the control system does not have to be acquired twice.

- Optimized total costs of ownerships
- Reduced costs
- Increased availability
- Voith Hydro know-how implementation

Benefits using HyCon MD:

Hardware configuration



- 1 Keyphasor
- 2 Absolute bearing vibration
- 3 Shaft relative vibration
- 4 Stator End Winding Vibration
- 5 Air Gap
- 6 Magnetic flux
- 7 Stator Core Vibration
- 8 Generator temperature monitoring
- 9 Partial discharge
- 10 Absolute bearing Vibration
- 11 Shaft relative Vibration
- 12 Shaft current monitoring
- 13 Axial Thrust Vibration
- 14 Turbine headcover vibration
- 15 Turbine temperature monitoring
- 16 Shaft relative vibration
- 17 Absolute bearing Vibration
- 18 Wicklet gate vibration
- 19 Labyrinth gap (Francis)
- 20 Runner Gap (Kaplan/ Bulb)
- 21 Cavitation monitoring
- 22 Pressure
- 23 Ozen monitoring



## Monitoring and protection interface

Reliable measurement and signal processing plus a well-engineered unit protection concept are considered to be of paramount importance for plant safety.

## Monitoring

The highly sensitive measuring systems that are adapted to the requirements of hydropower machines ensure effective condition-based monitoring and maintenance, and thus increase the life cycle of rotating machines as well as increasing plant availability and reliability.

To provide plant safety, the primary tasks of monitoring are to:

- Identify the plant's individual optimum condition
- Optimize modes of operation
- Allow for scheduled maintenance



## Protection interface

For complex excitation mechanisms with high dependency on specific operation conditions of the unit, special monitoring techniques are applied. The HyCon MD monitoring module evaluates all measurements and characteristic values as a function of operation mode and operation point.

Our data acquisition devices include logical functions based on parameters that generate trip signals to be transferred to the mechanical protection of the unit. This requires simple and reliable solutions that, at the same time, need to be flexible to meet various machine characteristics that are highly dependent on operating conditions.

## More than monitoring

Most monitoring systems only measure values and create alarms based on limit values. In order to extend the benefit for the plant operator, the system must be able to efficiently support preventive maintenance strategies.

To fulfill this demand the following prerequisites must be met:

- Highly sensitive measurement technology with adapted analysis techniques
- Diagnostic intelligence for proper selection of specific parameters and comparison of the measured values with the expected behavior, depending on specific plant conditions and machine operation modes
- Tailor-made systems to meet specific conditions such as very low speed or various operating modes with highly volatile excitation requirements
- Precise machine monitoring through intelligent measuring and analysis systems covering analytic evaluation of pre-processed values from the measurement device, for example frequency analysis providing frequency-selective observation results, and the calculation of further hydro specific characteristic values.

- Vibration Diagnosis - VD
- Air Gap Module - AG
- Reporting Tool - RT
- Event Data - ED
- Internal Simulation

## HyCon MD functions

The HyCon MD system is a scalable system with several functions which will be adapted to the power plant requirements. The graphical user interfaces will also be configured according to the requirements.

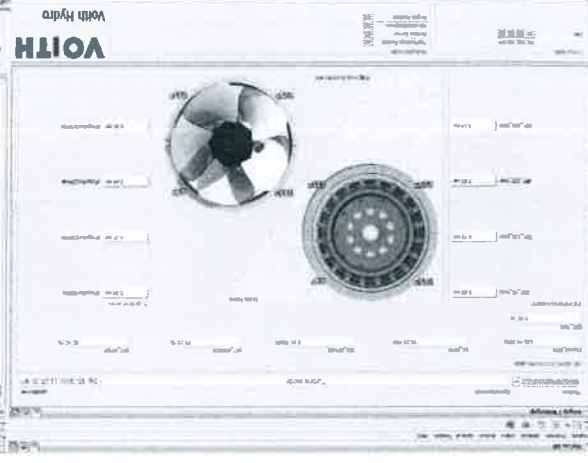
## Statistic module

To increase the information content of for e.g. vibration signals, as well as to represent the great variety of vibration-related factors, our statistic module is flexible to provide measurement values from any desired process variable. Different measurement planes, signals and key parameters can thus be compared.

## Intelligent measurement and analysis for additional benefits

In order to add on benefits for plant operators, our systems are designed to efficiently support predictive maintenance strategies.

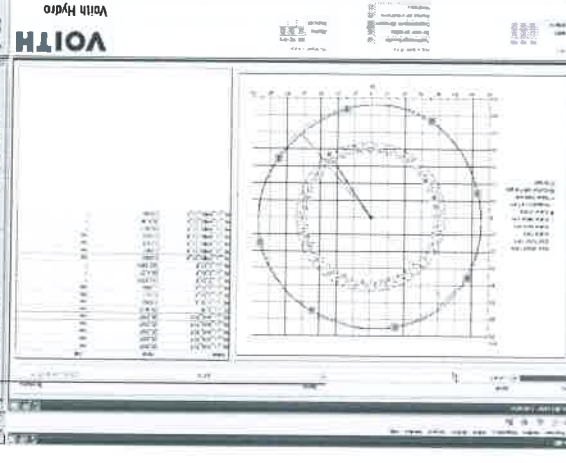
## Monitoring



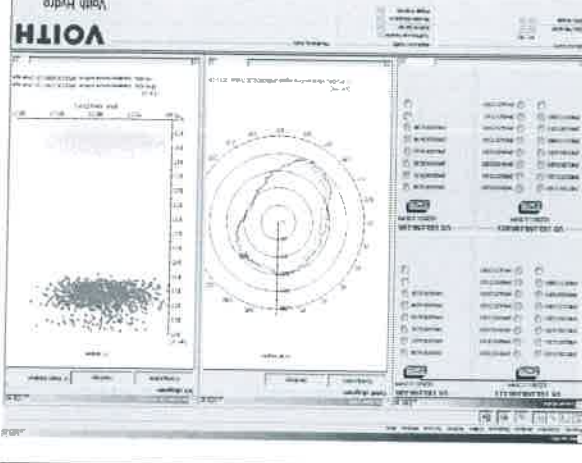
## Time Signal Diagram



## Rotor Profile



## Shaft Orbit Diagram







**Automated diagnosis: Value added for the operator**

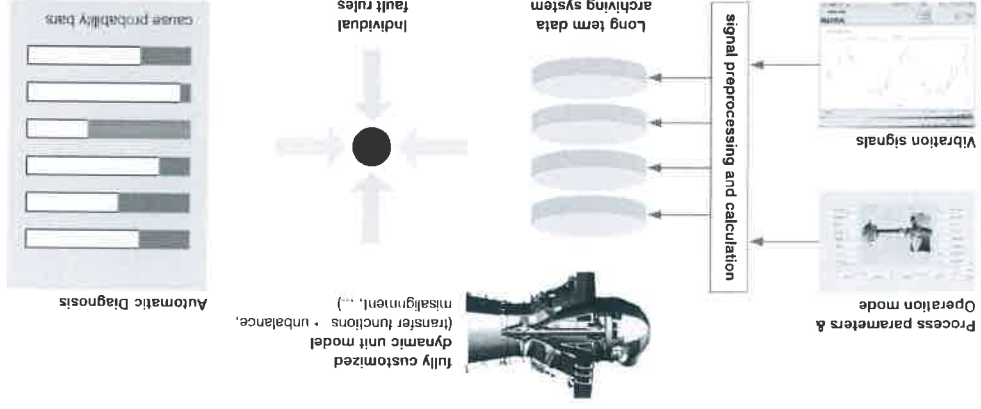
HyCon MD with its flexibility and adaptive modular configuration provides a powerful tool for you to do reliable diagnostics for safe operation all the time.

Many monitoring systems are available, which are able to measure and present the results using standard evaluation methods. In contrast, Voith, as an equipment manufacturer, understands the process and knows how to interpret these measurements. This knowledge is integrated in the HyCon MD system – a clear added value for the plant operator.

In order to automate diagnostic tasks, a knowledge database processes the results of the analysis. The database is adapted individually to each unit and is largely based on fully customized dynamic machine models.

A mathematical model of the unit ensures quantitative and qualitative evaluations since it incorporates the highest process know-how and all existing mechanical couplings as in the real machine. In addition, the owner's operational experience can be integrated into the knowledge database. The diagnostic module is structured with configurable sub-modules.

Diagnosis module process



**Diagnosis user interface**

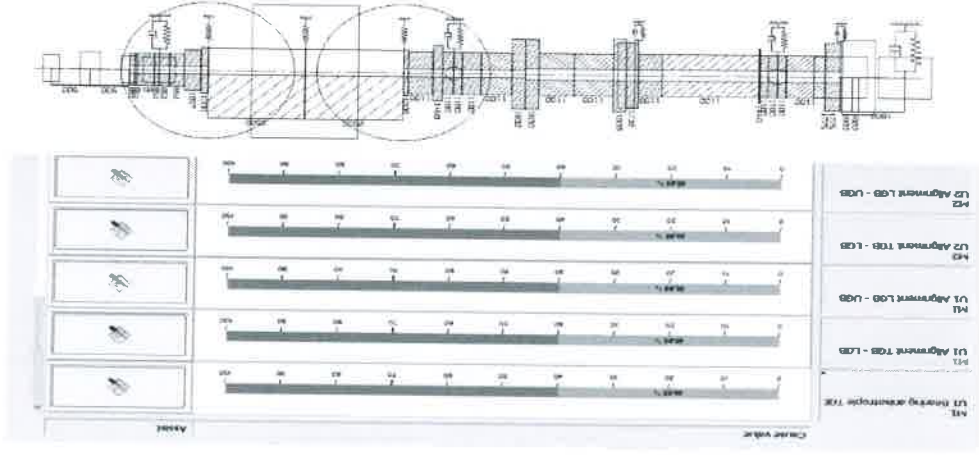
**Evaluation module**

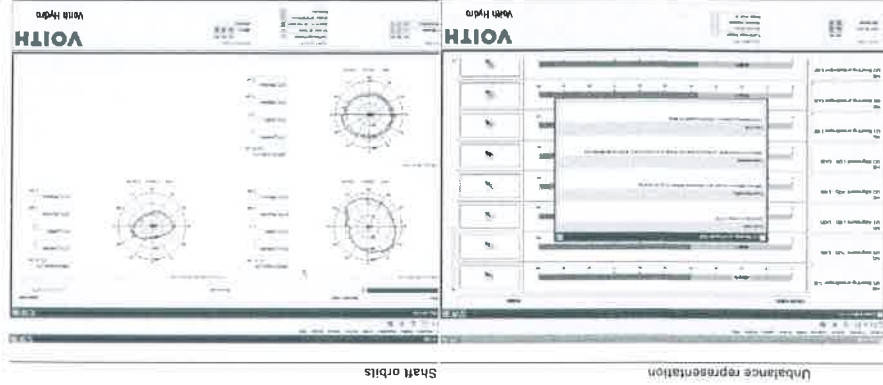
Clear and basic information on the machine's condition is presented to the operator through user-friendly interfaces. Whenever information about a problem becomes evident, the results are passed to the user as a list of clearly identified failure causes including error probabilities.

In addition, each failure is described in detail with recommendations on how the user should proceed. However, if the unit is in good condition, only condensed information is given to the user without the burden of too many details.

As a result, abnormal behavior leads to processing of probabilities for various error patterns. The cause of the abnormality can thus be clearly identified. In case of the identification of an unidentified new fault pattern, our evaluation module is designed to constantly incorporate the new information into the knowledge base.

Diagnosis user interface





With this safe access possibility (only registered Voith specialists will have access to your HyCon MD), we can provide several options for in-plant service contracts, such as:

- Remote updates of HyCon MD
- Remote support and quick analysis in case of unforeseen unit standstill w/o Voith specialists going to site
- Cycle assessments
- Commissioning, troubleshooting and analysis can be centrally supported by specialists
- Remaining works via remote access (parameter settings and configuration)

Voith offers a safe remote access from a central server to your HyCon MD installation on site.

**Model based diagnosis**  
 For a dynamic analysis model play a crucial role during the design process of a hydropower unit. These analysis models are used to define complex transfer functions, which diagnosed information from a detailed dynamic shaft analysis. Changes in the balance can be clearly diagnosed this way, particularly through trend analysis. Furthermore, the hydraulic and electrical influences can be separated using this method.

**Balance module**  
 A balance module calculates current unbalance in various planes, using readings from vibration measurements and calculated information from a detailed dynamic shaft analysis.

**Voith Hydro Remote Service: Just like sitting in front of the real PLC (Programmable Logic Control System)**  
 Voith offers a safe remote access from a central server to your HyCon MD installation on site.

This will help you to enhance the profitability of your plant by:

- Evaluation of the machine condition
- Analysis of anomalies
- Recommendations for the correction of defects or advanced measurements to detect them
- Remote troubleshooting and system update
- Check of monitoring and data archiving system
- Alert and trip optimization
- Preferred rates for additional services (e.g. on site)



2007	Asswan High Dam, Egypt	HyCon MD for 12 x 175 MW (Francis units)	Herdecke, Germany	HyCon MD for 1 x 150 MW (Pump turbine)
2006	Tai'an, China	HyCon MC for 4 x 250 MW (Pump turbine)	Ferreira Gomes, Brazil	HyCon MD for 3 x 88 MW (Francis units)
2007	Onkarashwar, India	HyCon MC for 8 x 65 MW (Francis units)	Picote, Portugal	HyCon MD for 1 x 248 MW (Francis unit)
2007	Lohu, Romania	HyCon MC for 3 x 170 MW (Pelton units)	Arroya, Colombia	HyCon MD for 2 x 40 MW (Pelton units)
2007	Baguan, Brazil	HyCon MD for 4 x 36 MW (Bulb units)	Yacujeta, Argentina	HyCon MD for 20 x 145 MW (Kaplan units)

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 89522 Heidenheim, Germany  
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 Fax +49 7521 37 7529  
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**VOITH**

Engineered Reliability

ANNEXURE-11.1

Hindalco Baspa Power Company Limited,  
Baspa II E Project,  
Shobra Colony, P.O. Lapa - 172103,  
District Kinnaur (Himachal Pradesh)

Date: 30-03-2018

Minutes of Meeting  
**Between M/s Bosch and IIBPCI, at Baspa IIPS site**  
**Conditioning Monitoring of Fire Alarm System, CCTV, PA System**

**IIBPCI**  
Ravindra Rana (DCM) *Ravindra Rana*  
Vikas Gupta (Addl. C.F.) *Vikas Gupta*  
Himashu Puri (Manager) *Himashu Puri*  
Navinder Rawat (Engineer) *Navinder Rawat*

Following were present

**M/s Bosch LTD, New Delhi**  
Mr. Tejender Singh  
(tejendersingh.virk@in.bosch.com) *Tejender Singh*  
Mr. Tarun Razdan  
(tarun.razdan@in.bosch.com) *Tarun Razdan*

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 Technion India Pvt. Ltd and are incorporation since commissioning 2003.  
Existing CCTV cameras are analog low resolution (Samsung).  
PA system installed is a standalone system by AHUJA.

On Dated : 29/03/2018, representative of company Bosch Ltd visited the Baspa power house site to study the existing system and offering the latest & updated system for its betterment .

Following was observed and shared by Bosch LTD:

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, EMI interference causes false alarm.
4. PA system speakers are not industrial grade, and spl value of the speakers are very less in comparison to the field requirement.
5. Zone wise announcement is not present.
6. Integration with Fire alarm system is not present.
7. Fire alarm sensors/MCP are not with Inbuilt isolator & EMI sensors. (No redundancy if the system have a short circuit or open circuit.
8. Existing Analog CCTV system to be replaced with IP CCTV System.





Himachal Baspa Power Company Limited,  
Baspa - II H. E. Project,  
Sholru Colony, P. O. Tappi - 172104,  
District Kinnaur (Himachal Pradesh)

Following recommendations were made by Bosch L.TD in the same context:

**FIRE ALARM:**

1. The current Fire alarm main Panel should be replaced by a Modular Add fire Alarm Panel which should support features such as EMI interference report (False Alarming), Expendability in loops, TCP IP protocol, Serial port, remote connect (Required all these features for configuration from remote area).
2. Existing hooters, MCP, sensors compatibility has to be confirmed.
3. Integration of fire alarm system with PA system for Evacuation process has to be implemented for safety, further the PA system should be able to address to particular zone/area. The Speakers in the field should be industrial grade for better production of sound quality. It is also suggested that Emergency Message Broadcast System should be implemented at BASPA plant. This will enable automatic pre-recorded messages broadcast in the plant. Such System should be inbuilt to the Fire Alarm Panel to have seamless integration.

**PA System :**

1. Solution to be offered for PA system in the Lift.

**CCTV:**

1. Existing CCTV Cameras can be integrated with New offered hybrid NVR that can accommodate new IP CCTV Cameras, Hence it will save cost of replacing all the existing Analog CCTV cameras.

**Note:** Complete solution Documentation along with BOQ and offer to be shared by Bosch Ltd.  
-----END -----

*[Signature]*  
12/11/2011

*[Signature]*  
(Himanshu Joti)

*[Signature]*

(Maulander Reamul)





## ANNEXURE-11.2

Bosch Limited Commercial Offer					
Qty.	Addressable FIRE DETECTION & ALARM				
1.00	Supply, Installation, testing and commissioning of En54/VDS/UL listed Fire alarm control panel of 3 loop networkable type (each loop capable of handling minimum 252 devices / detectors) , EN54/VDS/UL listed 32 bit Central processor with 5.7" touch screen LCD display supporting smart degrade mode operation and not limited with characters.10000 History Events, TCP/IP Port , RJ485 & RJ232 Port ,serial Port , USB Port is required,. EN54/VDS/UL listed 12 Amps inbuilt power supply, 100AH of Lead Acid battery charging capacity, EN54/VDS/UL listed Fire Fighter Touch Screen Graphical Display panel to inform & guide Fire Fighter for carrying out Fire Fighter operation. The screen will display icons representing hazardous material stored on the floor, programmed building contact information, complete as required.and as per specifications.	1	Job	355000	355000
2.00	Supply, Installation, Testing & commissioning of Intelligent Addressable Multi sensor Smoke detector with emi sensor & inbuilt/ External Isolator base as per NFPA 72 -Style 7/X wiring Complete as required.and as per specifications.	1	Each	5000	5000
3.00	Supply, Installation, Testing and Commissioning of addressable double action manual call point with inbuilt isolators as per NFPA requirements, with flexible network structures & necessary fixing arrangements with key complete as required. The MCP shall have EN54 / Vds/UL Certification. (Units without inbuilt isolators may be considered with an additional isolator).	1	Each	6400	6400
4.00	Supply, Installation, Testing & commissioning of loop powered Sounder with inbuilt/ External Isolator base as per NFPA 72 - Style 7/X wiring with Control relay Module for addressing along with supervised powersupply . complete as required.and as per specifications.	10	Each	7000	70000
5.00	Supply, Installation, Testing & commissioning of addressable control module with inbuilt/ External Isolator base as per NFPA 72 -Style 7/X wiring for hooter, PA system & AHU.Complete as required.and as per specifications.	5	Each	6018	30090





6.00	Supply, installation, Testing & commissioning of Addressable Input module with inbuilt/ External Isolator base as per NFPA 72 -Style 7/X wiring for monitoring the external systems. Complete as required and as per specifications.	5	Each	6018	30090
2.00	<b>PA SYSTEM</b>				
1.00	Supply, installation, testing and commissioning of 6W ceiling mount/wall mount speaker with excellent speech & music reproduction,Max Power: 8W,Rated Power: 6Watts, Power Tapping: 6/3/1.5W,Effective frequency range(-10 dB) : 150 Hz to 15KHz SPL at rated power (1Khz at 1 m) 108 dB,Opening Angle 1 KHz / 4 KHz (-6 dB): 180/45. Complete as required and as per specifications.	14	Each	2250	31500
2.00	Supply , installation , testing Commissioning of two way line array colour speaker with components of 2 Inch tweeters - 8nos and driver with vertical coverage pattern of 45 degrees adjustable coverage with power capacity of 90W, SPL 110 DB , complete with installation as per site requirement	6	Each	39800	238800
3.00	Supply, installation, testing and commissioning 6 zone PA system expandable to 120 zone. Controller with built-in 240 W amplifier,12 business and emergency control inputs and supporting 6 zones with 6 key selection call station for 2 Locations ,extendable upto 120 zones,with single or dual channel operation, with suitable amplifiers,call stations as per requirement IEC 60849 certified.With Following Features:Max power consumption 600 VA Battery power supply Voltage 24 VDC, +15% / -15%, Output power (rms/maximum) 240 W / 360 W,Frequency response 60 Hz to 18 kHz,Distortion <1% at rated output power, 1 kHz,Programmable Trigger Inputs 12,Speech filter -3 dB at 3.15 Hz, high-pass,6 dB/oct,Messages Data format WAV-file, 16-bit PCM, mono,Memory capacity 16 MB Flash ROM.Complete as required and as per specifications.	1	Job	260000	260000
					<b>1026880</b>



**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

Petition No. 234/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 Order: 16.08.2016**

**In the matter of**

Revision of tariff after truing-up exercise for the period 2009-14 and determination of tariff for 2014-19 in respect of Teesta-V Hydroelectric Project (510 MW)

**AND**

**In the matter of**

NHPC Ltd,  
NHPC Office Complex, Sector 33,  
Faridabad – 121003

**Vs**

.....Petitioner

1. West Bengal State Electricity Distribution Company Ltd  
Bidyut Bhawan (8th Floor), Block-DJ, Sector-II, Salt Lake,  
Kolkata – 700 091 (West Bengal)
2. Damodar Valley Corporation,  
DVC Towers, VIP Road,  
Kolkata – 700 054 (West Bengal)
3. Jharkhand State Electricity Board,  
Doranda, Ranchi- 834 002 (Jharkhand)
4. North & South Bihar Power Distribution Co. Ltd.  
(Formerly Bihar State Electricity Board),  
Vidyut Bhawan, Bailey Road, Patna – 800 021 (Bihar)
5. Department Of Power, Govt. of Sikkim,  
Kazi Road, Gangtok-737101 (Sikkim)
6. GRIDCO,  
4th Floor, Janpath,  
Bhuaneshwar-751022

.....Respondents



**Parties Present**

Shri A.K Pandey, NHPC  
 Shri Piyush Kumar, NHPC  
 Shri C.K. Dhanush, NHPC  
 Shri Jitender Kumar Jha, NHPC  
 Shri R.B. Sharma, Advocate, GRIDCO  
 Shri S.R Sarangi, GRIDCO

**ORDER**

The petition has been filed by NHPC Ltd, for revision of tariff in respect of Teesta-V Hydroelectric Project (3 x 170 MW) ('the generating station'), for the period 2009-14 after truing-up exercise 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 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ("the 2014 Tariff Regulations").

2. The generating station was declared under commercial operation on 10.4.2008. Petition No. 27/GT/2013 was filed by the petitioner for determination of tariff of the generating station for the period 2009-14 and the Commission by order dated 23.1.2014 had determined the capital cost and the annual fixed charges of the generating station for the period 2009-14 as under..

**Capital Cost**

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	262886.11	267523.72	269490.58	269556.27	269598.83
Additional capital expenditure	4637.61	1966.86	65.69	42.56	1365.68
Closing gross block	262886.11	267523.72	269490.58	269556.27	269598.83

**Annual Fixed Charges**

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	19259.92	19359.45	19412.74	19727.68	20706.61
Interest on Loan	7708.92	7173.27	6530.77	5846.09	5189.86
Depreciation	13566.21	13735.14	13787.12	13789.89	13825.91
Interest on Working Capital	1194.14	1208.55	1218.48	1233.16	1264.25
O & M Expenses	6983.06	7382.49	7804.77	8251.20	8723.17
<b>Total</b>	<b>48712.25</b>	<b>48858.89</b>	<b>48753.88</b>	<b>48848.02</b>	<b>49709.79</b>



**Revision of Annual Fixed Charges for 2009-14**

3. 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."*

4. The petitioner in this petition has claimed revision of tariff based on the actual additional capital expenditure incurred during the period 2009-14 after truing up exercise in terms of Regulation 6(1) of the 2009 Tariff Regulations. Accordingly, the annual fixed charges claimed by the petitioner for the period 2009-14 are as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	25852.36	25694.23	25621.76	22114.74	23523.82
Interest on Loan	7746.41	6958.35	6047.30	5444.38	4800.15
Depreciation	13597.62	13745.70	13924.48	14035.47	14133.30
Interest on Working Capital	1332.98	1336.32	1340.67	1279.66	1321.25
O & M Expenses	6983.06	7382.49	7804.77	8251.20	8723.17
<b>Annual Fixed Charges</b>	<b>55512.43</b>	<b>55117.09</b>	<b>54738.98</b>	<b>51125.46</b>	<b>52501.69</b>

(₹ in lakh)

5. The petitioner has filed the additional information as sought by the Commission and has served copies on the respondents. The respondent, GRIDCO has filed the reply and the petitioner has filed the rejoinder to the said reply. Based on the submissions of the parties and the documents available on record, we proceed to revise the tariff of the generating station as stated in the subsequent paragraphs.

**Capital cost**

6. The last proviso to Regulation 7 of the 2009 Tariff Regulation 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 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."*





7. The Commission in order dated 23.1.2014 in Petition No. 27/GT/2013 had considered the opening capital cost of ₹262886.11 lakh as on 1. 4.2009. The petitioner has submitted that the discharge of liability for ₹10063.80 lakh was inadvertently claimed in Petition No. 229/GT/2012 (tariff of 2008-09) against the actual liability of ₹10083.80 lakh discharged in the year 2008-09 (pertaining to the period prior to COD). Accordingly, the petitioner has rectified the error and has considered the opening capital cost as ₹262906.11 lakh (262886.11+20.00) as on 1.4.2009. However, in terms of the last proviso to Regulation 7 of the 2009 Tariff Regulations, the capital cost of ₹262886.11 lakh as on 1.4.2009 as approved vide order dated 23.1.2014 in Petition No. 27/GT/2013 has been considered.

#### **Actual Additional Capital Expenditure**

8. Regulation 9 of the 2009 Tariff Regulations, as amended on 21.6.2011, provides as under:

*"9. Additional Capitalisation.(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) Un-discharged 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, un-discharged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.*
- (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.

(vi) In case of gas/liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations. Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.

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

(viii) Any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.

(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometres of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

9. The actual additional capital expenditure claimed by the petitioner as against the projected additional capital expenditure allowed for the period 2009-14 in order dated 23.1.2014 in Petition No 27/GT/2013 is as under.

	2009-10	2010-11	2011-12	2012-13	2013-14
Projected additional capital expenditure allowed in Order dated 23.1.2014 (after adjustment of liabilities)	4637.61	1966.86	65.69	42.56	1365.68
Actual additional capital expenditure claimed in the petition	4102.71	2714.15	3736.50	593.09	1828.66



10. The re-conciliation of the actual additional capital expenditure claimed with the additional capital expenditure as per books of accounts duly certified by auditor for the period 2009-14 is as under:

Sl. No.		2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>Additional Capital Expenditure (claimed for the purpose of tariff)</b>					
<b>(a)</b>	<b>Additions</b>					
i	Capitalization against works projected earlier and allowed for tariff purpose	3367.44	1466.36	301.34	60.22	33.18
ii	Additional Capital Expenditure not projected / allowed but incurred on actual basis due to site requirements.	73.63	1074.22	3193.65	538.36	3843.60
	<b>Total (a)</b>	<b>3441.08</b>	<b>2540.58</b>	<b>3494.99</b>	<b>598.58</b>	<b>3876.78</b>
<b>(b)</b>	<b>Deletion / Deduction</b>					
i	Assets deducted on replacement of new assets covered	0.00	0.00	0.00	0.00	0.00
ii	Deduction of assets without any replacement and not covered under exclusion	(-)109.37	(-)1.74	0.00	(-) 27.76	0.00
iii	Deletion on account of Inter Unit Transfer (IUT)	(-) 3.77	0.00	0.00	(-) 30.57	0.00
	<b>Total (b)</b>	<b>(-) 113.14</b>	<b>(-) 1.74</b>	<b>0.00</b>	<b>(-) 58.33</b>	<b>0.00</b>
<b>(c)</b>	<b>Net addition claimed (c)=(a)-(b)</b>	<b>3327.94</b>	<b>2538.84</b>	<b>3494.99</b>	<b>540.25</b>	<b>3876.78</b>
<b>2</b>	<b>Additional Capital Expenditure (not claimed for the purpose of tariff)</b>					
<b>(d)</b>	<b>Additions</b>					
i	Addition other than Inter-unit additions	34.38	37723.88	5348.34	35.58	110.80
ii	Addition on account of Inter-unit transfers	0.00	0.34	0.40	2.73	2.46
	<b>Total (d)</b>	<b>34.38</b>	<b>37724.23</b>	<b>5348.74</b>	<b>38.31</b>	<b>113.26</b>
<b>(e)</b>	<b>Deletions</b>					
i	Deletions other than IUT	(-) 7806.57	(-) 8.08	(-) 34579.43	(-) 4716.13	(-) 29.00
ii	Deletions on account of Inter-Unit Transfer	0.00	(-) 0.81	(-) 0.83	(-) 0.57	(-) 2.51
	<b>Total (e)</b>	<b>(-) 7806.57</b>	<b>(-) 8.89</b>	<b>(-) 34580.26</b>	<b>(-) 4716.70</b>	<b>(-) 31.51</b>
	<b>Net Addition under Exclusion (f)=(d)+(e)</b>	<b>(-) 7772.19</b>	<b>37715.34</b>	<b>(-) 29231.53</b>	<b>(-) 4678.39</b>	<b>81.75</b>
	<b>Net Additional Capitalization (including IUT) as per books of accounts(g)=(c)+(f)</b>	<b>(-) 4444.25</b>	<b>40254.18</b>	<b>(-) 25736.53</b>	<b>(-) 4138.13</b>	<b>3958.54</b>
<b>3</b>	<b>Net additional capitalization claimed for the purpose of tariff</b>					
	Net additional capitalization as above (c)	3327.94	2538.84	3494.99	540.26	3876.78
	Less : Un-discharged liability in additional capitalization	354.54	20.81	63.27	8.05	2425.45
	Add : Liability discharged (pertains to prior COD period)	1082.60	196.12	233.30	0.20	360.25

Add : Liability discharged (to post COD period)	46.71	0.00	72.68	62.29	17.08
Less: Assumed Deletions	0.00	0.00	1.20	1.61	0.00
<b>Net amount of additional capitalization claimed</b>	<b>4102.71</b>	<b>2714.15</b>	<b>3736.50</b>	<b>593.09</b>	<b>1828.66</b>

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

### 2009-10

12. The break-up of the actual additional capital expenditure claimed by the petitioner is as under:

Description	Actual expenditure claimed	
	Projected Expenditure allowed in order dated 23.1.2014	(₹ in lakh)
Works within original scope but deferred for execution, up to the cut-off date – Regulation 9(1)(ii)	1497.89	1497.90
Liabilities to meet award of Arbitration – Regulation 9(1)(iv)	1727.16	1727.17
Works beyond the original scope –Regulation 9(2)(iv)	148.39	142.37
<b>Sub-total against works approved by Commission on projected basis (a)</b>	<b>3373.44</b>	<b>3367.44</b>
Additions claimed by the petitioner which were disallowed on projection basis- Regulation 9(2)(iv) (b)	0.00	73.62
<b>Total additions (c)=(a)+(b)</b>	<b>3373.44</b>	<b>3441.08</b>
Deletions	(-112.94)	(-113.14)
<b>Total additional capital expenditure claimed prior to adjustment of discharged/un-discharged liabilities and assumed deletion</b>	<b>3260.50</b>	<b>3327.93</b>

13. The Commission in its order dated 23.1.2014 in Petition No. 27/GT/2013 had allowed the projected additional capital expenditure of ₹3373.44 lakh in 2009-10. Against this, the petitioner has claimed actual additional capital expenditure of ₹3367.44 lakh (1497.90 +1727.17+142.37) on assets/works which are within the original scope of work, to meet contingent liability and works beyond the original scope but which are essential for satisfactory operation of the generating station. Accordingly, on prudence check, the claim of the petitioner for the said actual expenditure is allowed.



14. The petitioner has claimed actual additional capital expenditure of ₹73.62 lakh (₹37.36 lakh on Stabilization of hill slope over GIS & TRT and ₹36.26 lakh on Reservoir RIM treatment work and damage compensation). As regards Stabilization of hill slope over GIS & TRT, the petitioner has submitted that due to weak geological condition of rock, incidents of continuous loose rock falling had been observed which was not only endangering the human life working in this area but also creating a situation to damage the GIS equipment. It has also submitted that at some incidents GIS building structure had got damaged and in order to avoid the potential damage to humane and equipment's, these works was carried out for safety of GIS and TRT area. The petitioner has stated that the work not being of recurring nature and was executed as per situation at site. As regards Reservoir RIM treatment work and damage compensation, the petitioner has submitted that due to weak geological condition the incidents of settlement and sinking of the rock in the rim of the reservoir has been observed. It has also submitted that the fluctuation of the inflow cannot be ruled out and due to this, land containing dwelling house had settled and the State administration pressurized the power station for remedial measure and for compensation of the damage. Accordingly, the petitioner has stated that in order to comply with this, the expenditure had been incurred.

15. The matter has been examined. It is observed that the Commission in order dated 23.1.2014 had disallowed the projected additional capital expenditure of ₹73.62 lakh towards these works/items on the ground that the expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. In line with the said decision, we are not inclined to allow the actual additional capital expenditure of ₹73.62 lakh claimed by the petitioner under this head.

#### **Deletions**

16. As the corresponding assets do not render any useful service in the operation of the generating station, the deletion of (-)₹113.14 lakh as reflected in the books of accounts is deleted for the purpose of tariff.



### Exclusions

17. It is observed from the submissions of the petitioner that the exclusion of (-)₹7772.19 lakh, comprising of positive and negative book entries, pertains to rectification entries leading to zero sum, FERV which has been directly billed to the beneficiaries and Sales tax actually paid but wrongly de-capitalized. As such, the same is found to be in order and is allowed for the purpose of tariff.

18. Based on the above, the net additional capital expenditure allowed in 2009-10 prior to the adjustment of discharged/un-discharged liabilities and assumed deletions, is as under:

	Actual expenditure allowed
Works within original scope but deferred for execution up to the cut-off date – Regulation 9(1)(ii)	1497.90
Liabilities to meet award of arbitration – Regulation 9(1)(iv)	1727.17
Works beyond the original scope – Regulation 9(2)(iv)	142.37
<b>Sub- total (a)</b>	<b>3367.44</b>
Deletions	(-)113.14
<b>Total additional capital expenditure allowed</b>	<b>3254.30</b>

### 2010-11

19. The category-wise breakup of the actual additional capital expenditure claimed by the petitioner is as under:

Description	Projected expenditure allowed in order dated 23.1.2014	Actual expenditure claimed
Works within original scope but deferred for execution up to the cut-off date – Regulation 9(1)(ii)	1577.58	1422.10
Works beyond original scope of work	126.00	44.26
<b>Sub- total against works approved on projected basis (a)</b>	<b>1703.58</b>	<b>1466.36</b>
Additions claimed by the petitioner which were disallowed on projection basis/new additions (b)	0.00	922.06
New additions -Regulation 9(2)(iv) (c)	-	152.16
<b>Total additions (d)=(a)+(b)+(c)</b>	<b>1703.58</b>	<b>2540.58</b>
Deletions	0.00	(-)1.74
<b>Total additional capital expenditure claimed prior adjustment of discharged/un-discharged liabilities and assumed deletions</b>	<b>1703.58</b>	<b>2538.84</b>





20. The Commission in its order dated 23.1.2014 in Petition No. 27/GT/2013 had allowed the projected additional capital expenditure of ₹1703.58 lakh in 2010-11. Against this, the petitioner has claimed actual additional capital expenditure of ₹1466.36 lakh (1422.10 + 44.26) on assets/works which are within the original scope of work but deferred for execution up to the cut-off date, and works beyond the original scope but which are essential for satisfactory operation of the generating station. Accordingly, on prudence check, the claim of the petitioner for the said actual expenditure is allowed.

21. The petitioner has claimed actual additional capital expenditure of ₹922.06 lakh as follows:

Works/Assets	Amount (₹ in lakh)
Stabilization of hill slope over GIS & TRT	527.15
Stabilization of hill slope over APS and Main Access Tunnel	268.97
Reservoir RIM treatment work & damage compensation	8.88
TRT outlet strengthening, training work upto dumping yard.	60.59
BIO engineering works for the left bank slope and dam top road	56.47
<b>Total</b>	<b>922.06</b>

22. As regards Stabilization of hill slope (over GIS & TRT and over APS and Main Access Tunnel), the petitioner has submitted that due to weak geological condition of rock, incidents of continuous loose rock falling had been observed which was not only endangering the human life working in this area but also creating a situation to damage the GIS equipment. It has also submitted that at some incidents GIS building structure had got damaged and in order to avoid the potential damage to humans and equipment's, these works were carried out for safety of GIS and TRT area. The petitioner has stated that the work not being of recurring nature and was executed as per situation at site. As regards Reservoir RIM treatment work and damage compensation, the petitioner has submitted that due to weak geological condition the incidents of settlement and sinking of the rock in the rim of the reservoir has been observed. It has also submitted that the fluctuation of the inflow cannot be ruled out and due to this, land containing dwelling house had settled and the State administration pressurized the power station for remedial measure and for compensation of the damage. As regards TRT outlet strengthening, training work upto dumping yard, the petitioner has



submitted that due to weak geological condition the incidents of settlement and sinking of the rock, the damage at TRT outlet had been observed. It has also submitted that this area has always been facing the water thrust, coming out from generating plant and at the same time, the tower to support the Teesta-Binaguri transmission line lies in this area and is vulnerable to fall due to the above reason. Accordingly, the petitioner has stated that in order to protect the TRT structure and transmission line, the work was carried out. As regards BIO engineering works for the left bank slope and dam top road, the petitioner has submitted that as per minutes of the 8<sup>th</sup> Central level monitoring committee meeting held on 13<sup>th</sup> and 14<sup>th</sup> November, 2008, different activities had been suggested for strengthening the muck dumping sites and weak land zone in the different project area and accordingly, the said works have been carried out. Accordingly, the petitioner has stated that the expenditure incurred may be allowed.

23. The matter has been examined. It is observed that the Commission in order dated 23.1.2014 had disallowed the projected additional capital expenditure of ₹1378.00 lakh in 2010-11 towards these works/items on the ground that the expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. In line with the said decision, we are not inclined to allow the actual additional capital expenditure of ₹922.06 lakh claimed by the petitioner under this head.

#### **New Assets**

24. In addition to the above, the petitioner has claimed actual additional capital expenditure of Rs 152.16 lakh in 2010-11 under Regulation 9(2)(iv) of the 2009 Tariff Regulations in respect so the assets/works as discussed under:

Sl No.	Assets/work	Actual expenditure claimed	Submissions of the Petitioner/respondent	Remarks on admissibility	Amount allowed (₹ in lakh)
1	Land-Right to use	74.55	The petitioner has submitted that in order to meet the expenditure as per recommendation of Joint Action Committee for Additional	Considering the fact that the expenditure has been incurred by the petitioner in compliance with the statutory obligations	74.55



			environment measures taken by State Forest Department in different project area, payment had been made to DFO, State Govt. of Sikkim against materialization of contingent liabilities towards degradation of forest and environment.	towards additional environment measures taken by the State Forest Department of Sikkim, the actual expenditure incurred is <b>allowed</b> .	
2	Plant & Machinery other (D G set) Acoustic enclosure for VTA 1710G (3-Nos)	12.98	The petitioner has submitted that as per Factory Act, noise level shouldn't be increased beyond 85 DB. In order to arrest the noise level beyond this limit acoustic enclosure was required. Accordingly, enclosure for VTA 1710G had been purchased and is being used for minimization of sound effect of DG set in the power house.	In consideration of the submissions of the petitioner and keeping in view that the expenditure incurred is necessary for successful & efficient operation of the generating station, the actual expenditure incurred is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	12.98
3	Oxygen Concentrator	1.72	The petitioner has submitted that in order to keep the health of the working personnel of the power station, different health equipment's are being used.	Since the expenditure is for the benefit of the employees working at remote areas of the project and in turn facilitates the successful and efficient operation of the generating station, the same is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	1.92
4	ECG Machine (BPL Cardiart 8108R)	0.20			
5	Fire Extinguisher of different specification- 33 Nos	2.39	The petitioner has submitted that the assets as well as human life are required to be protected from fire in different location of the power station. In order to come out from any eventualities due to fire, fire extinguishers have been purchased for power station area for safety purposes.	Since the expenditure incurred is for the safety of the generating station which in turn will facilitate the successful and efficient operation of the generating station, the same is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	2.39
6	Other assets- 400 KV Single Phase CVT	6.36	The petitioner has submitted that for metering and protection	Considering the fact that the asset is necessary for	6.36



Type	of outgoing lines in GIS area, the CVT is essentially required. This is not only protecting the system from fault current in line but also used for metering.	successful and efficient operation of the generating station, the same is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	
7	WS420N2 Illumination around auditorium building at Balutar	2.89 The petitioner has submitted that for security and safety of power station area, illumination all around is required. Accordingly, the work was carried out.	0.00 As the expenditure incurred is in the nature of minor assets like tube fixtures and tube lights etc., the same is <b>not allowed</b> .
8	SBI ATM room at balutar, left bank parking area near admin building.	2.07 The petitioner has submitted that, there is not any Bank situated in project area. Nearest Bank is around 7-KMS from the power station. In order to meet the daily financial need of the employees, SBI ATM Room was constructed.	2.07 Since the expenditure incurred is for the benefit of the employees working in the remote areas of the project and in turn will facilitate the successful and efficient operation of the generating station, the same is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.
9	Construction of parking platform/jetty & approach for platform at Dam site	6.81 The petitioner has submitted that, Dam site are situated 30-35 Km from the head quarter of the Power station. The staff deployed there in the shifts and general duty shifted from residential area. The vehicle transporting them should be out of rock falling zone. The structure has been constructed for the same.	6.81 As the expenditure incurred is in the nature of minor assets, the same is <b>not allowed</b>
10	Two shed for installation of security equipment at admn. bldg. gate & zero point check post at power	1.06 The petitioner has submitted that in order to avoid any untoward incidents in the project area, the security personnel are deployed in different project area. For safekeeping of the security equipments, these sheds were constructed.	0.00 As the expenditure incurred is in the nature of minor assets, the same is <b>not allowed</b>
11	Dyke up to EL 542M for protection of left bank slope over plunge	22.46 The petitioner has submitted that due to weak geological condition, the incidents of settlement and sinking	22.46 Considering the fact that the asset is necessary for successful and efficient operation of





	pool		near plunge pool area observed. The fluctuation of the inflow cannot be ruled out. In order to minimize the impact of water thrust in the left bank in this area, protruding concrete structure called Dyke has been constructed. As the asset is	the generating station, the same is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	
12	Construction of CGI sheet shed for packing of vehicle and equipment at Mechanical workshop	6.35	The petitioner has submitted that for smooth operation of the power station, the vehicle and heavy equipment available at power station should be at particular location in covered area. These sheds are prepared for the same.	As the expenditure incurred is in the nature of minor assets, the same is not allowed	0.00
13	Providing and fitting of CGI sheet of open portion of godown no-10 (half covered sheet) in central store	2.92	The petitioner has submitted that for proper holding the inventories and assets, the godown in central store is required.		0.00
14	Toe wall at 1 <sup>st</sup> bend near fire fight tank in the stretch of approach road from zero point to MAT	3.58	The petitioner has submitted that due to weak geological condition of rock and to arrest/channelize the seepage from water source, Toe wall constructed in shrinking zone.	Considering the fact that the asset is necessary for successful and efficient operation of the generating station, the same is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	3.58
15	Construction of drain at the side of Singtam Dikchu road in front of ADIT V	5.82	The petitioner has submitted that, in order to channelize the seepage/rain water drainage is required. Non channelization of this water may obstruct the approach road from head quarter to Dam area.		5.82
	<b>Amount claimed</b>	<b>152.16</b>			
	<b>Amount allowed</b>				<b>138.94</b>



### Deletions

25. As the corresponding assets do not render any useful service in the operation of the generating station, the deletion of (-) ₹1.74 lakh as reflected in the books of accounts is deleted for the purpose of tariff.

### Exclusions

26. 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.”*

27. The respondent, BRPL in its reply dated 31.12.2014 has submitted that the minor assets/spares which are de-capitalized is required to be adjusted in the capital cost as per proviso under Regulation 7(1)(c) of the 2009 Tariff Regulations. The respondent has also submitted that that the exclusion of minor items from the capital cost is in conflict with the proviso to Regulation 7(1)(c) of the 2009 Tariff Regulations. The respondent has also pointed out that the Commission had not permitted the MBOA in respect of the generating station of NTPC and has accordingly prayed that the exclusion of minor items from capital cost may not be allowed.

28. The matter has been examined. It is observed that the exclusion of ₹37715.34 lakh comprise of positive and negative book entries effected by the petitioner relating to purchase of minor assets like furniture, heat convectors, etc, whose capitalization for the purpose of tariff was not allowed after



the cut-off date, FERV which has been directly billed on the beneficiaries, capitalized provisions for contingent liabilities likely to be materialized.

29. It is observed that this issue had been considered by the Commission in Petition No. 233/GT/2014 (revision of tariff of Chamera-II Hydroelectric Project for the period 2009-14) and the Commission by order dated 17.6.2016 decided as under:

*"24.....In our view, since the cost of new assets would not be taken into account by implication of the regulations, the value of old assets should be permitted to continue to form part of the gross block. In other words, if the cost of the new assets is not considered on account of implication of the regulations, 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. The generating station should not be debarred from servicing the capital originally deployed on account of procurement of minor assets, if the services of these assets are being rendered by similar assets which do not form part of the gross block. In this background and in line with the decision of the Commission in order dated 7.9.2010, the negative entries corresponding to the deletion of minor assets are allowed to be excluded/ ignored for the purpose of tariff"*

30. In line with the above decision, the negative entries corresponding to the deletion of minor assets are allowed to be excluded/ ignored for the purpose of tariff. Other exclusions as sought by the petitioner i.e. FERV entries and capitalized provisions for contingent liabilities are also in order in terms of the 2009 Tariff Regulations as FERV is directly billed to beneficiaries and capitalized provisions have not been paid in cash.

The net additional capital expenditure allowed for the purpose of tariff prior to adjustment of discharged/un-discharged liabilities and assumed deletion, is as under:

Description	Amount allowed (₹ in lakh)
Works within original scope but deferred for execution, up to the cut-off date – Regulation 9(1)(ii)	1422.10
Works beyond original scope	44.26
Sub- total against works approved on projected basis (a)	1466.36
Additions claimed disallowed on projection basis/new additions claimed (b)	0.00
New additions claimed under Regulation 9(2)(iv) (c)	138.94
Total additions allowed (d)=(a)+(b)+(c)	1605.30
Deletions (e)	(-)1.74
<b>Total additional capital expenditure allowed prior to adjustment of discharged/un-discharged liabilities and assumed deletion (f) =(d)-(e)</b>	<b>1603.56</b>



2011-12

31. The category-wise breakup of the actual additional capital expenditure claimed by the petitioner, prior to adjustment of discharged/un-discharged liabilities and assumed deletion are as under:

Description		Projected expenditure allowed in order dated 23.1.2014	Actual expenditure claimed
(₹ in lakh)			
Expenditure on works/assets allowed by Commission on projection basis for the year 2011-12 -Regulation 9(2)(iv) (A)		71.50	8.95
Expenditure on works/assets allowed on projection basis during the years 2009-10 & 2010-11 --Regulation 9(2)(iv) (B)		792.00	292.39
Sub-total (c)=(a)+(b)		<b>802.75</b>	<b>301.34</b>
Additions claimed which were disallowed on projection basis/new additions claimed under various regulations (d)		0.00	3193.65
Total additions claimed (e)=(c)+(d)		<b>802.75</b>	<b>3494.99</b>
Deletions		<b>5.81</b>	<b>0.00</b>
<b>Net additions claimed prior to adjustment of discharged/un-discharged liabilities and assumed deletions</b>		<b>801.30</b>	<b>3494.99</b>

32. The details of the works, the submissions of the petitioner and the justification for admissibility is discussed as under:

Sl. No.	Assets/works	Projected expenditure allowed in order dated 23.1.2014	Actual Expenditure claimed	Remarks for admissibility
(₹ in lakh)				
1	Drainage pump	10.75	8.95	As the asset/work was allowed in Commission's order dated 23.1.2014 in Petition No. 27/GT/2013 under Regulation 9(2)(iv) of the 2009 Tariff Regulations, against replacement of old pump, the expenditure incurred is <b>allowed</b> . The de-capitalization of the old asset is considered under assumed deletions.
2	Design, drawing, fabrication, erection, commissioning of 22.50 m <sup>3</sup> /hr iron removal plant unit near filtration plant near Balutar	45.00	51.84	The petitioner has submitted that there is slight variation in expenditure due to price variation between actual and estimated cost.





					In view of the submissions and since the asset/work was allowed in 2010-11 in Commission's order dated 23.1.2014 in Petition No. 27/GT/2013, the expenditure is allowed.
3	Installation of CCTV (shifted from (10-11)	50.00	45.71		Since the asset/work was allowed in 2010-11 in Commission's order dated 23.1.2014 in Petition No. 27/GT/2013, the expenditure is allowed.
4	Purchase of Tan delta & capacitance measurement instrument-capacitance & tan delta kit	40.00	35.28		
5	Concrete mixer 10/7 CFT	2.00	1.99		
6	Tractor 45 HP, ESCORTS Farmtrac 45	5.00	5.66		The petitioner has submitted that there is slight variation in expenditure due to price variation between actual and estimated cost. In view of the submissions and since the asset/work was allowed in 2010-11 in Commission's order dated 23.1.2014 in Petition No. 27/GT/2013, the expenditure is allowed.
7	Laying of Tetrapods for protection of left bank slope over plunge pool	600.00	147.54		It is noticed that against the projected expenditure of ₹600.00 lakh allowed in Commission's order dated 23.01.2014 in Petition no. 27/GT/2013 for the works of laying of tetrapods, the actual expenditure of ₹616.62 lakh in 2010-11 was claimed by the petitioner and the same has been allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.  However, as regards the actual expenditure of ₹147.54 lakh claimed in 2011-12, the petitioner has submitted that during monsoon season, due to flushing of heavy water, tetrapods were broken and disposed of for which additional tetrapods were required, thereby resulting in increase in cost. It has also submitted that these have been made for protection of left bank slope over plunge pool area at dam site.



				It is observed that the petitioner has not furnished the gross value of the disposed of tetrapods. Moreover, considering the fact that these are expenses of a recurring nature, we are of the view that the same can be met from the O&M expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b> .
8	Electrostatic liquid cleaner Machine model ELC 50C	50.00	3.29	The petitioner has submitted that the projected items could not be purchased in full in 2010-11. It has submitted that while the actual expenditure incurred in 2010-11 was ₹6.35 lakh, only ₹4.37 (3.29+1.09) lakh was actually incurred in 2011-12. Since the asset/work was allowed in 2010-11 in Commission's order dated 23.1.2014 in Petition No. 27/GT/2013, the actual expenditure is <b>allowed</b> .
9	Lever chain hoist 1.5 ton Cap, 4-5 mtr Lift		1.09	
	<b>Amount claimed</b>	<b>802.75</b>		
	<b>Amount allowed</b>			<b>153.80</b>

33. Additions claimed in 2011-12 which were disallowed on projection basis/new additions:

Sl. No.	Assets/works	Amount claimed	Submissions of the Petitioner	Remarks on admissibility	Amount allowed
1	Disturbance allowance Transportation charges, Fertilizer & seeds, money to land oustees	0.50	The petitioner has submitted that disturbance allowance, transportation charges, fertilizer & seeds money to land ousted people as grants & subsistence allowance as per directive of state Govt. of Sikkim. This compensation has been given to land oustees at dam site towards full & final settlement and, capitalized as per the accounting policy of the Corporation.	The petitioner has claimed the expenditure under Regulation 9(2)(i) of the 2009 Tariff Regulations. The petitioner has not enclosed any Court order or Arbitrator award in support of this. However, considering the fact that the expenditure incurred is in compliance with the statutory obligations as per directives of the State government, the expenditure incurred is <b>allowed</b> under	0.50
2	Disturbance allowance Transportation charges, fertilizer & seeds, money to land oustees	0.50			0.50



3	Grouting, Hill Slope Stabilization, TRT Strengthening Etc.	70.93	The petitioner has submitted that due to weak geological condition the incidents of settlement and sinking of the rock, the damage at TRT outlet had been observed. This area has always been facing the water thrust, coming out from generating plant. At the same time, the tower to support the Teesta-Binaguri transmission line lies in this area and is vulnerable to fall due to the above reason. In order to protect the TRT structure and transmission line, the work was carried out. The work though not being of recurring nature and was executed as per situation of site. Commission had disallowed this expenditure in order dated 23.1.2014. Since the amount was already capitalized under fixed asset in the books of account before the issue of tariff order, the same has been again included in the petition for reconsideration of the Commission. Moreover, these works can't be claimed under O&M either in current year / even in next tariff period as the same has been booked under capital assets.	Regulation 9(2)(ii) of the 2009 Tariff Regulations	0.00
4	Left bank slope protection works- Engineering measures	11.83	Petitioner has submitted that as per minutes of 8th central level monitoring committee meeting held on 13 and 14 Nov 2008, different activities had been suggested for strengthening the muck dumping sites and weak land zone in the different project area. Accordingly, BIO engineering works had been carried out. Since the amount was already capitalized under fixed asset in the books of account before the issue of tariff order, the same has again included in the instant	The expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b>	0.00



			petition for reconsideration of the Hon'ble Commission. Moreover, these works can't be claimed under O&M either in current year / even in next tariff period as the same has been booked under capital assets.		
5	Spillway glacis rebuilding works by HPC/other designed product	219.98	Dam is the most vital structure of the power station. To arrest the impact at glacis due to heavy boulder with inflow, these High Performance Concrete was applied. The Commission has disallowed this expenditure in tariff order dated 23.1.2014. Since the amount was already capitalized under fixed asset in the books of account before the issue of tariff order, the same has again included in the instant petition for reconsideration of the Commission. Moreover, these works can't be claimed under O&M either in current year / even in next tariff period as the same has been booked under capital assets.	The expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b>	0.00
6	PCC road from central store near main gate to godown rooms inside central store at left bank	13.81	The petitioner has submitted that, usually all the sophisticated/delicate electrical & electronics/spare parts are stored in the godown of the central stores. These are carried from different locations to store and from store to site. Manual transporting /loading / unloading of the materials is not possible as the instruments are very heavy and sophisticated in nature. Any human error may result damage to the spare/ equipment's. Hence, all the HMVs carrying the materials are required to ply safely to the godown. Thus, PCC road was constructed from main gate of Central store to godown.	As the asset/ work is necessary and will facilitate the successful and efficient operation of the generating station, the same is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	13.81
7	Drilling & Grouting in Dipudara Nallah, Stabilisation of hill slope (means cement	419.15	Due to weak geological condition, continuous rock falling has been observed. The rock fall not only is	The expenditure is recurring in nature and the same can be met under the O&M	0.00





	grouting above part LSG plug area and penstock erection gallery). Drilling & grouting near surge shaft area, Epoxy grouting inside power house, C/o rock trap in between MAT & GIS building at Power House, Hill slope protection below Dipudara village at EL 450m by means of PCC walls with dowling to protect the hill over TRT Protection of Hill slope near Dipudara Village.		endangering the human life working in this area but also a potential threat to the GIS equipment. At some incidents, GIS building structure had got damaged. In order to avoid such situation, these works had been carried out for safety of GIS, TRT and other areas. Further, to protect weak zones at different places in power stations, drilling and grouting was necessitated and the same executed.	expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b>	
8	Price variation on account of Material Issue to Contractor- TT-4 against works	40.14	The petitioner has submitted that the reconciliation of material issued to the contractor is undertaken to account for the material issued, consumed during the contract period and to account for normal / predetermined normal loss provided in the contract on completion of work on joint verification of data by the company and contractor. The material cost was booked in the account/work at a predetermined recovery rate. As such, difference between issue rate and pre fixed recovery rate of material issued to contractor in respect of major packages are accounted for on actual work done basis in the books of account.	Considering the fact that expenditure incurred is on account of price variation which form part of the contract and is in respect of assets/work which are necessary for efficient operation of the generating station, the same is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	40.14
9	EPOXY grouting inside power house	19.03	The petitioner has submitted that the seepage inside power house weakens the civil structure and increases the moisture level inside power house in which various moisture sensitive equipment's are installed. To safeguard the instruments, the concerned area has been treated through epoxy grouting.	The expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b> .	0.00
10	Construction of rock trap in between MAT	68.72	Due to weak geological condition, continuous rock	The expenditure is recurring in nature	0.00



	& GIS at power house		falling has been observed. The rock fall is not only endangering the human life working in these areas but also creating a potential threat to damage the GIS equipment. At some incidents, GIS building structure had got damaged. In order to overcome such problem, these works had been carried out for safety of GIS, TRT and other areas.		and the same can be met under the O&M expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b>	
11	Electrical and Mechanical Office At Dam Site	1.00	The petitioner has submitted that, Dam is around 20 km away from station head quarter. So in order to co-ordinate electrical and mechanical activities, the construction of electrical & mechanical office at dam got necessitated.	1.00	Since the asset / work will facilitates the successful and efficient operation of the generating station, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	2.43
12	C/O one room for installation of incinerator equipment at project hospital	2.43	The petitioner has submitted that, expenditure has been incurred, as per directive of State Pollution control board, Govt of Sikkim.	2.43		
13	C/O toilet cum urinal at three locations namely zero point check post, APS top and surge shaft at PH	4.76	The petitioner has submitted that it has been constructed for use of Security personnel posted at various locations for round the clock security monitoring of power station.	4.76	Since the expenditure incurred is for the benefit of the employees working in remote areas of the project and will facilitate the successful and efficient operation of the generating station, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations	4.76
14	Providing & fixing security fencing boundary around right bank execute colony at ph site balutar	24.73	The petitioner has submitted that consequent upon the issue of order by Ministry of Power, Govt. of India, bearing no. C-30019/32/2001-V&S dated 09.01.2008, the Home Department, Govt. of Sikkim had declared the right bank executive colony, guest house, hospital as category "B" prohibited area having local settlements adjacent to this.	24.73	Since the asset / work is necessary for the safety of the plant which will facilitate the successful and efficient operation of the plant, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	24.73
15	Providing & fencing boundary around scrap yard area near workshop at left bank balutar	5.10		5.10		5.10
16	Strengthening & extension of chain	7.37		7.37		7.37



	link fencing along the boundary from ph check post to pot yard		As the area is not protected properly by fencing, it is allowing thoroughfare to the local people as well as the labourers of the adjacent downstream project. Accordingly, fencing boundary at the above locations has been constructed.		
17	Drilling & Grouting of Cement sand mix at EL 583.020M between the left bank abutment of Dam & intake structure	188.32	The petitioner has submitted that Dam safety team inspected the project from 22-23 April 2010. During the inspection of Dam area, seepage was observed in the left bank abutment through exposed overburden material which was left out untreated between the left abutment of Dam and intake structure. Keeping in view of the importance of Dam safety it was suggested and instructed by Dam safety team that grouting work should be carried out. Accordingly the work was executed. Further, Dam safety team also suggested for filling the hill and intake structure at Dam site for safety of structure. Rim treatment work was carried out for protection of side slope of reservoir at Zang village and Phidang village.	The expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b>	0.00
18	Material issued to Contractor- TT-4	43.21	The petitioner has submitted that the reconciliation of material issued to the contractor is undertaken to account for the material issued, consumed during the contract period and to account for of normal/predetermined normal loss provided in the contract on completion of work on joint verification of data by the company and contractor. The material cost was booked in the account/work at a predetermined recovery rate. As such, Differential in issue rate and pre fixed recovery rate of material issued to contractor in r/o major packages are accounted for on	Considering the fact that expenditure incurred is on account of price variation which form part of the contract and is in respect of assets/work which are necessary for efficient operation of the generating station, the same is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	43.21
19	Material issued to contractor TT-3	69.50			69.50



20	Provision for Sales Tax for Assessment year 1998-99 to 2007-08	585.58	actual work done in the books of account.	The petitioner has submitted that an amount of ₹1418.62 lakh for payment of Sales tax was allowed by Commission in 2009-10 vide order dated 23.1.2014 which was paid and claimed in in 2009-10. Due to inadvertence, the above amount got deleted in books of accounts. Based on the assessment order received from the Sales tax department for an amount of ₹3372.53 lakh (which is inclusive of ₹1418.62 lakh paid), a provision for ₹1953.91 lakh (₹3372.53 - ₹1418.62) was made in 2011-12 with a request for exclusion of ₹1418.62 lakh also from the additional capitalization in 2011-12. During 2013-14, the final demand notice for ₹2571.43 lakh (1953.91 + 617.52) lakh was received from Sales Tax Department, which was paid during 2013-14.	The petitioner has claimed the expenditure under Regulation 9(2)(i) of the 2009 Tariff Regulations. The petitioner has not enclosed any Court order or Arbitrator award in support of this. However, considering the fact that the expenditure incurred is in compliance with the statutory obligations as per directives of the State government, the expenditure incurred is <b>allowed</b> under Regulation 9(2)(ii) of the 2009 Tariff Regulations. Since the amount of ₹1953.91 lakh was actually paid in 2013-14 and not during 2011-12, the same has been adjusted in 2011-12 as un-discharged liability and allowed as discharge of liability in 2013-14.	585.58
21	Provision for Sales Tax for Assessment year 1998-99 to 2007-08	1368.33			The petitioner has claimed the expenditure under Regulation 9(2)(i) of the 2009 Tariff Regulations. The petitioner has not enclosed any Court order or Arbitrator award in support of this. However, considering the fact that the expenditure incurred is in compliance with the statutory obligations as per directives of the State government, the expenditure incurred is <b>allowed</b> under Regulation 9(2)(ii) of the 2009 Tariff Regulations. Since the amount of ₹1953.91 lakh was actually paid in 2013-14 and not during 2011-12, the same has been adjusted in 2011-12 as un-discharged liability and allowed as discharge of liability in 2013-14.	1368.33
22	Low Vacuum Dehydration Unit Lvdh 50 Ad Abc EI	3.96			Since the asset / work will facilitates the successful and efficient operation of the generating station, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	3.96
23	Particle Counter 9000-5-1 Op 1.4-500bar	3.29			The expenditure is not allowed as the asset is of the nature of 'tools ad tackles'.	0.00
24	Laying Of Cat-6 Network Cables & Installation Of Lan	8.81			Since the asset / work will facilitates the successful and	8.81





Switches And Associate Equipment At Dam Site			efficient operation of the generating station, expenditure is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.
25 Power Supply & Illumination Of Adit V	6.11		0.00
26 Streetlight From Switchyard To Switchyard Left Bank Colony Balutar	3.38		0.00
27 Motorized Siren, 3-Phase, AC, Range- 8 KM (2 Nos.)	0.82		0.00
28 Water Purifiers (RO), KENT Wonder Model (13 Nos.)	2.34		0.00
<b>Amount claimed</b>	<b>3193.63</b>		
<b>Amount allowed</b>			<b>2179.73</b>

#### Exclusions

34. It has been observed that the exclusion of (-) ₹29231.53 lakh, comprising of positive and negative book entries, as mentioned by the petitioner pertain to purchase of minor assets like furniture, digital weigh machine, etc, whose capitalization for the purpose of tariff is not allowed after the cut-off date, FERV which is directly billed to the beneficiaries, capitalization/reversal of provisions for contingent liabilities likely to be materialized and de-capitalization of minor assets like computers, ups, printers, furniture etc., whose capitalization is not allowed for the purpose of tariff. In line with the findings of the Commission in paras 26 to 30 of this order, the exclusion of (-) ₹29231.53 lakh as claimed by the petitioner is allowed to be excluded/ ignored for the purpose of tariff.

35. Accordingly, the net additional capital expenditure allowed for the purpose of tariff before adjustment of discharged/un-discharged liabilities and assumed deletion works out as follows:

Description	Actual expenditure allowed	
	₹ in lakh	
Expenditure on works/assets allowed by Commission on projection basis for the year 2011-12 - Regulation 9(2)(iv) (a)		8.95
Expenditure on works/assets allowed on projection basis during the		144.85



years 2009-10 & 2010-11 - Regulation 9(2)(iv) (b)	
Sub-total against works approved on projected basis (c) = a+b	153.80
Additions claimed by the petitioner which were disallowed on projection basis/new additions claimed (d)	0.00
New additions -Regulation 9(2)(iv) (e)	2179.73
Total additions allowed for the purpose of tariff (f)=(c)+(d)+(e)	2333.53
Deletions (g)	0.00
<b>Total additional capital expenditure allowed (h) =(f)-(g)</b>	<b>2333.53</b>

### 2012-13

36. The category-wise breakup of the actual additional capital expenditure claimed by the petitioner for 2012-13 before adjustment of discharged/un-discharged liabilities and assumed deletion is as under:

Description	Projected expenditure allowed in order dated 23.1.2014	Actual expenditure incurred/claimed
(₹ in lakh)		
Expenditure on works/assets allowed on projection basis for 2012-13 (Regulation 9(2)(iv) (a))	45.00	3.10
Expenditure on works/assets allowed by Commission on projection basis during the years 2009-10, 2010-11 & 2011-12 (Regulation 9(2)(iv) (b))	12.50 (on total basis against which amount already claimed in previous years is 56.43 and balance left 68.57).	57.12
Sub-total against works approved on projected basis (c)=(a)+(b)	113.57	60.22
Additions claimed by the petitioner which were disallowed on projection basis/new additions claimed (d)	0.00	538.36
Total additions claimed (e)=(c)+(d)	113.57	598.58
Deletions (f)	0.83	58.33
<b>Net additions claimed (g) = (e) - (f)</b>	<b>112.75</b>	<b>540.26</b>

37. The admissibility of the above expenditure claimed under Regulation 9(2)(iv) based on justifications submitted by the petitioner is as under:

Sl. No.	Assets/works	Projected expenditure allowed in order dated 23.1.2014	Actual expenditure claimed	Remarks for admissibility
(₹ in lakh)				
<b>A. Projected Expenditure allowed on works/assets allowed</b>				
1	Purchase of Dewatering Pump	20.00	3.10	Since the asset/work has been approved under Regulation 9(2)(iv) of the 2009 Tariff Regulations in Commission's order dated 23.1.2014 in Petition



					no. 27/GT/2013 against replacement of old pump, the expenditure is allowed. The de-capitalization of the old asset is considered under assumed deletions.
<b>B. Expenditure on works/assets allowed on projection basis during the years 2009-10, 2010-11 and 2011-12</b>					
1	CCTV Items	50.00	4.60		The asset/work was allowed vide Commission's order dated 23.1.2014 in Petition No. 27/GT/2013 under Regulation 9(2)(iv) of the 2009 Tariff Regulations. The petitioner has submitted that against the total amount of ₹50.00 lakh allowed on projected basis, the claim of the petitioner in 2011-12 is ₹45.71 lakh and the balance of ₹4.60 lakh is claimed in 2012-13. Since the projected capitalization of the asset/item has been allowed in order dated 23.1.2014, the expenditure actually incurred is allowed after prudence check.
2	Purchase of Bus	25.00	25.98		The petitioner has submitted that there is minor increase in the expenditure for this asset and the same is due to price variation, as the claimed amount was on estimated basis. Since the asset/work was approved by the Commission vide order dated 23.1.2014 in Petition no. 27/GT/2013, the same is allowed after prudence check.
3	Purchase of second stage embedded part of HM gate/tools - Drilling Equipments etc.	50.00	6.41		Since the expenditure on asset/work is in the nature of "Tools and Tackles", the same is not allowed.
4	Manual and hydraulic puller set including accessories, Capacity: 17.5 & 30 T, Model IPS-3017		9.33		
5	Hydraulic jack capacity (50-60) Ton		10.80		
	<b>Amount claimed</b>	<b>145.00</b>			
	<b>Amount allowed</b>				<b>33.68</b>



38. Additions claimed in 2012-13 which were disallowed on projection basis/new additions claimed:

Sl. No.	Assets/works	Amount claimed	Submissions of the Petitioner	Remarks on admissibility (₹ in lakh)	Amount allowed
1	Tipper 1 no	16.33	The petitioner has submitted that for running and maintenance of the station, various repair work and other miscellaneous works are required to be done. For this purpose, Tipper was purchased to carry the material from one location to other in Power Station.	As the asset/ work is necessary for successful and efficient operation of the generating station, the same is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations. The de-capitalization of the old asset is considered under assumed deletions.	16.33
2	BIO engineering works for the left bank slope protection	33.39	As per minutes of 8th central level monitoring Committee meeting held on 13 and 14 Nov 2008, different activities had been suggested for strengthening the muck dumping sites and weak land zone in the different project area. Accordingly, BIO Engineering works had been carried out. Since the amount was already capitalized under fixed asset in the books of account before the issue of tariff order, the same has again included in the instant petition for reconsideration of the Commission. Moreover, these works can't be claimed under O&M either in current year / even in next tariff period as the same has been booked under capital assets.	The expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b>	0.00
3	Spillway glacis rebuilding works by HPC/other designed product	1.03	Dam is the most vital structure of the power station. To arrest the impact at glacis due to heavy boulder with inflow, these High Performance Concrete was applied.	The expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. Hence, the expenditure	0.00





			Commission has disallowed this expenditure in tariff order dated 23.1.2014. Since the amount was already capitalized under fixed asset in the books of account before the issue of tariff order, the same has again included in the instant petition for reconsideration of the Commission. Moreover, these works can't be claimed under O&M either in current year / even in next tariff period as the same has been booked under capital assets.		is not allowed	
4	Freehold Land-Plot No 378,364/663,294/66 4,301/665	2.25	The petitioner has submitted that the payment of land as per DPR was already made to land Revenue Dept, of Govt. of Sikkim during construction period as advance and booked under "deposit with other Govt. Dept". However the mutation of portion of land was granted during the year. Accordingly, the account has been capitalized against advance during 2012-13	2.25	The petitioner has claimed the expenditure under Regulation 9(2)(i) of the 2009 Tariff Regulations. The petitioner has not enclosed any Court order or Arbitrator award in support of this. However, considering the fact that the expenditure incurred is in compliance with the statutory obligations as per directives of the Sales Tax department the expenditure incurred is <b>allowed</b> under Regulation 9(2)(ii) of the 2009 Tariff Regulations	2.25
5	PLOT no.- 498/3290- land compensation at zang village	15.38	Compensation for Damage to Land/House at the Bank Of River/Dam/Power House as per Demand raised by Land Revenue Department, Sikkim.	15.38	The petitioner has claimed the expenditure under Regulation 9(2)(i) of the 2009 Tariff Regulations. The petitioner has not enclosed any Court order or Arbitrator award in support of this. However, considering the fact that the expenditure incurred is in compliance with the	15.38
6	PLOT no.- 496/3267- land compensation at zang village	7.00		7.00		7.00
7	PLOT no.- 498/3305- land compensation at zang village	17.37		17.37		17.37



8	PLOT no.-314- land compensation at zang village & DIPUDARA	57.22	statutory obligations as per directives of the Land Revenue department, Sikkim the expenditure incurred is allowed under Regulation 9(2)(ii) of the 2009 Tariff Regulations	57.22	
9	PLOT no.-23- land compensation at zang village & Dipudara	8.65		8.65	
10	plot no.-21/1589 - land compensation at zang village & dipudara	50.66		50.66	
11	plot no.-314 - land compensation at zang village & dipudara-Hari Prasad Ojha	16.88		16.88	
12	PLOT no.- 494/3269,493/3197 - land compensation at zang village & Dipudara	62.05		62.05	
13	PLOT no.- 483/3374- land compensation at zang village & Dipudara	41.01		41.01	
14	plot no.- 25,24/2026,21/1860 - land compensation at zang village & Dipudara	21.78		21.78	
15	PLOT no.- 460 & 464- land compensation at zang village & Dipudara	9.13		9.13	
16	Plot no- 466,469,1278,1118, 1120,1163,1164,14 27,1322,1291 & 1290 land compensation at sangtok & tanek	59.41		59.41	
17	50 Ton capacity lifting beam crane for spillway Stoplog	10.41		10.41	
				The petitioner has submitted that the crane is needed for lifting and placing seal beam during repair and maintenance of Gates at DAM site. Hence, it was purchased and capitalized.	
				As the asset/ work is necessary for successful and efficient operation of the generating station, the same is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	



18	8KL water tanker ON SE1613 TCIC	16.52	The petitioner has submitted that expenditure is for water tanker for supply of water for welfare of employees and around project.	Since the expenditure incurred is for the benefit of the employees working in remote areas of the project and in turn will facilitate the successful and efficient operation of the generating station, the expenditure is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	16.52
19	Single Chamber Incinerator, 5-10kg/Hr(Oil Fied)	8.65	The petitioner has submitted that the equipment which is used in hospital, destroys combustible waste material and maintains hygienic condition in hospital.	Since the expenditure incurred is for the benefit of the employees working in remote areas of the project and in turn will facilitate the successful and efficient operation of the generating station, the expenditure is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	8.65
20	Supply Installation, Testing & Commissioning Of Fire Protection System For Administrative Building	25.74	The petitioner has submitted that the assets as well as human life are required to be protected from fire in different location of the power station. In order to come out from any eventualities due to fire, fire protection system is required for safety purposes.	Since the work is considered necessary for the safety of the generating station, the expenditure incurred is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	25.74
21	Kleentek Ferrocare electrostatic liquid cleaner machine, ELC 100LP 3PH JH DI (3 nos.)	13.83	The petitioner has submitted that hydraulic and cooling oil is very important material in hydro power plant. For efficient operation of hydraulic operated and oil cooled equipment, filtration of oil is very much essential, so the procurement of asset was necessitated.	As the asset/ work is necessary for successful and efficient operation of the generating station, the same is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations	13.83
22	Nut Splitters 15 Ton capacity model: HNS 50A, make power team	2.66		Since the expenditure incurred is on assets/ works which are in the nature of tools and tackles the expenditure is <b>not allowed</b> .	0.00
23	Spreaders 1 ton capacity model: HS2000, make: power team	0.47		Since the expenditure incurred is on assets/ works which are in the nature of tools and tackles the expenditure is <b>not allowed</b> .	0.00
24	Ultrasonic rodent repellent master with two transducer, coverage area up to 900sq ft, 230V AC supply (30 nos)	1.85		Since the expenditure incurred is on assets/ works which are in the nature of tools and tackles the expenditure is <b>not allowed</b> .	0.00



25	Providing and fixing security fencing boundary around right bank executive colony at PH site, Balutar	0.69	The petitioner has submitted that the work of fencing has been done for the security of power station.	As the asset/ work is necessary and will facilitate the successful and efficient operation of the generating station, the expenditure is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	0.69
26	Construction of Garage for ambulance near hospital building at right bank, Balutar	2.34	The petitioner has submitted that two ambulances have been deputed at Project hospital, Balutar to cater to requirement of the patients as well as doctors for round-the-clock emergency duty. As there was no facility of parking of the said ambulances, hence the garage was constructed.	Since the expenditure incurred is for the benefit of the employees working in remote areas of the project and in turn will facilitate the successful and efficient operation of the generating station, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	2.34
27	Construction of CGI Sheet store for Hydro mechanical & Electrical establishments of dam top.	4.82	The petitioner has submitted that presently the temporary HM store is situated at Intake top. The same was replaced and an electrical store room was constructed.	Since the expenditure incurred is on assets/ works which are minor in the nature, the expenditure is <b>not allowed</b> .	0.00
28	Drainage sump level indicator at control room	8.94	The petitioner has submitted that the expenditure incurred to purchase sump level indicator for control room, which avoids any flood situation in the power house.	Since the expenditure incurred is on assets/ works which are in the nature of tools and tackles the expenditure is <b>not allowed</b> .	0.00
29	Illumination in front of administrative office building	5.49	The petitioner has submitted that for security and safety of power station area, illumination all around is required. Accordingly the work carried out.	Since the expenditure incurred is on assets/ works which are in the nature of O&M expenses, the expenditure is <b>not allowed</b> .	0.00
30	Supply, Erection and installation of Optical fiber Cable (OFC) between Hospital and Admin building	16.39	The petitioner has submitted that to make communication between Admin building and Hospital more reliable, OFC has been installed.	Since the expenditure incurred is for the benefit of the employees working in remote areas of the project and in turn will facilitate the successful and efficient operation of the generating station, the expenditure is <b>allowed</b>	16.39





				under Regulation 9(2)(iv) of the 2009 Tariff Regulations.
<b>Amount claimed</b>	<b>538.36</b>			
<b>Amount allowed</b>				<b>479.69</b>

#### Deletions

39. As the corresponding assets do not render any useful service in the operation of the generating station, the deletion of (-) ₹58.33 lakh as reflected in the books of accounts is deleted for the purpose of tariff.

#### Exclusions

40. It has been observed that the exclusion of (-) ₹4678.39 lakh, comprising of positive and negative book entries, for the purpose of tariff as effected by the petitioner pertain to purchase of minor assets like furniture, digital weigh machine, etc, whose capitalisation for the purpose of tariff is not allowed after the cut-off date, FERV which is directly adjusted with the beneficiaries, capitalized and de-capitalization of minor assets like computers, ups, printers, furniture etc., whose capitalization is not allowed for the purpose of tariff. In line with the findings of the Commission in paras 26 to 30 of this order, the exclusion of (-) ₹4678.39 lakh is allowed to be excluded/ ignored for the purpose of tariff.

41. Accordingly, the net additional capital expenditure allowed for the purpose of tariff prior to the adjustment of discharged/un-discharged liabilities and assumed deletion is as follows:

Description	₹ in lakh	
	Actual expenditure allowed	
Expenditure on works/assets allowed on projection basis for the year 2012-13 - Regulation 9(2)(iv) (a)	3.10	
Expenditure on works/assets allowed on projection basis during the years 2009-10, 2010-11 & 2011-12 - Regulation 9(2)(iv) (b)	30.58	
Sub- total against works approved on projected basis(c) = a + b	<b>301.34</b>	
Additions claimed by the petitioner which were disallowed on projection basis/new additions claimed (d)	0.00	



New additions -Regulation 9(2)(iv)	(e)	479.69
Total additions allowed for the purpose of tariff (f)=(c)+(d)+(e)		513.37
Deletions	(g)	(-) 58.33
<b>Total additional capital expenditure allowed (h) =(f)-(g)</b>		<b>455.04</b>

#### 2013-14

42. The category-wise breakup of the actual additional capital expenditure claimed by the petitioner prior to adjustment of discharged/un-discharged liabilities and assumed deletion for 2013-14 are as under:

Description	(₹ in lakh)	
	Projected expenditure allowed in order dated 23.1.2014	Actual expenditure claimed
Expenditure on works/assets allowed on projection basis for 2013-14 (Regulation 9(2)(iv)) (a)	10.00	0.00
Expenditure on works/assets allowed on projection basis during the years 2009-10, 2010-11, 2011-12 & 2012-13 (Regulation 9(2)(iv)) (b)	15.00	33.18
Sub- total against works approved on projected basis (c)=(a)+(b)	25.00	33.18
Additions claimed which were disallowed on projection basis/new additions claimed (d)	261.79	3843.60
Total (e)=(c)+(d)	286.79	3876.78
Deletions (f)	0.00	0.00
<b>Net additional capital expenditure claimed g =(e-f)</b>	<b>286.79</b>	<b>3876.78</b>

43. The admissibility of the above expenditure claimed under Regulation 9(2)(iv) along with the justifications as submitted by the petitioner is discussed as under:

Sl. No.	Assets/works	Projected expenditure allowed in order dated 23.1.2014	Actual expenditure claimed	Remarks for admissibility
<b>Expenditure on works/assets allowed on projection basis during the years 2009-10, 2010-11, 2011-12 and 2012-13</b>				
1	Loaders-Wheel Loader, JCB,430ZX	15.00	33.18	The petitioner has submitted that the acquisition of asset was already approved vide order dated 23.1.2014 in Petition no. 27/GT/2013. However, the actual expenditure claimed is Rs. 33.18 lakh as against the projected expenditure of Rs. 15.00 lakh approved. On



			prudence check, the said expenditure is allowed.
	<b>Amount claimed</b>	15.00	
	<b>Amount allowed</b>		<b>33.18</b>

44. The petitioner has claimed actual additional capital expenditure of ` 261.79 lakh in respect of assets/works which were disallowed by the Commission in order dated 23.1.2014 and `3581.81 lakhs for new assets which were not projected for capitalization. The details of these assets/works, justification of the petitioner and remarks for admissibility of the expenditure are discussed as under:

Sl. No.	Assets/works	Amount claimed	Submissions of the Petitioner	Remarks on admissibility	Amount allowed (` in lakh)
1	IRB barrack at left bank Balutar	31.46	The petitioner has submitted that as per directive of Ministry of Power, Govt of India, bearing no. C-30019/32/2001-V&S dated 09.01.2008 the Home department, Govt of Sikkim had declared the Right bank colony, Guest house, hospital as category "B" prohibited area having local settlement with a good number of IRBn's and home guards personnel were deputed. In place of an earlier temporary sheds, permanent structure for IRBn Barrack was constructed for security personnel at Balutar.	Since the asset/work is necessary for safety of the generating station and will facilitate the successful and efficient operation of the generating station, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	31.46
2	Reservoir RIM treatment Works & damage compensation	261.79	Due to weak geological condition the incidents of settlement and sinking of the rock in the rim of the reservoir has been observed. The fluctuation of the inflow cannot be ruled out. Due to this, land containing dwelling house had settled and state administration pressurized for remedial measure and for compensation of the	The expenditure is recurring in nature and the same can be met under the O&M expenses allowed to the generating station. Hence, the expenditure is <b>not allowed</b> . Also, in the absence of the break-up of the damage compensation, the	0.00



			<p>damage. In order to comply with it, the expenditure had been incurred. The work not being of recurring nature and was executed as per situation of site. Commission has disallowed this expenditure in tariff order dated 23.01.2014. Since the amount was already capitalized under fixed asset in the books of account before the issue of tariff order, the same cannot be claimed through O&amp;M (neither in 2009-14 nor in 2014-19). Accordingly, the same has been included in the instant petition for reconsideration of the Commission. Moreover, these works can't be claimed under O&amp;M either in current year / even in next tariff period as the same has been booked under capital assets.</p>	<p>capitalization is not allowed.</p>	
3	Additional Service Tax on Dam civil works (Contingent Liability) -Jai Prakash Associates	2.08	<p>The petitioner has submitted that reimbursement of additional service tax was made on Insurance premium LOTT TT-2 (Dam) after approval of competent authority. The petitioner has claimed the expenditure under Regulation 9(2)(viii) which pertains to un-discharged liability towards final payment withheld payment due to contractual exigencies for works executed after the cut-off date. However, in the instant case the actual payment could not be made in the year 2013-14 as an amount of ₹2.037 lakh has been shown as un-discharged</p>	<p>Considering the fact that the difference between the amount capitalized and the amount kept under undischarged liability is on account of income tax deducted at source, the amount is allowed to be capitalized under Regulation 9 (2) (viii) of the 2009 Tariff Regulations. As such, the difference of ₹2.08 lakh and ₹2.037 lakh would get capitalized for the purpose of tariff.</p>	2.08





4	Sales Tax Amount paid against Assessment year 2005-06 to 2007-08 to Commercial Tax department.	185.10	liability.	The petitioner has submitted that out of total demand of ₹3990.05 lakh, ₹617.52 (185.10+432.42) lakh is capitalized in 2013-14.	Considering the fact that the expenditure incurred is in compliance with the statutory obligations, the expenditure incurred is <b>allowed</b> under Regulation 9(2)(ii) of the 2009 Tariff Regulations	185.10
5		432.42				432.42
6	Gammon India Limited (TT-3)	4.45		The petitioner has submitted that the payment in respect of major package (HRT) was being made in foreign currency during the construction of the project. Liability for price escalation due to payment made in foreign currency was raised by Gammon India Limited. However, the payment has been made during 2013-14. No liability was provided at the time of finalization of project cost. Now, payment made to Gammon India Limited and capitalized in 2013-14 in the books of account.	Since the expenditure is incurred on assets/works which has become necessary for the successful and efficient operation of the generating station, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	4.45
7	TEXMACCO (TT-5)-Offshore payment of HM works	97.01		The petitioner has submitted that the payment in respect of major package (HM) was being made in foreign currency during the construction of the project. Liability for price escalation due to payment made in foreign currency was raised by Texmacco. However, the payment has been made during 2013-14. No liability was provided at the time of finalization of project cost. Now, payment made to Texmacco and capitalized in 2013-14 in the books of account.	Since the expenditure is incurred on assets/works which has become necessary for the successful and efficient operation of the generating station, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	97.01
8	TEXMACCO (TT-5)-Offshore payment of HM works	5.75				5.75



9	M/s Mitsui & Co.- Contingent Liability (2 <sup>nd</sup> EOT)	278.66	The petitioner has submitted that provision was made under contingent liability as the Arbitration award has been given against the petitioner by the High Court. Accordingly, the payment has been made to M/s Mitsui & Co.	Since the expenditure incurred is towards payment of liabilities to meet the award or order of Court, the same is <b>allowed</b> under Regulation 9(2)(i) of the 2009 Tariff Regulations.	278.66
10	Variable Frequency Drive 75 KW-ABB	54.50	The petitioner has submitted that as per recommendation of energy audit conducted by CPRI, VFD drives recommended for use in power house for various pumps for efficient operation and reduced energy consumption.	Since the asset is considered necessary for successful and efficient operation of the plant the same is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	54.50
11	Heating, ventilation and Air Conditioning VAC System	46.25	The petitioner has submitted that most of the equipments inside power house are temperature sensitive. To maintain proper air ventilation and room temperature of Power house to safeguard the sophisticated machine and equipments, the system is essential.	Since the expenditure incurred in respect of the asset/work is of minor nature, the same is <b>not allowed</b> .	0.00
12	Squirrel Cage Motor, 0.5 KW, 0.67 HP, 415VAC, 50HZ, RPM- 900 (3 Nos.)	0.30			0.00
13	Dehumidifier with all accessories, capacity-2000 TO 8000 cubic feet (4 nos.)	3.02			
14	Dissolved Gas Analysis Kit	25.60	The petitioner has submitted that dissolved gas in transformer oil indicates the internal condition of transformer. Increase of level of dissolved gas creates faults. Such type of fault regularly observed in GTs. Timely action to ascertain the level of dissolved gas is necessary which can be	Since the expenditure incurred in respect of the asset/work which are in the nature of Tools & Tackles, the same is <b>not allowed</b> .	0.00



15	Water storage Tank & Supply line IRBn Barack at Dam Top	21.78	done with help of DGA kit. The petitioner has submitted that for proper safety and security of power station, IRBn personnel have been deployed in the project area. Due to remote location of dam site, there was not any proper for drinking water facility for them. In order to meet this requirement, water storage tank has been constructed for supply of water for IRBn personnel as well as employees working there.	Since the expenditure incurred is for the benefit of the employees working in remote areas of the project and in turn will facilitate the successful and efficient operation of the generating station, the expenditure is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	21.78
16	Electric siren, single phase, 220/250 V, Range- 2 km (3 nos.)	0.24		Since the expenditure incurred in respect of the asset/work is of minor nature, the same is <b>not allowed</b> .	0.00
17	Hand Operated Siren 1.5 KM Range (2 nos.)	0.18			
18	Motorized SIREN, 3-Phase, AC, Range- 8KM	0.45			
19	Onshore payment of Tunnel & pipe lines-Jai Prakash Associates	44.94	The petitioner has submitted that this amount was capitalized after finalization of deviation in respect of major packages for LOT TT-4.	The petitioner has not indicated the specific provision of the regulation under which the claim has been made. It is observed that the actual payment could not be made in 2013-14 as an amount of ₹43.39 lakh has been shown as un-discharged liability. Accordingly, the balance amount of ₹44.94 lakh towards TDS is <b>allowed</b> under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the expenditure is towards final	44.94



20	Providing and fixing security fencing boundary around right bank executive colony at PH site, Balutar	92.89	The petitioner has submitted that security fencing has been erected to enforce the prohibition order of Govt. Of India and for proper security of the Power House site and Right bank Colony as described above.	settlement against approved works. However, effectively the difference between ₹44.94 lakh and ₹43.39 lakh will get capitalized for the purpose of tariff. Since the asset/work is necessary for safety of the generating station and will facilitate the successful and efficient operation of the generating station, the expenditure is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.	92.89
21	Cement Variation LOTT TT-4	438.16	The petitioner has submitted that the Arbitration award was challenged by NHPC in District court and later in High Court, which was dismissed by High court of Punjab & Chandigarh on 6.2.2014.	The petitioner has claimed the expenditure under Regulation 9(2)(viii) which pertains to any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date after prudence check of such liability. In the present case the actual payment could not be made in 2013-14 and accordingly an amount of ₹429.01 lakh has been shown as un-discharged liability. The difference of ₹9.15 lakh (438.16-429.01) between the amount capitalized and the amount kept under un-discharged liability is on account of Income Tax	438.16





22	Extension of Insurance & PBG beyond contract period & excess interest recovered on mobilization and machinery advance beyond contract period and deform reinforcing bars grade FE-500 beyond 25% limit (Lott TT-4)	341.36	The petitioner has submitted that Arbitration award in favour of M/s JAL has been challenged in court by NHPC on the ground that the claim is non tenable. The matter is <i>subjudice</i> in the District Court of Faridabad and provision has been made for capitalization.	deducted at source. This has been allowed under Regulation 9(2)(viii) of the 2009 Tariff Regulations. The petitioner has claimed the expenditure under Regulation 9(2)(viii) which pertains to any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date after prudence check of such liability. In the present case the actual payment could not be made in 2013-14 and accordingly an amount of ₹334.23 lakh has been shown as un-discharged liability. The difference of ₹7.13 lakh (341.36-334.23) between the amount capitalized and the amount kept under un-discharged liability is on account of Income Tax deducted at source. This has been allowed under Regulation 9(2)(viii) of the 2009 Tariff Regulations.	341.36
23	Cement variation concrete works (LOTT TT-2)	245.05	The petitioner has submitted that, a similar case is being contested by the company for LOT TT-4 and decision of LOT TT-4 will be binding for this case. A similar case of LOT TT-4 arbitration award was challenged by NHPC in District Court and later in High court	The petitioner has claimed the expenditure under Regulation 9(2)(viii) which pertains to any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works	245.05
24	Cement variation concrete works (LOTT TT-2)	571.78			571.78



			<p>which was dismissed. Hence provision made against capitalisation. The petitioner has claimed the expenditure under 9(2)(viii) which pertains to the capital expenditure incurred towards any un-discharged liability final payment/withheld payment due to contractual exigencies for works executed after the cut-off date .</p>	<p>executed within the cut-off date after prudence check of such liability. In the present case the actual payment could not be made in 2013-14 and accordingly an amount of ₹239.93 lakh and ₹559.83 lakh (for the works) has been shown as un-discharged liability. The difference between the amount capitalized and the amount kept under un-discharged liability is on account of Income Tax deducted at source. This has been allowed under Regulation 9(2)(viii) of the 2009 Tariff Regulations.</p>	
25	Up gradation of Telephone & LAN Networking of Admin. Building	22.44	<p>The petitioner has submitted that up-gradation of communication system was necessitated as the telephone and LAN systems were old. There has been lot of advancements in the technology. In addition to this, due to implementation of systems like ERP, requirement of networking speed and bandwidth were also increased. Hence, the expansion &amp; up-gradation of Telephone &amp; LAN Networking of admin departments was necessary.</p>	<p>Since the asset/work is necessary for efficient and successful operation of the generating station, the expenditure is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations.</p>	22.44
26	Land Compensation for Dipudara village	635.94	<p>The petitioner has submitted that Land compensation paid for Dipudara village as per directive of Land</p>	<p>The petitioner has claimed the expenditure under Regulation 9(2)(i) of the 2009 Tariff</p>	635.94



		Revenue Department Govt. of Sikkim for damaged houses due to settlement/subsidence at Dipudara village as the houses situated in the area were in dilapidated conditions. Any untoward incident would endanger the lives and properties at nearby area of power station and may hamper the prospects of future projects in Sikkim.	The Regulations. The petitioner has not enclosed any Court order or Arbitrator award in support of this. However, considering the fact that the expenditure incurred is in compliance with the statutory obligations as per directives of the Land Revenue department, Sikkim the expenditure incurred is <b>allowed</b> under Regulation 9(2)(ii) of the 2009 Tariff Regulations.	
<b>Amount claimed</b>	<b>3843.60</b>			
<b>Amount allowed</b>				<b>3505.77</b>

#### Exclusions

45. It has been observed that the exclusion of ₹81.75 lakh, comprising of positive and negative book entries, for the purpose of tariff as effected by the petitioner pertain to purchase of minor assets like furniture, computers, camera, etc, whose capitalization for the purpose of tariff is not allowed after the cut-off date, and de-capitalization of minor assets like computers, stabilizers, printers, furniture etc., whose capitalization is not allowed for the purpose of tariff. In line with the findings of the Commission in paras 26 to 30 of this order, the negative entries corresponding to the deletion of minor assets are allowed to be excluded/ ignored for the purpose of tariff.

46. Accordingly, the net additional capital expenditure allowed for the year 2013-14, prior to adjustment of discharged/un-discharged liabilities and assumed deletion works out as follows:

Description	₹ in lakh)	
	Actual expenditure allowed	Actual expenditure allowed
Expenditure on works/assets allowed on projection basis for the year 2013-14 (Regulation 9(2)(iv) (a)	0.00	
Expenditure on works/assets allowed on projection basis during the years 2009-10, 2010-11, 2011-12 & 2012-13 (Regulation 9(2)(iv) (b)	33.18	
Sub-total against works approved on projected basis (c) = a) + (b)	<b>33.18</b>	
Additions claimed by the petitioner which were disallowed on	0.00	



projection basis/new additions claimed	(d)
New additions claimed under Regulation 9(2)(iv)	(e)
Total additions allowed (f)=(c)+(d)+(e)	3505.77
Deletions (g)	3538.95
<b>Total additional capital expenditure allowed (h) =(f)-(g)</b>	<b>0.00</b>
	<b>3538.95</b>

#### Assumed Deletions

47. 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 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)		
	2009-10	2010-11	2011-12
	0.00	0.00	1.20
			1.61
			0.00

48. The COD of the generating station is 10.4.2008 and the assumed deletions claimed by the petitioner during the year 2011-12 and 2012-13 appear to be on the lower side. Therefore, as per consistent methodology adopted by the Commission for arriving at the fair value of the de-capitalized asset, the escalation rate of 5% per annum from COD has been considered in order to arrive at the gross value of the old asset in comparison to the cost of new assets. Accordingly, the assumed deletions claimed and allowed for the purpose of tariff are as under:

Asset/work	2011-12		De-capitalization considered
	Additional capital expenditure claimed	De-capitalization claimed	
Drainage pump	8.95	(-) 1.20	(-) 7.73
<b>Total</b>		(-) 1.20	(-) 7.73
	2012-13		
Purchase of Dewatering Pump	3.10	(-) 0.13	(-) 2.43
Tipper	16.33	(-) 0.74	(-) 12.80
8KL Water Tanker on E1613 TCIC	16.52	(-) 0.74	(-) 12.94
<b>Total</b>		(-) 1.61	(-) 28.17





### Liabilities

49. The petitioner has submitted the details of un-discharged liabilities and discharge of liabilities as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Un-discharged liability in additional capital expenditure	354.54	20.81	63.27	8.05	2425.45
Liability discharged (pertains to period prior to COD) (a)	1082.60	196.12	233.30	0.20	360.25
Liability discharged (pertains to period post COD) (b)	46.71	0.00	72.68	62.29	17.08
<b>Total liabilities discharged (a+b)</b>	<b>1129.31</b>	<b>196.12</b>	<b>305.98</b>	<b>62.49</b>	<b>377.33</b>

50. Accordingly, the actual additional capital expenditure allowed for the period 2009-14 after adjustment of discharged/un-discharged liabilities for the purpose of tariff is as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Additions against works already approved (a)	3367.44	1466.36	153.80	33.68	33.18
Additions not projected earlier but incurred and claimed (b)	0.00	138.94	2179.73	479.69	3505.77
<b>Total additions allowed (c= a+b)</b>	<b>3367.44</b>	<b>1605.30</b>	<b>2333.53</b>	<b>513.37</b>	<b>3538.95</b>
Deletions allowed (d)	(-113.14)	(-11.74)	0.00	(-) 58.33	0.00
Assumed deletions considered (e)	0.00	0.00	(-) 7.73	(-) 28.17	0.00
Total additional capital expenditure allowed before un-discharged/ discharged liabilities (f)=(c)+(d)+(e)	3254.30	1603.56	2325.80	426.87	3538.95
<b>Less: Un-discharged liabilities in the additional capital expenditure allowed above (g)</b>	<b>354.54</b>	<b>20.81</b>	<b>63.27</b>	<b>8.05</b>	<b>2425.45</b>
<b>Add: Liabilities discharged during the year out of un-discharged liability existing as on 31.3.2014 (h)</b>	<b>1129.31</b>	<b>196.12</b>	<b>305.98</b>	<b>62.49</b>	<b>377.33</b>
Adjustment towards Sales Tax liability capitalized in 2011-12, but actually paid in 2013-14 (i)	-	-	(-)1953.91	-	1953.91
<b>Additional Capital Expenditure allowed (j=f-g+h+i)</b>	<b>4029.07</b>	<b>1778.87</b>	<b>614.60</b>	<b>481.31</b>	<b>3444.74</b>

### Capital cost for 2009-14

51. As stated, the Commission in order dated 23.1.2014 in Petition No.27/GT/2013 had considered the closing capital cost of ₹262886.11 lakh as on 1.4.2009. Accordingly, this capital cost



of ₹262886.11 lakh has been considered as the opening capital cost as on 1.4.2009. Based on this, the capital cost for the purpose of the tariff for 2009-14 is as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost as on 31.3.2009	262886.11	266915.18	268694.05	269308.65	269789.96
Additional capital expenditure allowed	4029.07	1778.87	614.60	481.31	3444.74
<b>Closing capital cost</b>	<b>266915.18</b>	<b>268694.05</b>	<b>269308.65</b>	<b>269789.96</b>	<b>273234.70</b>

#### Debt-Equity Ratio

52. In accordance with clause (2) of Regulation 12 of the 2009 Tariff Regulations, in case of the generating stations 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 is considered. The Commission in order dated 5.1.2010 in Petition No.132/2009, while approving tariff for the generating station for the period ending 31.3.2009 had directed as under:

*"42. The un-discharged liability of ₹13015.87 lakh as on the date of commercial operation of the project shall be considered as debt as and when the same is discharged. As the equity amounting to ₹109902.02 lakh has been considered, any additional expenditure incurred and admitted by the Commission after the date of commercial operation up to the approved revised capital for the generating station shall also be considered as debt for the purpose of tariff.*

53. In line with the above decision, the entire additional capital expenditure up to the Revised Cost Estimate (RCE) amount of ₹265695.00 lakh has been considered as debt. The additional capital expenditure in excess of this RCE amount has been considered in the normative debt-equity ratio of 70:30.

#### Return on Equity

54. In terms of Regulation 15(3) of the 2009 Tariff Regulations, the Return on Equity is computed as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	109902.00	110268.05	110801.72	110986.10	111130.49
Addition due to Additional Capitalization	366.05	533.66	184.38	144.39	1033.42
Closing Equity	110268.05	110801.72	110986.10	111130.49	112163.91
Average Equity	110085.03	110534.88	110893.91	111058.29	111647.20



Return on Equity (Base Rate )	15.500%	15.500%	15.500%	15.500%	15.500%*	16.500%
Tax rate for the year	33.990%	33.218%	32.445%	32.445%	20.008%	20.961%
Rate of Return on Equity	23.481%	23.210%	22.944%	22.944%	19.689%	20.876%
Return on Equity	<b>25849.07</b>	<b>25655.15</b>	<b>25443.50</b>	<b>25443.50</b>	<b>21866.27</b>	<b>23307.47</b>

NB--Base rate for April- December 2012 @ 15.5% and for January-March @16.5%

#### Interest on Loan

55. The opening gross normative loan as on COD of each unit has been arrived at in accordance with Regulation 16 of the 2009 Tariff Regulation. The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project. The repayment for the period 2009-14 has been considered equal to the depreciation allowed for the respective year. The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest. Accordingly, Interest on loan has been calculated as under:

	(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14	
Gross Normative Loan	152984.11	156647.13	157892.34	158322.56	158659.47	
Cumulative Repayment	593.15	14187.85	27904.80	41696.50	55516.29	
Net Loan-Opening	152390.96	142459.28	129987.54	116626.06	103143.18	
Repayment during the year	13594.70	13716.95	13791.70	13819.79	13955.73	
Addition due to Additional Capitalization	3663.02	1245.21	430.22	336.92	2411.32	
Net Loan-Closing	142459.28	129987.54	116626.06	103143.18	91598.76	
Average Loan	147425.12	136223.41	123306.80	109884.62	97370.97	
Weighted Average Rate of Interest	5.253%	5.094%	4.837%	4.837%	4.833%	
<b>Interest on loan</b>	<b>7744.24</b>	<b>6939.22</b>	<b>5964.35</b>	<b>5315.12</b>	<b>4705.94</b>	

#### Depreciation

56. The weighted average rate of depreciation as per the 2009 Tariff Regulations has been considered for the calculation of depreciation. Accordingly, depreciation has been computed as under:

	(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14	
Opening Gross Block	262886.11	266915.18	268694.05	269308.65	269789.96	
Additional capital expenditure	4029.07	1778.87	614.60	481.31	3444.74	
Closing gross block	266915.18	268694.05	269308.65	269789.96	273234.70	
Average gross block	264900.65	267804.62	269001.35	269549.31	271512.33	
Rate of Depreciation	5.132%	5.122%	5.127%	5.127%	5.140%	
Depreciable Value	236509.91	239123.48	241079.80	242450.19	243337.66	
Remaining Depreciable	230202.02	219229.39	206589.72	193290.52	181257.09	



Value				
Depreciation	13594.70	13716.95	13791.70	13819.79
				13955.73

### O & M Expenses

57. O & M expenses as allowed in order dated 23.1.2014 in Petition No. 27/GT/2013 has been considered as under:

	(₹ in lakh)			
	2009-10	2010-11	2011-12	2012-13
	6983.06	7382.49	7804.77	8251.20
				8723.17

### Interest on Working Capital

58. The petitioner is entitled to claim interest on working capital as per Regulation 18 of the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder.

#### (i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital are equivalent to two months' of fixed cost. In the tariff being allowed, receivables have been worked out on the basis of "2 months" fixed cost.

#### (ii) Maintenance spares

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses as part of the working capital. The value of maintenance spares has accordingly been worked out.

#### (iii) O & M expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

#### (iv) Rate of interest on working capital

In accordance with clause (3) of Regulation 18 of the tariff regulations, as amended, 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 is declared under commercial operation, whichever is later. Accordingly, SBI PLR of 12.25% as on 1.4.2009 has been considered in for working out Interest on Working Capital.

59. Accordingly, Interest on Working Capital has been calculated as under:

	(₹ in lakh)			
	2009-10	2010-11	2011-12	2012-13
Maintenance Spares	1047.46	1107.37	1170.72	1237.68
O & M expenses	581.92	615.21	650.40	687.60
Receivables	9250.65	9171.39	9056.13	8419.94
Total	10880.03	10893.97	10877.24	10345.22
<b>Interest on working capital @ 12.25%</b>	<b>1332.80</b>	<b>1334.51</b>	<b>1332.46</b>	<b>1267.29</b>
				<b>1311.07</b>





### Annual Fixed Charges

60. The annual fixed charges allowed for generating station for the period 2009-14 are summarized as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	25849.07	25655.15	25443.50	21866.27	23307.47
Interest on Loan	7744.24	6939.22	5964.35	5315.12	4705.94
Depreciation	13594.70	13716.95	13791.70	13819.79	13955.73
Interest on Working Capital	1332.80	1334.51	1332.46	1267.29	1311.07
O & M Expenses	6983.06	7382.49	7804.77	8251.20	8723.17
<b>Total annual fixed charges</b>	<b>55503.87</b>	<b>55028.32</b>	<b>54336.78</b>	<b>50519.67</b>	<b>52003.39</b>

61. The difference between the annual fixed charges recovered by the petitioner and the annual fixed charges determined by this order 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

62. 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:

	₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	14227.86	14298.60	14363.97	14406.67	14407.32
Interest on Loan	4191.73	3603.00	3000.44	2407.93	1867.99
Return on Equity	23639.04	23725.24	23804.88	23856.91	23857.71
Interest on Working Capital	1426.47	1446.99	1468.93	1492.11	1516.65
O & M Expenses	8297.32	8848.59	9436.50	10063.46	10732.07
<b>Total</b>	<b>51782.42</b>	<b>51922.42</b>	<b>52074.72</b>	<b>52227.07</b>	<b>52381.74</b>

63. The petitioner has filed the additional information as sought by the Commission and has served copies on the respondents. The respondent, GRIDCO has filed the reply and the petitioner has filed the rejoinder to the said reply. Based on the submissions of the parties and the documents available on record, we proceed to determine the tariff of the generating station for 2014-19 as stated in the subsequent paragraphs

### Capital Cost

64. 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) xxxxx*
- (c) xxxxx*

65. The closing capital cost considered by the Commission as on 31.3.2014 in this order is ₹273234.70 lakh. Accordingly, this amount has been considered as the opening capital cost as on 1.4.2014 for determination of tariff for the period 2014-19.

### Projected Additional Capital Expenditure

66. 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. 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 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."

67. The year-wise breakup of the projected additional capital expenditure claimed by the petitioner for the period 2014-19 is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Proposed additional capital expenditure on gross basis.	200.00	342.90	102.00	38.00	23.00	705.90
Proposed de-capitalization	0.00	6.58	23.57	17.98	17.42	65.56
Net proposed additional capital expenditure	200.00	336.32	78.43	20.02	5.58	640.34
Proposed discharges of liability	1650.80	565.59	1562.99	0.00	0.00	3779.38
<b>Total projected additional capital expenditure claimed</b>	<b>1850.80</b>	<b>901.90</b>	<b>1641.42</b>	<b>20.02</b>	<b>5.58</b>	<b>4419.72</b>



68. The respondent, BRPL has submitted that the claim of the petitioner for projected additional capital expenditure under Regulation 14(3)(viii) is required to be made under Regulation 14(3)(vii) of the 20104 Tariff Regulations, which require that the claim for expenditure for replacement of assets which are necessary for successful and efficient operation of the plant shall be substantiated with technical justification duly supported by documentary evidence like test results carried out by independent agency in case of deterioration of the assets. We have examined the matter. The petitioner has claimed capitalization of the expenditure under Regulation 14(3)(viii) which also provides for capitalization of expenditure incurred due to additional work which has become necessary for successful and efficient operation of plant. The submission of the respondent, BRPL that Regulation 14(3)(viii) should be read with Regulation 14(3)(vii) in respect of expenditure incurred on replacement assets and that the same should be supported by documentary evidence like test results carried out by independent agency in case of deterioration of the assets, is also not acceptable. In our view, the requirement of documentary evidence like test results etc., carried out by independent agency will be necessary in case of assets which have deteriorated prior to the expiry of useful life and accordingly sought to be replaced. In the instant case, these assets are being replaced on account of obsolescence /deterioration etc., after expiry of its useful life in consideration of year-wise assets which were put to use. However, there may be some assets which are serviceable even after the expiry of their useful life and should be put to use instead of seeking their replacement in a routine manner. In our view, the petitioner should support its claim either on the basis of the certificate by the OEM or its technical committee to the effect that the subject assets cannot be kept in service on account of its obsolescence or it being beyond economic repair. Though we are allowing capitalization of these assets under Regulation 14(3)(viii) of the 2014 Tariff Regulations, we direct that the petitioner shall place on record the necessary certificate from the OEM or its technical committee at the time of truing-up of tariff . Similar approach shall be adopted in other cases where additional capitalization has been allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. Accordingly, based on the submissions of the parties and the documents





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	Submissions of the Petitioner	Remarks on admissibility	Amount allowed
1.	Providing and fixing security fencing boundary around Left and Right bank executive colony at PH site, Balutar (New work)	200.00	The petitioner has submitted that, subsequent to the release of order by Ministry of Power, Govt. of India, bearing no. C-30019/ 32/ 2001-V&S dated 9.1.2008 by the Home department, Govt. of Sikkim had declared the right bank executive colony, guest house, hospital as category "B" prohibited area having local settlements adjacent to this. As the area is not protected properly by fencing, it is allowing thoroughfare of the local people as-well-as the labourers of the adjacent downstream project. Hence, providing and fixing of security fencing is required. The proposal is to construct boundary wall at Right bank and left bank of colony in phase wise manner. The construction cost of boundary is approximately Rs. 20000 per meter including protection work. Budget estimate is based on awarded rates for similar works during 2013-14.	Since the work is considered necessary for the safety & security of the generating station, the expenditure is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.	200.00
<b>Total claimed</b>		<b>200.00</b>			
<b>Total allowed</b>					<b>200.00</b>



2015-16				
1. Fire Fighting System in switchyard and DG set (new asset)	12.00	The petitioner has submitted that there are lot of fire sensitive system like switchyard, DG sets, Diesel Storage Tanks at 66 KV Switchyard. Presently only portable ABC type fire extinguishers are available to deal with any kind of fire hazards which is not sufficient. In order to strengthen the fire fighting system, installation of water sprinkler system around the equipments and different fire fighting system at switchyard are required. Cost estimate is based on telephonic discussions for rates of each component.	Since the work is considered necessary for the safety & security of the generating station, the expenditure is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.	12.00
2. Providing and fixing security fencing boundary around Left and Right bank executive colony at PH site, Balutar (New work)	225.00	The petitioner has submitted that, subsequent to the release of order by Ministry of Power, Govt. of India, bearing no. C-30019/32/2001-V&S dated 09.01.2008 by the Home department, Govt. of Sikkim had declared the right bank executive colony, guest house, hospital as category "B" prohibited area having local settlements adjacent to this. As the area is not protected properly by fencing, it is allowing thoroughfare of the local people as-well-as the labours of the adjacent downstream project. Hence, providing and fixing of security fencing is required. The proposal is to construct boundary wall at Right bank and left bank of colony in phase wise manner. The construction cost of boundary is approximately Rs. 20000 per meter including	Since the work is considered necessary for the safety & security of the generating station, the expenditure is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.	225.00



			protection work. Budget estimate is based on awarded rates for similar works during 2013-14.		
3.	Construction of IRBn barrack (first floor) at Left bank, Balutar (New work)	32.00	The petitioner has submitted that, to secure the safety of the power station, IRBn's and home guards have been deputed round the clock at the strategic points. Till now they are residing at temporary pre-fab quarters which are deteriorating with passage of time. Moreover, the ammunitions used by the guards needs proper storage and protection. As the necessity of the guards is essential and permanent in nature, a permanent type of barrack is proposed. The proposal is to construct the first floor of 180 sq.m. on the existing building. Estimation is based on awarded value considering the rate hikes of labour.	Since the work is considered necessary for the safety & security of the generating station, the expenditure is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.	32.00
4.	Purchase Of Mini Truck TATA 407 (on replacement)	5.70	The petitioner has submitted that this vehicle has already completed its useful life as per NHPC disposal policy.	Since the asset is considered necessary & efficient for the operation of generating station, the capitalization of expenditure for the new asset is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations along with the de-capitalization of old asset	5.36 (5.70-0.34)
5	Purchase Of pick & carry Crane 10 Ton (on replacement)	12.00	The petitioner has submitted that this equipment has already outlived its useful life as per NHPC disposal policy.		8.81 (12.00-3.19)
6	Purchase of 3 nos Buses, (on replacement)	46.20	The petitioner has submitted that these vehicles/buses are about to complete their useful life within one year as per NHPC disposal policy.		43.78 (46.20-2.42)
7.	Purchase of 1 no. Truck (on replacement)	10.00	The petitioner has submitted that, as per the NHPC disposal policy, one Truck has outlived its useful life and shall be	Since the asset is considered necessary & efficient for the operation of generating station, the	9.36 (10.00-0.64)



			replaced in 2015-16 and two trucks shall be replaced during 2018-19.		capitalization of expenditure for the new asset is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations along with the de-capitalization of old asset	
	<b>Total claimed</b>	<b>342.90</b>				
	<b>Total allowed</b>					<b>336.31</b>
<b>2016-17</b>						
1	Providing and fixing security fencing boundary around Left and Right bank executive colony at PH site, Balutar (New work)	75.00	The petitioner has submitted that, subsequent to the release of order by Ministry of Power, Govt. of India, bearing no. C-30019/32/2001-V&S dated 09.01.2008 by the Home department, Govt. of Sikkim had declared the right bank executive colony, guest house, hospital as category "B" prohibited area having local settlements adjacent to this. As the area is not protected properly by fencing, it is allowing thoroughfare of the local people as-well-as the labours of the adjacent downstream project. Hence, providing and fixing of security fencing is required. The proposal is to construct boundary wall at Right bank and left bank of colony in phase wise manner. The construction cost of boundary is approximately Rs. 20000 per meter including protection work. Budget estimate is based on awarded rates for similar works during 2013-14.	Since the work is considered necessary for the safety & security of the generating station, the expenditure is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.		75.00
2.	Purchase of portable Diesel Air Compressor of 425 CFM (on	15.00	The petitioner has submitted that this equipment has outlived its useful life in terms of years as well hours and is essentially required at	Since the asset is considered necessary for the successful & efficient operation of generating station, the capitalization of		14.39 (15.00-0.61)





	replacement)		Dam Top. Cost estimate is on the basis of telephonic enquiry and escalation taken @ 6% per annum.	expenditure for the new asset is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations along with the de-capitalization of old asset	
3	Telephone Exchange for Office building and Colony	12.00	The petitioner has submitted that, old telephone exchange is obsolete and has completed its useful life. Estimated cost is based on extrapolation of recent supply order for new telephone exchange		(-) 10.96 (12.00-22.96)
	<b>Total claimed</b>	<b>102.00</b>			
	<b>Total allowed</b>				<b>78.43</b>
<b>2017-18</b>					
1	Purchase of 2 ambulances (on replacement)	16.00	The petitioner has submitted that, these ambulances are about to complete their useful life in terms of kilometer as well as within 2-3 years as per utilization pattern and hence suitable replacement is required. Cost is on estimation basis.	Since the asset is considered necessary for the successful & efficient operation of generating station, the capitalization of expenditure for the new asset is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations along with the de-capitalization of old asset	<b>0.31</b> (16.00-15.69)
2.	Purchase of Fire Tender (on replacement)	22.00	The petitioner has submitted that, presently this fire tender is in major breakdown condition and is beyond economical repair and hence suitable replacement is required. Cost as per budgetary offer.		<b>19.71</b> (22.00-2.29)
	<b>Total claimed</b>	<b>38.00</b>			
	<b>Total allowed</b>				<b>20.02</b>
<b>2018-19</b>					
1.	Purchase of 2 nos Trucks (on replacement)	23.00	The petitioner has submitted that, as per the NHPC disposal policy, one Truck has covered its useful life and shall be replaced on 2015-16 and two trucks shall be replaced during 2018-19. Cost estimate is on estimation basis.	Since the asset is considered necessary for the successful & efficient operation of generating station, the capitalization of expenditure for the new asset is allowed under Regulation 14(3)(viii) of the 2014 Tariff	<b>5.58</b> (23.00-17.42)



									Regulations along with the de-capitalization of old asset
	<b>Total claimed</b>	<b>23.00</b>							
	<b>Total allowed</b>								<b>5.58</b>

#### Additional capital expenditure allowed for 2014-19

69. 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
Admitted additional capital expenditure on gross basis	200.00	342.90	102.00	38.00	23.00
De-capitalization considered	0.00	6.59	23.57	17.98	17.42
<b>Net Additional Capital expenditure allowed</b>	<b>200.00</b>	<b>336.31</b>	<b>78.43</b>	<b>20.02</b>	<b>5.58</b>

70. The discharge of liabilities of liabilities considered the petitioner is as under:

	(₹ in lakh)			
	2014-15	2015-16	2017-18	2018-19
	1650.80	565.59	1562.99	0.00
			0.00	0.00

71. Considering the above discharges, the net projected additional capitalize expenditure allowed is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net Additional Capital expenditure allowed	200.00	336.31	78.43	20.02	5.58
Discharges of liabilities	1650.80	565.59	1562.99	0.00	0.00
<b>Additional capital expenditure allowed</b>	<b>1850.80</b>	<b>901.90</b>	<b>1641.42</b>	<b>20.02</b>	<b>5.58</b>

#### Capital Cost for 2014-19

72. As stated, the closing capital cost of ₹273234.70 lakh has been allowed as on 31.3.2014 in this order. The same has been considered as the opening capital cost as on 1.4.2014. Accordingly, the capital cost considered for the period 2014-19 is as under:

	(₹ in lakh)			
	2014-15	2015-16	2016-17	2018-19
Opening Capital Cost	273234.70	275085.50	277628.82	277648.84
Additional Capital expenditure allowed	1850.80	901.90	1641.42	5.58
<b>Capital Cost as on 31<sup>st</sup> March of the year</b>	<b>275085.50</b>	<b>275987.40</b>	<b>277628.82</b>	<b>277654.42</b>

### Debt-Equity

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

#### *"19. Debt-Equity Ratio*

*(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."*

74. In terms of the above regulation, the debt-equity ratio of 70:30 has been considered for the purpose of tariff.

### Return on Equity

75. 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% has been 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.

76. 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 of 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."

77. The Base rate 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
Gross Notional Equity	112163.91	112719.15	112989.72	113482.15	113488.15
Addition due to Additional Capitalization	555.24	270.57	492.43	6.01	1.67
Closing Equity	112719.15	112989.72	113482.15	113488.15	113489.83
Average Equity	112441.53	112854.44	113235.93	113485.15	113488.99
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	20.876%	20.876%	20.876%	20.876%	20.876%
<b>Return on Equity</b>	<b>23473.29</b>	<b>23559.49</b>	<b>23639.13</b>	<b>23691.16</b>	<b>23691.96</b>





78. The petitioner is however directed to submit 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

79. 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 up to 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.”*



80. The opening gross normative loan as on the COD of each unit has been arrived at in accordance with Regulation 26 of the 2014 Tariff Regulations. The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project. The repayment for the period 2014-19 has been considered equal to the depreciation allowed for that year. The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest. The calculation of weighted average rate of interest is allowed as Annexure-I to this order. As such, interest on loan has been calculated as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative loan	161070.79	162366.35	162997.68	164146.67	164160.69
Cumulative Repayment up to Previous year	69472.03	83563.85	97726.43	111954.37	126225.00
Net loan-opening	91598.76	78802.50	65271.25	52192.31	37935.69
Repayment during the year	14091.83	14162.57	14227.94	14270.64	14271.29
Addition due to Additional Capitalization	1295.56	631.33	1148.99	14.01	3.91
Net loan-closing	78802.50	65271.25	52192.31	37935.69	23668.30
Average loan	85200.63	72036.87	58731.78	45064.00	30801.99
Weighted Average Rate of Interest on loan	4.850%	4.927%	5.027%	5.248%	5.933%
<b>Interest on loan</b>	<b>4132.23</b>	<b>3549.26</b>	<b>2952.45</b>	<b>2364.96</b>	<b>1827.48</b>

#### Depreciation

81. 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 up to 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.

(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."

82. The weighted average rate of depreciation of 5.140% calculated in terms of the above regulation has been considered for the period 2014-19. Accordingly, depreciation has been computed as follows:

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block as on 31.3.2014	273234.70	275085.50	275987.40	277628.82	277648.84
Admitted additional capital expenditure	1850.80	901.90	1641.42	20.02	5.58
Closing gross block	275085.50	275987.40	277628.82	277648.84	277654.42
Average gross block	274160.10	275536.45	276808.11	277638.83	277651.63
Rate of Depreciation	5.140%	5.140%	5.140%	5.140%	5.140%
Depreciable Value	246744.09	247982.81	249127.30	249874.95	249886.47
Remaining Depreciable value	171386.47	158533.35	145517.75	132047.46	117796.90
<b>Depreciation</b>	<b>14091.83</b>	<b>14162.57</b>	<b>14227.94</b>	<b>14270.64</b>	<b>14271.29</b>



**O&M Expenses**

83. 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)		
	2015-16	2016-17	2017-18
	8848.59	9436.50	10063.46
	8297.32		10732.07

**Interest on working capital**

84. 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.”

85. Accordingly, receivable component of working capital considering two months of fixed cost is worked out and allowed as under:

	(₹ in lakh)		
	2014-15	2015-16	2016-17
	8568.80	8593.12	8619.48
			8645.73
			8671.93

86. Maintenance spares @ 15% of operation and maintenance expenses are worked out and allowed as under:

	(₹ in lakh)		
	2014-15	2015-16	2016-17
	1244.60	1327.29	1415.48
			1509.52
			1609.81

87. O&M Expenses for one month are allowed as under:

	(₹ in lakh)		
	2014-15	2015-16	2016-17
	691.44	737.38	786.38
			838.62
			894.34





### Rate of interest on working capital

88. 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."*

89. 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

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

	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	1244.60	1327.29	1415.48	1509.52	1609.81
O & M expenses	691.44	737.38	786.38	838.62	894.34
Receivables	8568.80	8593.12	8619.48	8645.73	8671.93
Total	10504.85	10657.79	10821.33	10993.87	11176.08
<b>Interest on working capital @ 13.50%</b>	<b>1418.15</b>	<b>1438.80</b>	<b>1460.88</b>	<b>1484.17</b>	<b>1508.77</b>

### Annual Fixed Charges

91. Accordingly, the annual fixed charges approved for the generating station for the period 2014-2019 are as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	23473.29	23559.49	23639.13	23691.16	23691.96
Interest on Loan	4132.23	3549.26	2952.45	2364.96	1827.48
Depreciation	14091.83	14162.57	14227.94	14270.64	14271.29
Interest on Working Capital	1418.15	1438.80	1460.88	1484.17	1508.77
O & M Expenses	8297.32	8848.59	9436.50	10063.46	10732.07
<b>Total</b>	<b>51412.83</b>	<b>51558.71</b>	<b>51716.90</b>	<b>51874.39</b>	<b>52031.58</b>

### Normative Annual Plant Availability Factor

92. 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 85% being a R.O.R Hydro Station with pondage for this generating station has been considered.

### Design Energy

93. The Commission in its order dated 23.1.2014 in Petition No.27/GT/2013 had approved the annual Design Energy (DE) of 2572.70 Million units for the period 2009-14 in respect of this generating station. The same DE has been considered for the period 2014-19 as per month-wise details as under:

Month	Design Energy (MUs)
April	160.13
May	226.23
June	314.28
July	360.47
August	360.47
September	348.84
October	284.31
November	172.48
December	119.08
January	77.07
February	63.35
March	85.99
<b>Total</b>	<b>2572.70</b>

### Application Fee and Publication Expenses

94. 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 tariff filing fees of ₹2244000/- for the period 2014-15 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The petitioner vide affidavit dated 5.12.2014 has submitted that it has incurred ₹503566/- as charges towards publication of the said tariff petition in the newspapers. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 6.1.2016 in Petition No.232/GT/2014, the petitioner shall be entitled to recover the filing fees for the year 2014-15 and the expenses incurred on publication of notices for the period 2014-19 directly from the



respondents. The filing fees for the remaining years of the tariff period 2015-19 shall be recovered pro rata after deposit of the same and production of documentary proof.

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

96. Petition No. 234/GT/2014 is disposed of in terms of the above.

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

-Sd/-  
(A.S Bakshi)  
Member

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

-Sd/-  
(Gireesh B Pradhan)  
Chairperson



## Annexure-I

Calculation of weighted average rate of interest on loan

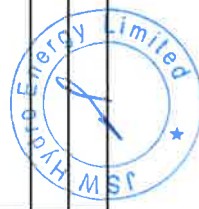
LIC	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Gross loan - Opening	58500	58500	58500	58500	58500
	Cumulative repayments of Loans upto previous year					
	Net loan - Opening	24375	29250	34125	39000	43875
	Add: Drawal(s) during the Year	34125	29250	24375	19500	14625
	Less: Repayment (s) of Loans during the year	0	0	0	0	0
	Net loan - Closing	4875.00	4875.00	4875.00	4875.00	4875.00
	Average Net Loan	29250	24375.00	19500.00	14625	9750.00
	Rate of Interest on Loan on annual basis	31687.5	26812.50	21937.50	17062.50	12187.50
	Interest on loan	7.74%	7.71%	7.62%	7.52%	7.32%
		2452.73	2068.07	1672.73	1282.73	892.73
	<b>PFC</b>					
	Gross loan - Opening	18600	18600	18600	18600	18600
	Cumulative repayments of Loans upto previous year					
	Net loan - Opening	10230	12090	13950	15810	17670
	Add: Drawal(s) during the Year	8370	6510	4650	2790	930
	Less: Repayment (s) of Loans during the year	0	0	0	0	0
	Net loan - Closing	1860.00	1860.00	1860.00	1860.00	930.00
	Average Net Loan	6510	4650.00	2790.00	930	0.00
	Rate of Interest on Loan on annual basis	7440	5580.00	3720.00	1860.00	465.00
	Interest on loan	9.94%	9.90%	9.73%	9.30%	3.32%
		739.62	552.59	362.13	172.97	15.42
	<b>DEUTSCHE BANK LOAN INR</b>					
	Gross loan - Opening	105168.86	105168.86	105168.86	105168.86	105168.86
	Cumulative repayments of Loans upto previous year					
	Net loan - Opening	51891.01	62658.09	73425.17	84192.25	94959.33
	Add: Drawal(s) during the Year	53835.34	43068.26	32301.18	21534.10	10767.02
	Add: ERV	0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	10767.08	10767.08	10767.08	10767.08	10767.02
	Average Net Loan	43068.26	32301.18	21534.10	10767.02	0.00
	Rate of Interest on Loan on annual basis	48451.80	37684.72	26917.64	16150.56	5383.51
	Interest on loan (including TDS)	0.76%	0.76%	0.76%	0.76%	0.76%
	Financing Charges (Guarantee Fee)	404.49	310.24	215.61	121.76	27.90
	Agency Fees	646.02	516.82	387.61	258.41	129.20
		4.91	4.91	4.91	4.91	4.91
	<b>Total Loans</b>					
	Gross loan - Opening	182268.86	182268.86	182268.86	182268.86	182268.86
	Cumulative repayments of loans upto previous year					
	Net loan - Opening	86496.01	103998.09	121500.17	139002.25	156504.33
	Add: Drawal (s) during the year	96330.34	78828.26	61326.18	43824.10	26322.02
	Less: Repayment (s) of loans during the year	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	17502.08	17502.08	17502.08	17502.08	16572.02
	Average Net loan	78828.26	61326.18	43824.10	26322.02	9750.00
	Interest on loan	87579.30	70077.22	52575.14	35073.06	18036.01
	<b>Weighted average Rate of Interest on loan</b>	<b>4.850%</b>	<b>4.927%</b>	<b>5.027%</b>	<b>5.248%</b>	<b>5.933%</b>





Annexure B

Sl. no. as per Annexure-B to petition	Description of Assets / Works	Purchase order / Service order (In Rs.) (FY 2018-19)	Commercial offer received from OEM / Equivalent Supplier (In Rs.)	Remarks
1	Upgradation of Excitation System for Unit-1, Unit-2, Unit-3	85,64,440	-	
2	Implementation of FGMO / RGMO Enabled Electronic Governor for Unit-1, Unit-2 & Unit-3	52,69,743	-	
3	Installation of Carbon Dust Collection System (CDCS) for Unit-1, Unit-2, Unit-3	-	42,91,200	
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)	19,37,560	-	
5	Procurement of Articulating Boom Lift, (Upto Height- 15 Meter)	17,87,700	-	
6	Procurement of Bearing (Generator and Turbine Bearing) Oil Filtration Plant	-	10,80,000	
7	Procurement of Cooling Water Pump Sets (Vertical Turbine Pump)	12,76,800	-	
8	(a) Upgradation of Position Sensors for Pelton Turbine Nozzles (Temposonic Sensors) for Unit-1 and Unit-3	15,74,120	-	
	(b) Upgradation of Position Sensors for Pelton Turbine Deflectors (Temposonic Sensors) for Unit-1, and Unit-3		-	
9	Upgradation of Alstom Make EPAC 3000 Series, Distance Protection Relays for 400 kV Outgoing Feeders	4,30,700	-	
10	Procurement of Dewatering Pumps (Submersible Type)	2,12,296	-	
11	Design, Supply, Installation and Commissioning of Night Glow Safety Signage & Stainless Steel Hand Rail Inside Power House Complex	7,20,712	2,89,902	PO Amount Given for SS Railing (PO Copy Attached), Commercial offer given for Safety Signage's
12	Procurement of Welding Fume Extractor System	1,40,013	-	
13	Procurement of Uninterrupted Power Supply for Plant Auxiliaries (15 KVA Inverter)	1,23,900	-	
	<b>Total</b>	<b>2,20,37,984</b>	<b>56,61,102</b>	
	<b>Grand total</b>		<b>2,76,99,086</b>	





## SERVICE ORDER

ANNEXURE- B1

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

Vendor Code	: 0010026565
Name	: <b>ABB INDIA LIMITED</b>
Address	: Sy.# 88/3 & 88/4,Kasaba Hobli, Basavanahalli Villa
Ph.No	: BANGALORE-562123-Karnataka
Fax No.	: 080-22946928
E-mail	: 080-22946600
PAN NO	: chandrashekar.shetty@in.abb.com
Vendor GST	: AAACA3834B
	: 29AAACA3834B1Z4

P.O.No.:JSWHEL/2018-19/08400000218  
 P.O.Date:21.11.2018  
 Type:ECAP/A/EPH/  
 Buyer Name:Pankaj Nainta  
 Buyer Email:indents.gbsenergy@jsw.in  
 PR.No/Date:4300000652/07.06.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. Dated: & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR						
SR. NO.	SERVICE SHORT DESCRIPTION	UOM	QTY.	TOTAL VALUE	COMPLETION DATE	
1	PARTIAL UPGRADATION OF EXCITATION SYSTEM	AU	1.000	7258000	01.03.2019	
The above work contains following Services:						
	SR.NO SERVICE CODE		QTY.	UoM	UNIT PRICE	TOTAL BASIC VALUE
	1.1 3000110140		1.000	EA	7258000.00	7258000.00
	INSTL,ELECL,EXCITATION SYS CTRL PNL					
	SAC Code: 85044010					
Detail Specification as per Annexure 1						
D/ T/C: I/P 18% GST_ND - 1306440.00						
Total Duties/Taxes & Charges: I/P 18% GST_ND - 1306440.00						
UOM Description :						
AU - Activity unit , EA - each ,						
Total PO Basic Value: 7258000.00				Total Taxes / Charges : 1306440.00		
Total PO Value (In Figures):EIGHT MILLION FIVE HUNDRED SIXTY-FOUR THOUSAND FOUR HUNDRED FORTY and ZERO Indian Rupee				Total PO Value: 8564440.00		
PRICE BASIS:FOR JSWHEL Site						
Contract Period						
Start Date:22.11.2018 to End Date :01.03.2019						
Delivery Address:						
Main Store,						
JSW Hydro Energy Limited						
BASPA-II H.E.P						
Sholtu Colony, P.O. - Tapri						
District - Kinnaur						
PIN-172104						
-Himachal Pradesh ( India.)						
PAYMENT TERMS:10% AD.AG.ABG, 80% AG.DEL,10% AG.PBG						
10% advance against ABG along with the PO, 80% along with the 100% applicable taxes within 30 days from the date of dispatch. Balance 10% after commissioning or in case commissioning is delayed, payment should be made within 60 days from supply and submission of 10% PBG for warranty period.						
INSPECTION BY EIC						



P.O.No.:JSWHEL/2018-19/08400000218

<p><b>WARRANTY CLAUSE:</b> Vendor 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.</p> <p>* Warranty 18 months from supply or 12 months from installation, whichever is earlier.</p> <p>** Supervision of erection in ABB scope.</p> <p><b>DELIVERY PERIOD:</b> 14 weeks from the date of drawing approvals &amp; Manufacturing Clearance.</p> <p><b>NOTE TO SUPPLIER:</b> Refer Offer Ref: DMP-CPCSESRN18SY0447IR5 dated 12.10.2018, Partial upgradation of Excitation System.</p> <p><b>P&amp;F, Freight &amp; Insurance :</b> Inclusive <b>TO &amp; FRO Charges:</b> In ABB Scope, JSWHEL Shall provide taxi service from Chandigarh to Plant site on free of charge basis only. <b>Accommodation &amp; Fooding at site</b> will be provided by JSWHEL</p> <p><b>Liquidated Damage:</b> 0.5% per week of delay, max upto 5%, shall be applicable after 14 weeks from the date of drawing approvals &amp; Manufacturing Clearance</p> <p><b>Scope of Work:</b> As per Anx _IV_ Scope of Work.</p> <p>The EIC of this Order is Mr Ravindra Rana, Mob: 9805002260.</p> <p><b>Arbitration:</b> All disputes arising in connection with this Agreement / Purchase 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.</p> <p>Please acknowledge the PO / WO by sending the confirmation email and material dispatch / Service Execution information to commercialdes.k.gbs@jsw.in and karcham.stores@jsw.in within 3 days from receipt of this PO / WO. Phone number: +91 22 71453477 / 3442</p> <p>For Advance payment terms / Cash against Documents (CAD) please send Non Negotiable documents to email : advancedocs.gbs@jsw.in Location contact: karcham.stores@jsw.in GBS contact: commercialdesk.gbs@jsw.in Phone number: +91 22 71453477 / 3442</p> <p>After-delivery for Payment status please send email to vendorhelpdesk.gbs@jsw.in along with PO number and invoice details.</p> <p>To track payment status, please follow link : <a href="https://vendorportal.jsw.in/VENDOR/viewHome.action">https://vendorportal.jsw.in/VENDOR/viewHome.action</a> Also you can call on help line number 022-71453333 and dial Extn 1 to speak with Finance and Accounts team.</p>
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P.O.No.:JSWHEL/2018-19/0840000218

• Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY



Page No: 3 / 4

Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



P.O.No.:JSWHEL/2018-19/0840000218

**Annexure 1**  
**TECHNICAL SPECIFICATION/SERVICE SPECIFICATION**

Item No.: 1.1 Material/Service: 000000003000110140 INSTALLATION,ELECTRICAL,ITEM NAME:EXCITATION SYSTEM CONTROL PANEL;SIZE:600(W)X1200(D)X2200(H) MM;INDOOR / OUTDOOR:INDOOR;CONSUMABLE SUPPLY BY:VENDOR;HANDLING EQUIPMENT BY:VENDOR;WORKING HEIGHT:0-3 M;SHIFTING OF MATERIALS:VENDOR;ADDITIONAL INFORMATION:SUPERVISION OF ERECTION,COMMISSIONING AND TESTING



Page No: 4 / 4

Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



## SERVICE ORDER

ANNEXURE - 02

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

Vendor Code : 0010027625
Name : ANDRITZ HYDRO PVT LTD
Address : 49/5 MATHURA ROAD, VILL PRITHLA PALWAL-121102-Haryana
Ph.No : 01275 262161 63
Mb.No. : 9999693366
E-mail : deepak.raj@andritz.com
Vendor GST : 06AABCY2466R1ZR

P.O.No.:JSWHEL/2018-19/0840000189  
 P.O.Date:30.08.2018  
 Type:ECAP/A/EPH/  
 Buyer Name:Pankaj Nainta  
 Buyer Email:indents.gbsenergy@jsw.in  
 PR.No/Date:4300000653/13.06.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. Dated: & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR						
SR. NO.	SERVICE SHORT DESCRIPTION	UOM	QTY.	TOTAL VALUE	COMPLETION DATE	
1	Supply, Installation, Comm. of Governor	AU	1.000	4335883	31.12.2018	
	The above work contains following Services:					
	SR.NO SERVICE CODE		QTY.	UoM	UNIT PRICE	TOTAL BASIC VALUE
	1.1 3000109837		1.000	D1	4335883.00	4335883.00
	EREC,ELECL,DGTL GVRNR;24-60VDC;IDR SAC Code: 998736					
Detail Specification as per Annexure 1						
D/T/C: I/P 18% GST_ND - 780458.94						
Total Duties/Taxes & Charges: I/P 18% GST_ND - 780458.94						
UOM Description :						
AU - Activity unit, D1 - DAY ,						
Total PO Basic Value: 4335883.00		Total Taxes / Charges : 780458.94		Total PO Value: 5116341.94		
Total PO Value (In Figures):FIVE MILLION ONE HUNDRED SIXTEEN THOUSAND THREE HUNDRED FORTY-ONE and NINETY-FOUR Indian Rupee						
PRICE BASIS:FOR HBPCl Plant Site						
Contract Period						
Start Date:31.08.2018 to End Date :31.12.2018						
Delivery Address:						
Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )						
PAYMENT TERMS:10% Ad Ag BG & 90% w/l 30 days from receipt & accept						
1. 10% advance against ABG submission.						
2. Remaining 90% of supply portion along with all applicable taxes and duties shall be payable against proforma invoice within thirty days after receipt of material on pro-rata basis.						
3. Remaining 90% of service portion shall be released within 30 days on pro-rata basis after invoice receipt and certification by EIC.						



P.O.No.:JSWHEL/2018-19/0840000189

**NOTE TO SUPPLIER:**

SOW / BOQ as per Annex-1, attached.

1. FOR Basis/Mobalization Time: FOR HBPCCL Plant Site Basis, Freight & P&FInclusive. As per HBPCCL Requirement on Mutually agreed date.

2. Delivery/Completion Time In days:

**SUPPLY PART:**

Delivery within 4 months from drawing approval date.Andritz will submit drawing within 20 days from PO date.

**SERVICE PART:**

Supervision of dismantling, erection, testing & commissioning for replacement of New Governor panel shall be 15-20 days per unit (approx.) from the date of handing over of unit by HBPCCL.

3. Warranty / DLP: Overall liability under warrantee obligations for the supplies made will be over in 12 months from date of commissioning or 18 months from the date of dispatch of material form our works whichever is earlier. (detail as per offer, attached).

4. Liquidated Damage for delay in: 0.5% per week of delay, max upto 5% of undelivered portion of contract value.

5. Freight: Inclusive.

6. Vendor Deployed Manpower Insurance: In Vendor Scope.

7. Safety, PPE, HR Compliances etc: In Vendor Scope.

8. To & Fro:

i) To & Fro charges- Inclusive, Vendor Scope.

ii) Taxi from Chandigarh to Site and site to Chandigarh shall be provided by HBPCCL free of cost.

iii) On-site accommodation in standard AC room, local transportation will be provided by HBPCCL at free of cost to our engineers during ETC work or charge by vendor at actual.

9. Boarding , Lodging and Local Conveyance: In HBPCCL Scope.

10. This EIC of this order is Mr. Ravindra Rana (Head OMI Baspa P/House, Mob: 9805009201).

11. Other Term and Conditions as per Annex-I,II,C and H attached.

12. Please acknowledge the PO / WO by sending the confirmation email and material dispatch / Service Execution information to commercialdesk.gbs@jsw.in within 3 days from receipt of this PO / WO.  
Phone number: +91 22 71453477 / 3442

13. For Advance payment terms / Cash against Documents (CAD) please send Non Negotiable documents to email : advancedocs.gbs@jsw.in  
Location contact: karcham.stores@jsw.in

GBS contact: commercialdesk.gbs@jsw.in Phone number: +91 22 71453477 / 3422

14. After-delivery for Payment status please send email to vendorhelpdesk.gbs@jsw.in along with PO number and invoice details.

15. To track payment status, please follow link : <https://vendorportal.jsw.in/VENDOR/viewHome.action>  
Also you can call on help line number 022-71453333 and dial Extn 1 to speak with Finance and Accounts team.



P.O.No.:JSWHEL/2018-19/08400000189

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY



Page No: 3 / 4

Plant GST No.:02AAADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



**Annexure 1**  
**TECHNICAL SPECIFICATION/SERVICE SPECIFICATION**

Item No.: 1.1 Material/Service: 000000003000109837 ERECTION,ELECTRICAL,ITEM NAME:DIGITAL GOVERNOR;VOLTAGE GRADE:24-60 VDC;INDOOR / OUTDOOR:INDOOR;SIZE:794(W)X800(D)2000(H) MM;CONSUMABLE SUPPLY BY:VENDOR;HANDLING EQUIPMENT BY:VENDOR;TOOLS and TACKLES SUPPLY BY:VENDOR;SHIFTING OF MATERIALS:VENDOR;ADDITIONAL INFORMATION:SUPERVISION OF ERECTION,TESTING AND COMMISSIONING OF GOVERNOR AS AS PERSIGNED SCOPE OF WORK





## SERVICE ORDER

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

Vendor Code	: 0010027690
Name	: DEUTEK CONTROLS INDIA LTD
Address	: 105 MAHAVIR BHAWAN, COMMERCIAL COMPLEX, KARAMPURA DELHI-110015-Delhi
Ph.No	: 011 25920123 24
E-mail	: mail@deutek.in
PAN NO	: AAACD9959J
Vendor GST	: 07AAACD9959J1Z4

P.O.No.:JSWHEL/2018-19/0840000188  
 P.O.Date:29.08.2018  
 Type:ECAP/A/EPH/  
 Buyer Name:Sidhi Prasad Sakla  
 Buyer Email:indents.gbsenergy@jsw.in  
 PR.No/Date:4300000653/13.06.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. PQ/AH046/AD Dated: 10.07.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR					
SR. NO.	SERVICE SHORT DESCRIPTION	UOM	QTY.	TOTAL VALUE	COMPLETION DATE
1	SCADA UPGRADE FOR INTERFACING GOVERNOR	AU	1.000	130000	14.11.2018
The above work contains following Services:					
1.1	3000109837 EREC,ELECL,DGTL GVRNR;24-60VDC;IDR SAC Code: 998736		1.000	130000.00	130000.00
Detail Specification as per Annexure 1					
D/ T/C: I/P 18% GST ND - 23400.00					
Total Duties/Taxes & Charges: I/P 18% GST_ND - 23400.00					
UOM Description :					
AU - Activity unit , D1 - DAY .					
Total PO Basic Value: 130000.00		Total Taxes / Charges : 23400.00		<b>Total PO Value: 153400.00</b>	
Total PO Value (In Figures):ONE HUNDRED FIFTY-THREE THOUSAND FOUR HUNDRED and ZERO Indian Rupee					
PRICE BASIS:EW2 Ex-Work Delhi					
Contract Period			Start Date:29.08.2018 to End Date :14.11.2018		
Delivery Address:					
Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )					
PAYMENT TERMS:Payment In 15 days from Invoice date					
WARRANTY CLAUSE:The electronic hardware offered are covered under warranty for faulty material or workmanship, subject to its proper usage, for a period of 12 months from date of supply. (Detail as per offer, attached).					
DELIVERY PERIOD:As per HBPCL Requirement (Within 8-10 weeks.)					



P.O.No.:JSWHEL/2018-19/0840000188

**NOTE TO SUPPLIER:**

1. Refer your proposal no: PQ/AH046/Ad, Rev0 dt. 10th July 2018 for Design, Engineering, Supply & Commissioning of IEC 60870-5-104, Communication System for 01 Unit.
2. Scope of Supply and Scope of technical service as per offer attached at Anx: "A"
3. Deputation of Engineer for 02 man-days, for commissioning activities: Included in the quoted prices.
4. Deputation of Engineer for commissioning activities for beyond above period, if required: Shall be paid extra @ 10,000/- per man-day.
5. TO & FRO: Total charges towards travelling from Ex-Work to Chandigarh: In Deutek Scope.
6. TO & FRO travelling: From Chandigarh to HBPCL Site and HBPCL site to Chandigarh: In HBPCL Scope
7. Boarding, Lodging and Local Conveyance at site: In HBPCL Scope
8. TRANSIT INSURANCE: IN HBPCL SCOPE
9. FREIGHT: IN HBPCL SCOPE
10. Engineer-in-Charge of this order is Mr.Ravinder Rana, (Head Baspa II), Mob: +91 980 500 2260, Email: ravindra.rana@jsw.in
11. Other terms & Condition as per Annexure (I) & (II), (C) & (H)
12. The major terms & Conditions shall be as mentioned on the body of the order. In case there is an overlap of terms and conditions mentioned elsewhere, the one mentioned on the body of the Purchase Order shall prevail.
13. Any reduction / savings in taxes & duties on Seller's Input cost due to Implementation of GST shall be passed on to HBPCL.

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY



Page No: 2 / 3

Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051

P.O.No.:JSWHEL/2018-19/0840000188

### Annexure 1 TECHNICAL SPECIFICATION/SERVICE SPECIFICATION

Item No.: 1.1 Material/Service: 000000003000109837 ERECTION,ELECTRICAL,ITEM NAME:DIGITAL GOVERNOR;VOLTAGE GRADE:24-60 VDC;INDOOR / OUTDOOR:INDOOR;SIZE:794(W)X800(D)2000(H) MM;CONSUMABLE SUPPLY BY:VENDOR;HANDLING EQUIPMENT BY:VENDOR;TOOLS and TACKLES SUPPLY BY:VENDOR;SHIFTING OF MATERIALS:VENDOR;ADDITIONAL INFORMATION:SUPERVISION OF ERECTION,TESTING AND COMMISSIONING OF GOVERNOR AS AS PERSIGNED SCOPE OF WORK

**Additional Specifications :**

Design, Engineering, Supply & Commissioning of IEC 60870-5-104 communication system for 01 Unit as per Scope of Supply & Scope of Technical Services as per attached Anx - "A"



Page No: 3 / 3

Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



ANNEXURE-B3**MERSEN**

**Quotation Number: M/MDC/BQ/DB/BASPA/DEC 18/3**  
**Dated – 10<sup>th</sup> Dec ,18**

Baspa (Stage II) Hydro-Electric Power Station  
 HBPCCL, Sholtu, Post Tapri  
 Tehsil – Nichar, Dist - Kinnaur  
 HP-172104

Dear Sir

With reference to the discussion , we are pleased to submit the Budgetary quote for Designing, Supply and Installation of Mersen Carbon Dust Collection System for Baspa Hydro Project one unit Siemens make Hydro Generator – 100 MW as below.

**Technical offer**

**Carbon Dust Collection System (MDC) operating principle:**

Carbon Brush Dust Collection system is provided to avoid drop in insulation resistance over time due to carbon dust accumulation in the generator area , thus decreasing the risk of short circuits. The MDC system is designed to collect carbon dust near to its source of generation , near the carbon brushes, which is the best possible way to extract the Carbon Dust being generated and avoiding dust to float and accumulate inside the Slip ring chamber and generator winding.

For MDC, each brush-holder needs to be equipped with a polymer suction shoe, to collect the carbon dust with high efficiency to an external dust collector. Tubes are connected from the polymer suction shoe to a manifold. Each tube is carefully insulated to avoid any short circuit.

The dust collector is designed to work continuously 24 hours a day with the machine .

**The Carbon Dust Collection Systems**

- Collects dust from the source, near the brushes.
- Provide protection against carbon dust and short circuit between active coils and ground.
- Low noise operation.

For a good efficiency:

- No oil or grease should be there near the MDC or the carbon brushes (major clogging risk).
- Out of round has to be less than 0.03 mm on one round, one wave.

**MERSEN India Private Limited**

REGD OFFICE: 11, BARABANKI ROAD, AGRA, INDIA

5, SCHEME 5 AREA INDUSTRIAL AREA, BANGALORE – 560053, INDIA

T : 49140390, 3094671, 3124125 F : 9110380, 30946730

[WWW.MERSEN.COM](http://WWW.MERSEN.COM)

CIN : U1429HKA159571031 8166





### Scope

The scope of the job includes designing the above Carbon Brush Dust Collection system, supply of the (MDC) system, supply of Carbon Brush, Brush Holder installed with dust extraction system, fitment of the carbon brush with proper seating of brush contact surface, Diagnostic check and reporting on Slip ring profile, surface roughness.

### Technical data:

#### A) Dust Collection System

##### a. Properties of dust exhaust system :

Three phase mobile industrial vacuum with side channel blower for liquids & solids.

- 3 Phase vacuum units
- Container release system for emptying operation
- Gravity unload (GU)
- Efficient filter cleaning system
- L Class filters (this last on the GU FM version)
- Filter blockage level monitoring
- Container with castors & handle
- Electrical Filter Shaker
- Highly maneuverable
- Heavy duty tubular steel body and painted with epoxy powder to prevent corrosion.

##### b. Technical Specifications

- IP Protection Class - 55
- Insulation Class - F
- Motor rated power (KW) – 7.5
- Airflow without hose (L/sec) - 534
- Vacuum max (mBar) - 430
- Main filter type – L class Polyester star filter

#### B. Properties of Suction Hose:

Semi-rigid silicone-free hose - non-electrically-conductive. Working temperature: min - 40°C / max +100°C

#### C. Brush Holders:

Constant Spring Pressure Brush holder with pocket Size 25mm x 32mm jacketed for dust exhausting system, suitable for the existing brush holder rocker system.



**MERSEN India Private Limited**

FARUFR CARENIE I DRRAINF INDIA PVT LTD

5, BONMASANDRA INDUSTRIAL AREA, BANGALORE – 560099, INDIA

T : +91(0)80 30994612/24/25 – F : + 91(0)80 30946130

[www.mersen.com](http://www.mersen.com)

CIN : U14294KA1995PTC016996

# MERSEN

i) **Brush Holder Body:** Brush holder shall be manufactured by gravity metal die-casting and shall conform to respective material grade as per the type of Brush holder covered under the specification. The physical and chemical properties of the material shall conform to material of the brush holder referred in the drawing. The pockets into the brush holder should be made by broaching process with tolerances as mentioned in the relevant drawing.

ii) **Materials – Brass Alloy (CuZn38Al)**

iii) **Chemical Composition:** The Brush holder body shall be manufactured by Gravity die-casting as per following specification

SL.No	Metal	Min	Max
1	Copper	59%	64%
2	Zinc	Remainder	
3	Aluminium	0.1%	0.8%
4	Impurities		

iv) **Physical properties:** Physical properties of the brush holder body manufactured by brass alloy conforming to following physical properties –

Hardness (BHN)	Tensile Strength (N/mm <sup>2</sup> )	Yield Strength (N/mm <sup>2</sup> )
min 75	min 380	min 130

v) **Brush Holder Pocket:** Brush Holder pocket should be made by broaching machine and shall conform to tolerance grade E10.

vi) **Constant Pressure Spring:** The material of spring should conform to DIN 17224 having steel grade X12CrNi17 7 or equivalent. Brush Holder Spring pressure within the range of 180 cN/cm<sup>2</sup> ± 10%

**D. Carbon brushes:**

Supply of Carbon Brush - as per specified grade details.

Grade: EG34D  
 Size: 25X32x64mm  
 Family: Electro Graphite.  
 Allowable current density: 12 A/cm<sup>2</sup>  
 Maximum linear speed: 50m/s





#### **E. Installation**

Mersen MDC installation need complete shutdown of the unit, necessary electrical ,mechanical and civil work support to set up the system & the electrical connection to the network will be provided by Baspa –II HEP.

Mersen will deploy 3 Expert technicians/ engineer. Baspa – II HEP need to provide necessary manpower, electrical power and service support. The Installation time is approximately 5 to 7 working days.

#### **F. Warranty**

We warrant that the goods will be free from manufacturing defects and workmanship for the period of twelve months only from the date of commissioning.

- a) Vacuum system and parts: One year.
- b) Brush Holder & Springs: One year.
- c) Carbon Brush being a consumable will last for its normal operating life under normal operating conditions.
- d) Other components: 3 months.

The material has to be stored properly avoiding contamination from corrosive atmosphere, water and its vapour etc..

#### **G. References:**

Mersen have proven records of supplying similar equipment's globally to various Hydro Electric Plants and Hydro Generators OEMs. The list is attached for reference

#### **H. Bill of Materials (for one 100MW Generator)**

- 1) Carbon Dust Collection Assembly – An integrated Dust Collection System with the Dust exhaust System and Brush holders equipped with polymer suction enclosure, special plastic flexible piping with different diameters, manifolds, connections, screws, separator and filter, vacuum station.
- 2) Brush Holder Assembly – Customised 24 Nos Brush Holder, Type BUNG2532 with the dust collecting polymer jacket.
- 3) Pipes, Hoses and other components as required.
- 4) Carbon Brush – 48 Nos Carbon brush in grade EG34D
- 5) Operational and Maintenance Manual – 1 No.



**MERSEN India Private Limited**

FAIRLIFR CARBOINF I ORRAINE INDIA PVT LTD

5, BOMMASANDRA INDUSTRIAL AREA, BANGALORE – 560099, INDIA

T : +91(0)80 3094612/24/25 – F : + 91(0)80 30946130

[www.mersen.com](http://www.mersen.com)

CIN : U14294KA1995PTC016996



# MERSEN

- 6) Installation - MDC installation (need complete shutdown of the unit, necessary electrical mechanical and civil work support to set up the system, the electrical connection to the network will be provided by Baspa –II HEP).
- a. Mersen will deploy 3 Expert technicians/ engineers
  - b. Installation time - 5 to 7 working days following below planning is required:
    - (i) Safety procedure, work preparation, brush-holder dismantling etc.
    - (ii) MDC installation, carbon brush contact surface seating
    - (iii) Tests, site cleaning, assistance for production start.
- 7) Service report -
- a. Installation Report
  - b. One free check after six months of Installation within the guarantee period.  
One day shut down will be required to carry the checks.

Price Terms: Ex Works, M/s MERSEN India Pvt. Ltd, Bangalore and unless otherwise stated are exclusive of taxes, duties, transportation, and demurrage at destination and bank charges. All such charges are to buyers account. The prices quoted are based on the prevailing rates of raw materials indigenous and imported and on the present rate of foreign exchange (USD and Euro), petroleum cost or cost of energy or other such charges related to direct production.

### Commercial Offer

- A. Unit Price**  
**Carbon Dust Collection System with Electrical Filter Shaker**  
**Rs. 35,76,000/- (Rupees Thirty five Lacs seventy six Thousands only)**

Price Basis – Exworks, Bangalore

### **Standard Terms & Conditions of Sales.**

- a. GST
  - i. Carbon Brush @ 18%
  - ii. Dust Collectors, Brush Holders – 18%
  - iii. Others (if any) as applicable at the time of dispatch .
- b. Other Taxes and Surcharges – To be borne by customer as applicable at the time of dispatch.
- c. SVC applicable.
- d. Packing & Forwarding Charges – 2 %
- e. Freight Charges- Extra at actuals. Will be charged in the bill.
- f. Delivery - Within 30 Weeks from the date of receipt of your technically and commercially acceptable order.
- g. The company shall not be responsible for any delay due to non-availability of power, raw materials, lock out, strike, natural calamities or reasons subject to standard force de-majeure clause



**MERSEN India Private Limited**

EARLIER CARBONE LORRAINE INDIA PVT. LTD.

5, BOMMASANDRA INDUSTRIAL AREA, BANGALORE – 560098, INDIA

T : +91 (0)80 3094612/24/25 – F : + 91(0)80 30948130

[www.mersen.in](http://www.mersen.in)

CIN : U14294KA1995PTC016996



- h. At least 60 days' written notice is required of any modification or suspension of scheduled deliveries. Any suspension will be limited to a maximum period of three months after which deliveries may be resumed at the former rate.
- i. The material will be dispatched by Road/Rail Baspa Project on freight paid basis (to be charged in the invoice) up to destination in your stores. Your purchase order must specify the Name of the transporter and accompany with waybill.
- j. Inspection- By Consignee (at our factory in Bangalore with prior intimation).
- k. Insurance – Insurance to be borne by you.
- l. Payment Terms- 30% advance with order and balance within 30 days after successful installation.
- m. Validity - This quotation will be valid up to 60 days and thereafter subject to our confirmation.
- n. Cancellation- Orders once placed cannot be altered or cancelled without our prior consent in writing and in no case if any progress has been made in the process for the material for the execution of the subject order.
- o. All disputes are subject to jurisdiction of Bangalore Court only.

#### Statutory Details

GST No: 29AAACE3191K1ZF  
PAN No: AAACE3191K

Bank Details- BNP PARIBAS,  
A/C No- 09067-011011-00120  
Type of account – Current A/c  
Address– Landmark Building, M G Road, Bangalore- 001  
Code of Bank – BNPA 0009067

Thanking You .,

For Mersen India Private Limited ,



( M.M.Agarwal )  
Regional Marketing Manager



**MERSEN India Private Limited**

FAIRFIER CARBONE LORRAINE INDIA PVT LTD

5, BOMMASANDRA INDUSTRIAL AREA, BANGALORE - 560099, INDIA

T : +91(0)80 3094612/24/25 - F : + 91(0)80 30946130

WWW.MERSEN.COM

CIN : U14294KA1995PTC016995

ANNEXURE - B4



## PURCHASE ORDER

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

Vendor Code : 0010032649	Name : ELGI SAUER COMPRESSORS LIMITED
Address : ELGI INDUSTRIAL COMPLEX III, SINGANAILLUR	COIMBATORE-641005-Tamil Nadu
Ph.No : 04222258955	Mb.No. : 9560074044
E-mail : anujkumar@elgi.com	PAN NO : AACCE0460H
Vendor GST : 33AACCE0460H1Z5	

P.O.No.:JSWHEL/2018-19/0840000203  
P.O.Date:20.10.2018  
Type:ECAP/A/EMT/4602002083  
Buyer Name:Pankaj Nainta  
Buyer Email:indents.gbsenergy@jsw.in  
PR.No/Date:4300000721/24.07.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. ENQ000286 Dated: 22.08.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR						
SR. NO.	ITEM CODE DESCRIPTION	UOM	QTY.	Over. Del%	UNIT PRICE	TOTAL DELIVERY SCHEDULE (Date - Qty)
1	2100529130 CMPRSR,INDSTL,AIR,RCPRCTNG,FOUR,1450 RPM	EA	1.000	0.0	1,642,000.00	1642000 1937560 27.01.2019
Detail Specification as per Annexure 1						
D/T/C: IGST_ND @ 18 % - 295560.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 84149090						
Total Duties/Taxes & Charges: IGST_ND @ 18% - 295560.00						
UOM Description : EA - each ,						
Total PO Basic Value : 1642000		Total Taxes / Charges :295560.00		Total PO Value : 1937560		
Total PO Value (In Figures):ONE MILLION NINE HUNDRED THIRTY-SEVEN THOUSAND FIVE HUNDRED SIXTY and ZERO Indian Rupee						
PRICE BASIS:FOR JSW BASPA-II, Site-BASPA						
Delivery Address: Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )						
Insurance Type : By Vendor Freight Type : Freight Pre Paid Ins policy No :						
PAYMENT TERMS:20%AdvABG,70%agt supMat,10%Suc.com ofPBG. 20% Advance against ABG 70% against supply of material with in 07 days 10% aginst PBG ( I.e DLP 12 months from the date of commissioning)						
INSPECTION: By EIC						
WARRANTY CLAUSE:12 months from date of commissioning or 18 months from date of invoice, whichever is earlier						
DELIVERY PERIOD:14 Weeks from the date of drawings & Document approval						



**NOTE TO SUPPLIER:**

LD: Delay in supplies and completion of the Contract shall attract LD. If the Contractor fails to attain "Completion of the Facilities" within the Time for Completion or any extension thereof due to reasons attributable to the Contractor, the Client shall recover the amount of Liquidated Damages, not by way of penalty, but by making deductions from the Contractor's account or by encasement of Contractor's Bank Guarantees at the rate of 0.5% per week of delay or part thereof of the Contract Price, paid or payable to the Contractor, excluding taxes and duties up to a maximum of 7.5% of the Contract Price, paid or payable to the Contractor excluding taxes and duties. The Liquidated Damages shall in no way relieve the Supplier from completing the Works and discharging all its other obligations under the Contract provided however that the above mentioned Liquidated Damages are the Supplier's obligation to financially compensate the Company in case of delay.

1. Compressor WP 4325 Basic Technical Specification & Scope of supply:

Limited to Reciprocating compressor motor & starter cum control panel( wall mounted) Air pressure tank is not in our scope of supply since it is already installed at project site

2. Scope of work :  
Annexure -A attached

3. To & Fro Charges : Vendor Scope

4. Boarding & lodging : JSW scope ( food will be on chargeable basis)

5. EIC of this order is Mr Satyender Sinha

6. Limit of Liability: i) Notwithstanding anything to the contrary , neither Party shall in any event, whether under and / or in connection with this Contract or the performance or non-performance thereof or as a result of breach of this Contract, breach of warranty, misrepresentation, indemnity, tort (including negligence), statute or the applicable law, be responsible or held liable towards the other for any indirect and / or consequential loss or damage, including but not limited to incidental, prospective, remote, special or speculative damages

ii) Notwithstanding anything to the contrary , the CONTRACTOR's cumulative maximum liability whether under and/or in connection with this Contract or due to delay in delivery of Services or due to late deployment of supervisors and / or the performance or non-performance thereof or any incidental thereto or as a result of any breach of contract, warranty, patent infringement, including termination of this Contract by the CLIENT, misrepresentation, indemnity, tort (including gross negligence), statute or the applicable law, shall in no event exceed ten per cent (10%) of the Contract Price)

7. Erection and Commissioning: Included in the price for a maximum of 3 man days with training for maximum 01 day at site covering max 06 person.

8. Exclusions:

- a. All external Piping, fittings & civil excluded from scope of supply.
- b. Fabrication, material handling, Loading & unloading at site, retro fitment work excluded from scope of supply.

Price Breakup

- (a) Compressor unit : Rs 16,35,000.00 ( Including supply erection, commissioning & testing)
- (b) Mandatory Spare : Rs : 7000/= ( Filter element Qty = 01 No & Compressor Oil Rarus 427/ corona P100 qty 6 Ltrs)

**FOR ADVANCE PAYMENT:**

Please acknowledge the PO / WO by sending the confirmation email and material dispatch / Service execution information to commercialdesk.gbs@jsw.in within 3 days from receipt of this PO / WO.  
Phone number: +91 22 71453477 / 3442.

For Advance payment terms / Cash against Documents (CAD) please send Non Negotiable documents to email : advancedocs.gbs@jsw.in  
Location contact: karcham.stores@jsw.in





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P.O.No.:JSWHEL/2018-19/08400000203

GBS contact: commercialdesk.gbs@jsw.in Phone number: +91 22 71453477 / 3422.

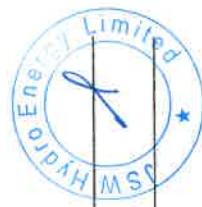
For After-delivery Payment status please send email to vendorhelpdesk.gbs@jsw.in along with PO number and invoice details.

To track payment status, please follow link : <https://vendorportal.jsw.in/VENDOR/viewHome.action>  
Also you can call on help line number 022-71453333 and dial Extn 1 to speak with Finance and Accounts team.

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY



Page No: 3 / 7

Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051

P.O.No.:JSWHEL/2018-19/0840000203

**Annexure 1**  
**TECHNICAL SPECIFICATION/SERVICE SPECIFICATION**

Item No.: 1 Material/Service: 000000002100529130  
COMPRESSOR,INDUSTRIAL,MEDIA:AIR,TYPE:RECIPROCATING,CAPACITY / FLOW RATE:35 M3/HR,DISCHARGE  
PRESSURE:200 BAR,DISCHARGE TEMPERATURE:  
0-30 DEG C,NO OF STAGES:FOUR,MAX SPEED (RPM):1450 RPM,DRIVE:BELT DRIVE,TANK CAPACITY:500  
LTR,POWER:15 KW,VOLTAGE:415 V,INLET PRESS  
URE:1.013 BAR



Page No: 4 / 7

Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051

**STANDARD TERMS AND CONDITIONS****Packing & Forwarding:**

Included in the prices, if not mentioned separately in order.

**Value Added Tax/Service Tax:**

You hereby are affirmed that all your rates and prices as contained in the supply are inclusive of all rates, duties levies and taxes as may be imposed by the Government of India / Government of Himachal Pradesh or any other appropriate Authority from time to time, unless otherwise as specified in this purchase orders.

**Entry Tax:**

Shall be borne by buyer

**Statutory variation In taxes & duties:**

Statutory variation in taxes & duties and/or imposition of any new tax/duty during the validity of the Order shall be to our account only in-case, if the break-up of taxes are mentioned in the Order.

**Road Permit (Way Bill):**

Necessary Way bill, if applicable shall be provided by us.

**Price Escalation /De-escalation:**

The negotiated prices, terms & conditions shall remain fixed, firm & binding till complete execution of the order.

**Dispatch:**

Material is in good packed condition to be consigned to the Manager (Stores).

**Documents Required For Payment:**

The following documents are required in original: 1. Delivery Challan and 2. Invoice. The stipulated payment shall be made only on receipt of these documents and on satisfactory receipt and acceptance of materials at site.

**Submission of Invoice:**

Your invoice (In duplicate) has to be addressed & submitted to the Manger (Stores) who will process your invoices for payment.

**Responsibility of completeness:**

- (a) Any scope of services which has not been specifically mentioned above but required for the completion of this order shall be rendered free of cost, unless expressly excluded in this order.
- (b) Any approval by us at any stage for any supply by you shall not relieve you of your obligations under this order.

**Force Majeure:**

1. Force Majeure means an event or circumstance or combination of events and circumstances beyond the reasonable control of the Party that wholly or partly prevents or unavoidably delays an affected Party in the performance of its obligations under this Order, which amongst other, include Act of God, Natural Calamity, war, etc.
2. If either Party is prevented from performing any of its obligations under this Order by such cases of Force Majeure, it shall give written notice to the other Party within 14 (fourteen) days of such occurrence to the events, describing the event and its effects supported by authentic evidences that are verifiable. The affected Party shall, having given notice, be wholly or partially excused performance of such obligation for so long as such Force Majeure prevents it from performing them. No Party shall have any claim/ compensation for the loss incurred due to the force majeure conditions.
3. The affected Party shall use all reasonable efforts to minimize any delay in its performance of the Order as a result of force Majeure Events.
4. The Party unable to perform this Order due to the effect of Force Majeure Events occurrence may, after consultation with the other Party, extend the duration of this Order by a period commensurate to the time actually lost due to the Force Majeure occurrence. The other Party shall not claim compensation for the loss thus incurred.
5. In case of an extension up to 90 (Ninety) days in the performance of this Order due to the effect of the Force Majeure occurrence, both Parties shall have friendly consultation on the performance of this Order or termination of the Order as provided in this Order.
6. Notwithstanding the foregoing, Force Majeure shall not apply to any delay, default or failure (direct or indirect) in procuring the components and /or the materials for the manufacture of the Equipment by the Supplier; and/or any delay, default or failure (direct or indirect) by the Supplier in any agreement entered into by it with any party including sub-contractor.



P.O.No.:JSWHEL/2018-19/0840000203

**Termination of Contract / Right of Acceptance:**

- 1) If the material is delivered beyond delivery time and is not as per quality parameters cited in quotation or discussed at the time of negotiation, we will have the right to reject the material or terminate / cancel the order without assigning any reason whatsoever.
- 2) In Case of reasonable doubt, the quality of the material shall be got tested in any reputed Third Party Laboratory at your cost.
- 3) We reserve the right to reject the material in case of detection of manufacturing defect at any stage of construction.
- 4) In the event of non adherence to the schedule and if deemed fit by the Engineer-in-Charge, we shall have right to offload the job and engage another supplier to complete the job at your risk & cost.

**Arbitration:**

- 1.1 It is expressly agreed by and between the Parties that:
- 1.2 any dispute arising out of or in connection with this Order including any question regarding the existence, interpretation, validity, frustration, notation, scope of the Order, performance of the Order, breach of Order, termination and consequences of termination of this Order shall be referred to and finally resolved by arbitration in accordance with the Rules of Indian Council of Arbitration (the "Rules") as amended and in force, from time to time;
- 1.3 This Order shall be exclusively governed by Indian law;
- 1.4 The dispute shall be decided by an Arbitral Tribunal consisting of three members, who shall be appointed in accordance with the Rules;
- 1.5 The costs, charges, fees and expenses of the arbitrator(s) shall be borne equally by the Parties to the arbitration, and save as aforesaid, the Parties shall bear its own legal and others costs;
- 1.6 The venue of such arbitration shall be in Mumbai only;
- 1.7 The courts at Mumbai alone shall have the exclusive jurisdiction to hear matters pertaining to the arbitration or any matter related thereto;
- 1.8 Arbitration proceedings shall be conducted in English language; and
- 1.9 Performance under the Order shall be continued during the arbitration proceedings unless otherwise directed by the Purchaser in writing or unless the matter is such that the performance cannot be possibly continued until the decision of arbitrator is obtained.

**Acceptance of Order:**

You are requested to confirm your unconditional acceptance of this order by signing the acceptance receipt attached with this order within 01 days of issuance of this order.

**EHS requirement:**

- (a) M/C Guarding including back-guarding :( for all rotating equipment)
  1. Guarding to ensure non-contact of hand in moving parts of the machine from any position.
  2. Exposed shaft drives to have fixed guarding
  3. Mesh guards to be of finger proof.
  4. All guards , which are not fixed, should be interlocked
  5. Access to Rotary Air locks to be prevented by positive interlocks
  6. Exhaust Fans to have guarding enclosure on either side.
- (b) Electrical Safety in Panels :( for all electrical panels)
  1. Padlock provision for doors
  2. Shrouding at the rear side against Busbar live contacts
  3. To comply with BS: 6423: 1983 & BS6626: 1985 standards on switch gear & Control Gear and IEE Wiring regulations BS 7671
  4. Equipment to have current state-of-art safety features eg. Earthing, fuses,RCCBsetc
  5. Equipment is labeled as per international colour& sign codes
  6. No taped joints in the wiring. Use of adaptors is allowed
  7. Use of MCBs in place of Switch fuse Units
  8. Double Earthing Provision for all mechanical & electrical equipment
- (c) Noise: (for all rotating equipment):Equipment should not to emit noise 70 dB(A) from 1 mtr distance from the machine
- (d) Asbestos:( for all packing , glands etc ) : Your products should not have traces of Asbestos in any form in the Item
- (e) Chlorofluorocarbons (CFCs) & Ozone Depleting Substances (ODS):( for all oils, lubricants and equivalent type ) Your products should not have traces of CFCs and its derivatives and ODSs in any form in the Item.
- (f) PolyChlorinatedBiphenyl (PCB):( for all oils , lubricants and equivalent type ) Your products should not have PCB in any form found in electrical transformers, capacitors, light ballasts)
- (g) Imported Equipment / Machinery: Equipment/ Machinery to have certification ' CE' (Certificate` the Europe )
- (h) Packaging Materials: 1. Total amounts of Hg,Pb,Cd and Cr6 In any packaging material does not exceed 100ppm and the packaging material

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Plant GST No.:02AADCH3821LIZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051





P.O.No.:JSWHEL/2018-19/0840000203

should not be bleached by a process involving chlorine.

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051





## PURCHASE ORDER

ANNEXURE-05

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

Vendor Code : 0010028495	Name : VANJAX SALES PVT LTD	INDUSTRIAL
Address : 343, SIDCO ESTATE, AMBATTUR	CHENNAI-600098-Tamil Nadu	
Ph.No : 044-42821000		
Mb.No. : 9538993100		
Fax No. : 044-54985700		
E-mail : ravi@vanjax.com		
PAN NO : AAACV2908B		
Vendor GST : 33AAACV2908B1ZX		

P.O.No.:JSWHEL/2017-18/0840000135  
 P.O.Date:16.12.2017  
 Type:ECAP/A/EMT/4602002083  
 Version No.:2Date:26.11.2018  
 Buyer Name:Dhani Ram  
 Buyer Email:dhanni.ram@jsw.in  
 PR.No/Date:4300000451/03.06.2017

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. EMAIL Dated: 20.09.2017 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR							
SR. NO.	ITEM CODE DESCRIPTION / SPECIFICATION	UOM	QTY.	Over. Del%	UNIT PRICE	TOTAL VALUE	DELIVERY SCHEDULE (Date - Qty)
1	3200004956 BOOM,LFTNG,13 m;VANJAX,VXAPF SPV BO 13X	EA	1.000	0.0	1,515,000.00	1515000	1787700 26.04.2019
BOOM,LIFTING,TYPE:Z BOOM/ARTICULATING;WORKING HEIGHT:13 M;MAXIMUM HORIZONTAL OUTREACH:4.5 M;LIFT CAPACITY:150 KG;POWER SOURCE:ELEC TRIC;MAKE:VANJAX,MODEL:VXAPF SPV BO 13X Additional Specifications :Self Propelled - Aerial Access Platform (Model No: VXAPF SPV-BO-15X) D/T/C: IP 18% IGST_ND @ 18 % - 272700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 84279000							

Total Duties/Taxes & Charges: IGST\_ND @ 18% - 272700.00

UOM Description :

EA - each ,

Total PO Basic Value : 1515000	Total Taxes / Charges :272700.00	Total PO Value : 1787700
Total PO Value (In Figures):ONE MILLION SEVEN HUNDRED EIGHTY-SEVEN THOUSAND SEVEN HUNDRED and ZERO Indian Rupee		
PRICE BASIS:FOR JSWHEL Site Kinnaur	Delivery Address: Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )	Insurance Type : By Vendor Freight Type : Freight Pre Paid Ins policy No :

PAYMENT TERMS:

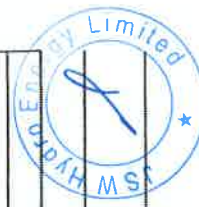
- 40% advance against ABG (Advance Bank Guarantee) valid till delivery + 01 month for claiming.
- 50% payment shall be paid against submission of dispatch proof i.e. (L.R Copy + Invoice Copy)
- 10% of the order value shall be paid after commissioning and submission of 10% PBG of Equivalent amount valid till DLP + 01 month for claiming.

WARRANTY CLAUSE:12 months from the date of commissioning or 18 months from the date of supply, whichever is early

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Corporate Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



**NOTE TO SUPPLIER:**

1. Refer offer no: VXQ/NDL/4093/2018 dt. 20.09.2011 (Model NO: VXAPP-SPV-BO-15X)

2. **STANDARD TERMS & CONDITION: -**

Price Basis: JSWHEL SITE SHOLTU - KINNAUR (H.P.)

Delivery Schedule: 05 months from the date of Receipt of Purchase Order.

Completion Period for Commissioning: Within 01 months from the date of dispatch of equipment.

Liquidated Damages: Delay in supplies and completion of the Contract shall attract LD. If the Contractor fails to attain "Completion of the Facilities" within the Time for Completion or any extension thereof due to reasons attributable to the Contractor, the Client shall recover the amount of Liquidated Damages, not by way of penalty, but by making deductions from the Contractor's account or by encashment of Contractor's Bank Guarantees at the rate of 0.5% per week of delay or part thereof of the Contract Price, paid or payable to the Contractor, excluding taxes and duties up to a maximum of 5% of the Contract Price, paid or payable to the Contractor excluding taxes and duties. The Liquidated Damages shall in no way relieve the Supplier from completing the Works and discharging all its other obligations under the Contract provided however that the above mentioned Liquidated Damages are the Supplier's obligation to financially compensate the Company in case of delay.

The LD shall be applicable after 05 months (Five Months) from the date of receipt of Amended Purchase Order.

LD Calculation, if any: -

**TIME IS ESSENCE OF THIS ORDER.**

\* The "Confident Inspection call"(\*) and the PI for payment, if any, has to be given at least 17 days before the scheduled despatch date by the Vendor for the entire lot of materials, unless mentioned / agreed upon otherwise.

\* JSWHEL Inspection team shall complete the inspection within 10 days of the inspection call.

- The despatch, should be made within 7 days of our inspection clearance.

\* In total, in case the materials is offered for inspection and is accepted, then the dispatches have to be made within 17 days of date of inspection call.

\* The written / emailed date of inspection clearance from our end shall be considered as date of despatch for the purpose of LD The despatch, however, should be made within 7 days of our inspection clearance

\* For the purpose of LD Calculation, the date of receipt of materials at site shall be considered. The above time lines are to safeguard that any delay from our end shall be added to the delivery date and any delay from your end shall be considered as delay and the delayed days shall be counted accordingly for the purpose of LD.

\* LD Shall be applicable on the Basic order value.

(\*\*) Confident Inspection call: The inspection calls against which the materials stands accepted after inspection. In case the materials stand rejected during the inspection, then the date of inspection call shall be treated as invalid and considered as null and void.

Patent Liability: I) The Contractor shall save harmless and indemnify the Company from and against all claims and proceedings for or on account of infringement of any patent rights and intellectual property rights, designs, trademark or name or other protected rights in respect of any Construction Equipment, machine, work, materials or Plant used for or in connection with the Works or any of them and from and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. Except where otherwise specified, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other construction materials required for the Works.

II) In the event of any claims made under or action brought against the Company in respect of any such matters as aforesaid, the Contractor shall be immediately notified thereof and the Contractor shall be at liberty, at his own expense, to settle any disputes or to conduct any litigation that may arise there from. Provided that the Contractor shall not be liable to indemnify the Company if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge in this behalf.



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**TRANSIT INSURANCE: IN VENDOR'S SCOPE**

**Defect Liability Period:** 12 months from the date of commissioning or 18 months from the date of supply, whichever is early.

**Test Certificate:** To be provided for all supplies

**Inspection / Testing:** As per JSWHEL's discretion / As mentioned in RFQ / as per mutually agreed schedule. JSWHEL shall bear the cost of expenses (i.e. to & fro travel, accommodation) for carrying out the inspection at your works.

**Arbitration:** As per Arbitration and Conciliation Act, 1996 by or any subsequent modifications and amendments thereof.

**3. Engineer-In-Charge** of this order is Mr. Ravindra Rana, Dy General Manager

**4. The major terms & Conditions** shall be as mentioned on the body of the order. In case there is an overlap of terms and conditions mentioned elsewhere, the one mentioned on the body of the Purchase Order shall prevail.

**5. Loding, Boarding for commissioning team at site:** Vendor Scope,(JSWHEL may provide accommodation, boarding facility subject to availability on debitable basis)

**6. TO & FRO Travelling for commissioning team:** Vendor Scope.

**7. Any reduction / savings in taxes & duties on Seller's input cost due to implementation of GST shall be passed on to JSWHEL**

Thanking You  
Yours sincerely,

**For JSW Hydro Energy Limited**



**AUTHORIZED SIGNATORY**



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**Plant GST No.:** 02AADCH3821L1ZU,**PAN:**AADCH3821L, **CIN:**U40101HP2014PLC000681,  
**COMMISSIONERATE:**CHANDIGARH-1, **RANGE:**SHIMLA, **DIVISION:**SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



**STANDARD TERMS AND CONDITIONS****Packing & Forwarding:**

Included in the prices, if not mentioned separately in order.

**Value Added Tax/Service Tax:**

You hereby are affirmed that all your rates and prices as contained in the supply are inclusive of all rates, duties levies and taxes as may be imposed by the Government of India / Government of Himachal Pradesh or any other appropriate Authority from time to time, unless otherwise as specified in this purchase orders.

**Entry Tax:**

Shall be borne by buyer

**Statutory variation in taxes & duties:**

Statutory variation in taxes & duties and/or imposition of any new tax/duty during the validity of the Order shall be to our account only In-case, if the break-up of taxes are mentioned in the Order.

**Road Permit (Way Bill):**

Necessary Way bill, if applicable shall be provided by us.

**Price Escalation /De-escalation:**

The negotiated prices, terms & conditions shall remain fixed, firm & binding till complete execution of the order.

**Dispatch:**

Material is in good packed condition to be consigned to the Manager (Stores).

**Documents Required For Payment:**

The following documents are required in original: 1. Delivery Challan and 2. Invoice. The stipulated payment shall be made only on receipt of these documents and on satisfactory receipt and acceptance of materials at site.

**Submission of Invoice:**

Your invoice (in duplicate) has to be addressed & submitted to the Manger (Stores) who will process your invoices for payment.

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- Force Majeure means an event or circumstance or combination of events and circumstances beyond the reasonable control of the Party that wholly or partly prevents or unavoidably delays an affected Party in the performance of its obligations under this Order, which amongst other, include Act of God, Natural Calamity, war, etc.
- If either Party is prevented from performing any of its obligations under this Order by such cases of Force Majeure, it shall give written notice to the other Party within 14 (fourteen) days of such occurrence to the events, describing the event and its effects supported by authentic evidences that are verifiable. The affected Party shall, having given notice, be wholly or partially excused performance of such obligation for so long as such Force Majeure prevents it from performing them. No Party shall have any claim/ compensation for the loss incurred due to the force majeure conditions.
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- Notwithstanding the foregoing, Force Majeure shall not apply to any delay, default or failure (direct or indirect) in procuring the components and/or the materials for the manufacture of the Equipment by the Supplier; and/or any delay, default or failure (direct or indirect) by the Supplier in any agreement entered into by it with any party including sub-contractor.



P.O.No.:JSWHEL/2017-18/0840000135

**Termination of Contract / Right of Acceptance:**

- 1) If the material is delivered beyond delivery time and is not as per quality parameters cited in quotation or discussed at the time of negotiation, we will have the right to reject the material or terminate / cancel the order without assigning any reason whatsoever.
- 2) In case of reasonable doubt, the quality of the material shall be got tested in any reputed Third Party Laboratory at your cost.
- 3) We reserve the right to reject the material in case of detection of manufacturing defect at any stage of construction.
  - (b) In the event of non adherence to the schedule and if deemed fit by the Engineer-in-Charge, we shall have right to offload the job and engage another supplier to complete the job at your risk & cost.

**Arbitration:**

- 1.1 It is expressly agreed by and between the Parties that:
- 1.2 any dispute arising out of or in connection with this Order including any question regarding the existence, interpretation, validity, frustration, notation, scope of the Order, performance of the Order, breach of Order, termination and consequences of termination of this Order shall be referred to and finally resolved by arbitration in accordance with the Rules of Indian Council of Arbitration (the "Rules") as amended and in force, from time to time;
- 1.3 This Order shall be exclusively governed by Indian law;
- 1.4 The dispute shall be decided by an Arbitral Tribunal consisting of three members, who shall be appointed in accordance with the Rules;
- 1.5 The costs, charges, fees and expenses of the arbitrator(s) shall be borne equally by the Parties to the arbitration, and save as aforesaid, the Parties shall bear its own legal and others costs;
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You are requested to confirm your unconditional acceptance of this order by signing the acceptance receipt attached with this order within 01 days of issuance of this order.

**EHS requirement:**

- (a) M/C Guarding including back-guarding :( for all rotating equipment)
  1. Guarding to ensure non-contact of hand in moving parts of the machine from any position.
  2. Exposed shaft drives to have fixed guarding
  3. Mesh guards to be of finger proof.
  4. All guards , which are not fixed, should be interlocked
  5. Access to Rotary Air locks to be prevented by positive interlocks
  6. Exhaust Fans to have guarding enclosure on either side.
- (b) Electrical Safety in Panels :( for all electrical panels)
  1. Padlock provision for doors
  2. Shrouding at the rear side against Busbar live contacts
  3. To comply with BS: 6423: 1983 & BS6626: 1985 standards on switch gear & Control Gear and IEE Wiring regulations BS 7671
  4. Equipment to have current state-of-art safety features eg. Earthing, fuses,RCCBsetc
  5. Equipment is labeled as per International colour& sign codes
  6. No taped joints in the wiring. Use of adaptors is allowed
  7. Use of MCBs in place of Switch fuse Units
  8. Double Earthing Provision for all mechanical & electrical equipment
- (c) Noise: (for all rotating equipment):Equipment should not to emit noise 70 dB(A) from 1 mtr distance from the machine
- (d) Asbestos:( for all packing , glands etc ) : Your products should not have traces of Asbestos in any form in the item
- (e) Chlorofluorocarbons (CFCs) & Ozone Depleting Substances (ODS):( for all oils, lubricants and equivalent type ) Your products should not have traces of CFCs and its derivatives and ODSs in any form in the item.
- (f) PolyChlorinatedBiphenyl (PCB):( for all oils , lubricants and equivalent type ) Your products should not have PCB in any form found in electrical transformers, capacitors, light ballasts)
- (g) Imported Equipment / Machinery: Equipment/ Machinery to have certification ' CE' (Certificate ' the Europe )
- (h) Packaging Materials: 1. Total amounts of Hg,Pb,Cd and Cr6 In any packaging material does not exceed 100ppm and the packaging material

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

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P.O.No.:JSWHEL/2017-18/0840000135

should not be bleached by a process involving chlorine.

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kuria Complex, Bandra (East) Mumbai 400051



ANNEXURE-B6

**AADIUSHMAA ENGINEERS PVT. LIMITED**  
SCO-6 (IInd Floor), Industrial Area, Phase-II, Chandigarh-160002  
Ph:-0172-2638387, Fax-0172-2638381, E-mail-sales@aadiushmaa.com



AEPL/107926-A/AT  
28-Dec-2018

**M/s. JSW Hydro Energy Ltd.**  
Kinnaur

**Kind Attention : Mr. Mahesh Chander Negi**

**Subject : Your Requirement of Oil Centrifuge MAB103**

Dear Sir,

Thank you for your valued inquiry. We are pleased to provide you with our techno-commercial offer for Disc stack type centrifuge Purifier / Clarifier model MAB103 for Mineral Oil purification unit.

We have supplied similar modules to various Industries for application like Lube oil purification, turbine lube oil purification, hydraulic oil cleaning.

Please find below our techno commercial proposal along with

1. Technical Data
2. Commercial Offer

Trust this in line with your requirement & look forward to receive your valued order.

Yours truly,  
For **Aadiushmaa Engineers Pvt. Ltd.**

**Manoj Kumar Jain**  
8591005566







**AADIUSHMAA ENGINEERS PVT. LIMITED**  
SCO-6 (IInd Floor), Industrial Area, Phase-II, Chandigarh-160002  
Ph:-0172-2638387, Fax-0172-2638381, E-mail-sales@aadiushmaa.com



**Index**

- 1. Design Data**
- 2. Scope Of Supply**
- 3. Exclusions**
- 4. Utility Requirements**
- 5. Prices**
- 6. Terms & Conditions**




**AADIUSHMAA ENGINEERS PVT. LIMITED**

 SCO-6 (IInd Floor), Industrial Area, Phase-II, Chandigarh-160002  
 Ph:-0172-2638387, Fax-0172-2638381, E-mail-sales@aadiushmaa.com

**1. Design Data**
**A. Installation**

Ambient Conditions	Temperature Humidity	5 to 45°C 98% non-condensing
--------------------	-------------------------	---------------------------------

Installation

Equipment designed for indoors installation

**B. Process fluid**

Lube Oil

VG 46

Throughput Capacity

1000 LPH

 Oil Inlet Condition  
 Dirty Oil

Temperature	≥ 40°C
Pump suction*	4 mwg
Free Water	5000 ppm

Oil outlet Condition

Temperature	70°C
Pump discharge	15 mwg
Free Water	500 ppm

**Notes**

- Above inlet & outlet parameters/conditions are considered while sizing / offering the Equipment.
- Complete Module will be suitable for operation in Safe Area
- \*Priming should be done & foot valve should be provided.
- Centrifuge can separate only Free water. It cannot separate emulsified / dissolved water from Oil

**Below Documents will be provided**

- Separator Module Factory Acceptance Test Report
- Std manual as per Alfa Laval Std
- GA Drawings
- Flow Diagram
- Bill of Material for Module
- Control Panel drawings




**AADIUSHMAA ENGINEERS PVT. LIMITED**

 SCO-6 (IInd Floor), Industrial Area, Phase-II, Chandigarh-160002  
 Ph:-0172-2638387, Fax-0172-2638381, E-mail-sales@aadiushmaa.com

**2. Scope of Supply**

Refer below scope for major components:

Major Items	Qty	Specification
Base Frame	1	MS fabricated Trolley base with 4 caster wheels
Separator	1	Solid Retaining type, MAB103
Motor	1	TEFC, 0.75kW,415V,3PH,50HZ, 1500 RPM(SYN), IP55
Feed / Discharge Pump	1	Built on Gear Pump with built in safety valve. Of suitable capacity.
Oil Heater	1	Direct Type,24 kW Capacity Rating suitable for 415V, 3Ph, 50Hz
Antiflood Tank	1	C S Fabricated antiflood tank of suitable capacity
Control Panel	1	Panel Including all lamps and switches and indication of all alarms Operating voltage 415V 50Hz, Control voltages:220 VAC
Strainer	1	Y type,12 Mesh SS316 Screen, SS Body
Set of Valves	1 Set	Set Of Valves with CS Body, SS INTERNALS
Set of Pressure gauge & Temp sensors	1 Set	Temp Sensors PT100 type & Pressure gauges at appropriate location in module
Flow Glass / sight Glass	1	25NB Flanged Connection
Solenoid Valve	1	1"NPT CONN., 2/2, NC, BRASS, 220VAC,50HZ, FT COIL, IP 54
Level Switch	1	HORIZONTAL SS304 FLOAT,1SPDT, IP54
Flexible Hoses	1 Set	1 Set Of inlet & outlet 3 Mtr Long Rubber Braided Flexible hoses (Flanged connections.)
Water Admixing Device	1	Loose Supply




**AADIUSHMAA ENGINEERS PVT. LIMITED**

SCO-6 (IInd Floor), Industrial Area, Phase-II, Chandigarh-160002  
 Ph:-0172-2638387, Fax-0172-2638381, E-mail-sales@aadiushmaa.com


**Module Scope**

1. Module Piping ASTM 106 Gr B, SCH 40
2. Counter Flanges.
3. The final coat of the components will be in Alfa Laval Medium Blue, similar to RAL5002 Epoxy
4. Inlet/outlet Flanged connections as per ANSI B16.5 #150.
5. Recommended spare parts and tools for commissioning.
6. Set of Operation and Maintenance Manual in English language and in accordance with Alfa Laval standard

**3. Exclusions**

The following items are **not** Included in our scope of supply (but not limited to):

- Sealing Water
- Oil
- All kind of chemicals /consumables
- Power and control cables off the module (s)
- Pipe-work off the module (s)
- Electricity
- Crane
- Civil work

**4. Utility Requirements (Customer Need to provide)**

**Water for Sealing** : 2-6 Bar  
**Power consumption (kW /Module)** : ~26.0 kW  
**Electrical Specifications** : 415Volts, 3Ph, 50Hz  
**Tolerances**  
 Frequency : ± 5%  
 Voltage : ± 10%






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Ph:-0172-2638387, Fax-0172-2638381, E-mail-sales@aadiushmaa.com


**5. Price**

Sr No	Description / Varients	Qty.	Unit price in INR Ex-works Dapodi	Total Price (INR)
1	MAB103+24kWDH+LSA+Trolley	1	10,60,000.00	10,60,000.00

The price quoted is on Ex-Works Dapodi, Pune packed basis.  
Statutory taxes /duties applicable will be charged extra at actual at the rates prevailing at the time of dispatch and will be to your account.

The Prices are net of MODVAT. The present rates of Taxes and Duties are as below:

<b>Packing</b>	:	3% of Basic Price
<b>GST</b>	:	18% of the Basic Price + Packing Value
<b>GST No.</b>	:	04AAOCA5591P1ZZ
<b>HSN Code</b>	:	84211910
<b>Transit Insurance</b>	:	Extra at actual to your account
<b>Freight</b>	:	Extra at actual to your account from Dapodi, Pune
<b>Payment Terms</b>	:	50% Advance along with PO & Balance against PI prior to dispatch from Dapodi, Pune.
<b>Delivery</b>	:	<b>20-24 Weeks</b> , ex-Pune from date of receipt of advance or drawings & QAP Approval if applicable whichever is later.
<b>Validity</b>	:	Offer valid upto 30 <sup>th</sup> January 2019 only.
<b>Warranty</b>	:	Equipment warranty is for twelve (12) months from date of Commissioning or 18 months from date of dispatch <b>(whichever is earlier)</b> . It is limited to the equipment within Alfa Laval scope and for defects in material and workmanship. This warranty specifically does not cover erosion (wear), corrosion, condition and process performance, or any other additional warranties, express or implied.
		The warranty does not cover the following: Wear & tear of bowl, rotating parts, O-rings, packing, gaskets, bearings, etc. Electrical items like bulbs / other fragile parts Consumable items like rubber parts, etc. Goods or parts damaged in transit Claims arising out of indirect damages




**AADIUSHMAA ENGINEERS PVT. LIMITED**

SCO-6 (IInd Floor), Industrial Area, Phase-II, Chandigarh-160002  
 Ph:-0172-2638387, Fax-0172-2638381, E-mail-sales@aadiushmaa.com

**Supervision of Erection and Commissioning**

Our standard rates for deputing our Engineer for carrying out supervision of erection and commissioning are as below  
 (Below rates applicable only for sites in India)

**Service Engineer : Rs. 20,000/- per day, per person**

- 8 hrs basis
- Per machine
- Applicable for travelling days also
- To and Fro first class train/air travelling up to site and local conveyance charges shall be to your account at actuals.
- Lodging & Boarding:- To be borne by Customer
- Advance Notice of 15 to 20 days is required for deputing our Personnel.
- Service Taxes Extra as applicable.
- One visit will be provided on free of cost basis.

**INSPECTION CHARGES:**

The Prices indicated do include charges for Third Party Inspection of component / Assembly at our works or at our principal's works. In case if you want to nominate any Third party inspection agency, the charges for the same shall be borne by you

**Our Bank Details:-**

<b>Name of the Account Holder</b>	<b>Aadiushmaa Engineers Pvt. Ltd.</b>
<b>Name of Bank</b>	<b>Bank of India, Sector-32 Branch, SCO-290-291, Sector-32D, Chandigarh</b>
<b>Current Account No.</b>	<b>620220110000643</b>
<b>MICR Code</b>	<b>160013004</b>
<b>IFSC Code</b>	<b>BKID0006202</b>
<b>PAN Number</b>	<b>AAOCA5591P (3rd Digit is not a Zero)</b>
<b>GSTIN</b>	<b>04AAOCA5591P1ZZ (5th digit is not a zero)</b>

Hope you will find the above offer in line with your requirement and incase if you need any clarification please feel free to contact us.

Thanking you and looking forward for receiving the order.

Yours truly,  
 For **Aadiushmaa Engineers Pvt. Ltd.**

**Manoj Kumar Jain**  
 8591005566





ANNEXURE-B7

JSW Hydro Energy Limited  
 BASPA-II H.E.P  
 Shoftu Colony, P.O. - Tapri  
 District - Kinnaur  
 PIN-172104  
 -Himachal Pradesh ( India )

## PURCHASE ORDER

Vendor Code : 0010020425
Name : JYOTI LIMITED,
Address : P.O. CHEMICAL INDUSTRIES, VADODARA-390003-Gujarat
Ph.No : 2653059016
Fax No. : 2652280671
E-mail : jmkhopadhyay@jyoti.com
PAN NO : AAACJ4909N
Vendor GST : 24AAACJ4909N1ZE

P.O.No.:JSWHEL/2018-19/08400000211

P.O.Date:06.11.2018

Type:ECAP/A/EPH/4602001207

Buyer Name:Pankaj Nainta

Buyer Email:indents.gbsenergy@jsw.in

PR.No/Date:4300000710/02.07.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. EMAIL Dated: 03.08.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR								
SR. NO.	ITEM CODE DESCRIPTION	UOM	QTY.	Over. Del%	UNIT PRICE	TOTAL VALUE		
					TOTAL BASE VALUE	TOTAL VALUE		
					DELIVERY SCHEDULE (Date - Qty)			
1	2100559096 PMP_VERT_TURBN,370 M3/HR,53 MTR;220 MM	EA	2.000	0.0	570,000.00	1140000	1276800	06.05.2019
Detail Specification as per Annexure 1								
D/T/C: IGST_ND @ 12 % - 136800.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 84138190								
Total Duties/Taxes & Charges: IGST_ND @ 12% - 136800.00								
UOM Description : EA - each,								
Total PO Basic Value : 1140000		Total Taxes / Charges :136800.00		Total PO Value : 1276800				
Total PO Value (In Figures):ONE MILLION TWO HUNDRED SEVENTY-SIX THOUSAND EIGHT HUNDRED and ZERO Indian Rupee								
PRICE BASIS:FOR JSWHE Site Kinnaur HP								
Delivery Address: Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Shoftu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )								
Insurance Type : By Buyer Freight Type : Freight Pre Paid Ins policy No : 0830017291 TATA AIG								
PAYMENT TERMS:100% against dispatch Document through Bank. a)100% payment shall be released against dispatch documents routed through bank . This payment shall be released after receipt of intimation from our bankers. Our bank charges shall be to our account and your bank charges shall be to your account. b)The address of our Bankers is : State Bank of India , Shoftu Colony, Tapri , Tehsil - Nichar , Distt : Kinnaur, PIN : 172104 , Himachal Pradesh (IFS Code : SBIN0011525)								
INSPECTION:At JSW Site								
WARRANTY CLAUSE:24 months from the date of supply								
DELIVERY PERIOD:Within 6 months from the date of receipt of approved Drawings								



P.O.No.:JSWHEL/2018-19/0840000211

**NOTE TO SUPPLIER:**

this has reference to your offer: Email dt. 30.05.2018 & Email dt. 26.10.2018 for Manufacturing , Supply & Supervision of Vertical Turbine Pump for Baspa II HEP.

**Delivery Schedule:** Within 6 months from the date of receipt of approval of drawings.

**Defect Liability Period:** 12 months from the date of commissioning or 18 months from the date of supply, whichever is early.

**Inspection / Testing:** As per JSWHEL discretion / As mentioned in RFQ / as per mutually agreed schedule. JSWHEL shall bear the cost of expenses (i.e. to & fro travel, accommodation) for carrying out the inspection at your works.

**Supervision:** In Vendor Scope (F.O.C. ) basis

**TO & FRO traveling :** In Vendor Scope

**Loading & Boarding at site:** In JSWHEL Scope

**Freight:** In Vendor Scope

**Transit Insurance:** In JSWHEL Scope

**Test Certificate:** To be provided for all supplies

**Engineer-In-Charge of this order is Mr. Mahesh Chander Negi, Dy. Chief Engineer, M +91 9805724444, mahesh.negi@jsw.in**

**Patent Liability :** i) The Contractor shall save harmless and indemnify the Company from and against all claims and proceedings for or on account of infringement of any patent rights and intellectual property rights, designs, trademark or name or other protected rights in respect of any Construction Equipment , machine, work, materials or Plant used for or in connection with the Works or any of them and from and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. Except where otherwise specified, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other construction materials required for the Works.

ii) In the event of any claims made under or action brought against the Company in respect of any such matters as aforesaid, the Contractor shall be immediately notified thereof and the Contractor shall be at liberty, at his own expense, to settle any disputes or to conduct any litigation that may arise there from. Provided that the Contractor shall not be liable to indemnify the Company if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-In-Charge in this behalf.

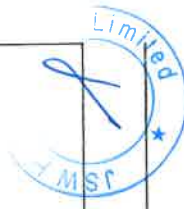
**Limit of Liability:** i) Notwithstanding anything to the contrary , neither Party shall in any event, whether under and / or in connection with this Contract or the performance or non-performance thereof or as a result of breach of this Contract, breach of warranty, misrepresentation, indemnity, tort (including negligence), statute or the applicable law, be responsible or held liable towards the other for any indirect and / or consequential loss or damage, including but not limited to incidental, prospective, remote, special or speculative damages

ii) Notwithstanding anything to the contrary , the CONTRACTOR#s cumulative maximum liability whether under and/or in connection with this Contract or due to delay in delivery of Services or due to late deployment of supervisors and / or the performance or non-performance thereof or anything incidental thereto or as a result of any breach of contract, warranty, patent infringement, including termination of this Contract by the CLIENT, misrepresentation, indemnity, tort (including gross negligence), statute or the applicable law, shall in no event exceed ten per cent (10%) of the Contract Price)

**Arbitration:** As per Arbitration and Conciliation Act, 1996 by or any subsequent modifications and amendments thereof

The major terms & Conditions shall be as mentioned on the body of the order. In case there is an overlap of terms and conditions mentioned elsewhere, the one mentioned on the body of the Purchase Order shall prevail

Please acknowledge the PO / WO by sending the confirmation email and material dispatch / Service execution information to [commercialdesk.gbs@jsw.in](mailto:commercialdesk.gbs@jsw.in), [karcham-stores@jsw.in](mailto:karcham-stores@jsw.in), within 3 days from receipt of this PO / WO.



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Plant GST No.:02AADCH3821L7ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
**COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA**

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051

P.O.No.:JSWHEL/2018-19/0840000211

Phone number: +91 22 71453477 / 3442.

For Advance payment terms / Cash against Documents (CAD) please send Non Negotiable documents to email : [advancedocs.gbs@jsw.in](mailto:advancedocs.gbs@jsw.in)  
Location contact: [karcham.stores@jsw.in](mailto:karcham.stores@jsw.in)

GBS contact: [commercialdesk.gbs@jsw.in](mailto:commercialdesk.gbs@jsw.in) Phone number: +91 22 71453477 / 3422.

• For After-delivery for Payment status please send email to [vendorhelpdesk.gbs@jsw.in](mailto:vendorhelpdesk.gbs@jsw.in) along with PO number and Invoice details.

• To track payment status, please follow link : <https://vendorportal.jsw.in/VENDOR/viewHome.action>  
Also you can call on help line number 022-71453333 and dial Extn 1 to speak with Finance and Accounts team.

Any reduction/savings in taxes & duties on Seller's Input cost due to Implementation of GST shall be passed on to JSWHEL

Thanking You  
Yours sincerely,

For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY



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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



P.O.No.:JSWHEL/2018-19/0840000211

### Annexure 1 TECHNICAL SPECIFICATION/SERVICE SPECIFICATION

Item No.: 1 Material/Service: 000000002100559096  
 PUMP,VERTICAL TURBINE,DISCHARGE CAPACITY:370 M3/HR;HEAD:53 METER;SHAFT LENGTH:3.5  
 MTR;TEMPERATURE:-20 TO 80 Deg C;WORKING MEDIA:WA MTR;IMPELLER MATERIAL:CAST IRON;NFPA  
 CERTIFICATION:REQUIRED;DRIVE:ELECRIC MOTOR, 90 KW;SUCTION SIZE:220 MM;  
 DELIVERY SIZE:200 MM;NUMBER OF STAGES:3



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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051

P.O.No.:JSWHEL/2018-19/0840000211

**LD:** Delay in supplies and completion of the Contract shall attract LD. If the Contractor fails to attain "Completion of the Facilities" within the Time for Completion or any extension thereof due to reasons attributable to the Contractor, the Client shall recover the amount of Liquidated Damages, not by way of penalty, but by making deductions from the Contractor's account or by encasement of Contractor's Bank Guarantees at the rate of 0.5% per week of delay or part thereof of the Contract Price, paid or payable to the Contractor, excluding taxes and duties up to a maximum of 7.5% of the Contract Price, paid or payable to the Contractor excluding taxes and duties. The Liquidated Damages shall in no way relieve the Supplier from completing the Works and discharging all its other obligations under the Contract provided however that the above mentioned Liquidated Damages are the Supplier's obligation to financially compensate the Company in case of delay

\*LD shall be applicable on the order value (Excluding Taxes)

\*LD shall be applicable after 6 (Six months) from the date of receipt of approval of drawings

**RISK PURCHASE CLAUSE:** If at any stage of the agreement, JSWHEL is of the opinion that performance is not satisfactory in execution of this contract and / or the resources employed to execute the contract have been reduced, diverted and/or interchanged with the existing jobs at the site, JSWHEL shall have the rights to carry out the work from alternate source(s) entirely at contractor's risk, cost & completion of work & limitation of liability



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Plant GST No.:02AADCH3821L1ZU PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051

**STANDARD TERMS AND CONDITIONS****Packing & Forwarding:**

Included in the prices, if not mentioned separately in order.

**Value Added Tax/Service Tax:**

You hereby are affirmed that all your rates and prices as contained in the supply are inclusive of all rates, duties levies and taxes as may be imposed by the Government of India / Government of Himachal Pradesh or any other appropriate Authority from time to time, unless otherwise as specified in this purchase orders.

**Entry Tax:**

Shall be borne by buyer

**Statutory variation in taxes & duties:**

Statutory variation in taxes & duties and/or imposition of any new tax/duty during the validity of the Order shall be to our account only in-case, if the break-up of taxes are mentioned in the Order.

**Road Permit (Way Bill):**

Necessary Way bill, if applicable shall be provided by us.

**Price Escalation (De-escalation):**

The negotiated prices, terms & conditions shall remain fixed, firm & binding till complete execution of the order.

**Dispatch:**

Material is in good packed condition to be consigned to the Manager (Stores).

**Documents Required For Payment:**

The following documents are required in original: 1. Delivery Challan and 2. Invoice. The stipulated payment shall be made only on receipt of these documents and on satisfactory receipt and acceptance of materials at site.

**Submission of Invoice:**

Your Invoice (in duplicate) has to be addressed & submitted to the Manger (Stores) who will process your Invoices for payment.

**Responsibility of completeness:**

- (a) Any scope of services which has not been specifically mentioned above but required for the completion of this order shall be rendered free of cost, unless expressly excluded in this order.
- (b) Any approval by us at any stage for any supply by you shall not relieve you of your obligations under this order.

**Force Majeure:**

1. Force Majeure means an event or circumstance or combination of events and circumstances beyond the reasonable control of the Party that wholly or partly prevents or unavoidably delays an affected Party in the performance of its obligations under this Order, which amongst other, include Act of God, Natural Calamity, war, etc.
2. If either Party is prevented from performing any of its obligations under this Order by such cases of Force Majeure, it shall give written notice to the other Party within 14 (fourteen) days of such occurrence to the events, describing the event and its effects supported by authentic evidences that are verifiable. The affected Party shall, having given notice, be wholly or partially excused performance of such obligation for so long as such Force Majeure prevents it from performing them. No Party shall have any claim/ compensation for the loss incurred due to the force majeure conditions.
3. The affected Party shall use all reasonable efforts to minimize any delay in its performance of the Order as a result of force Majeure Events.
4. The Party unable to perform this Order due to the effect of Force Majeure Events occurrence may, after consultation with the other Party, extend the duration of this Order by a period commensurate to the time actually lost due to the Force Majeure occurrence. The other Party shall not claim compensation for the loss thus incurred.
5. In case of an extension up to 90 (Ninety) days in the performance of this Order due to the effect of the Force Majeure occurrence, both Parties shall have friendly consultation on the performance of this Order or termination of the Order as provided in this Order.
6. Notwithstanding the foregoing, Force Majeure shall not apply to any delay, default or failure (direct or indirect) in procuring the components and /or the materials for the manufacture of the Equipment by the Supplier; and/or any delay, default or failure (direct or indirect) by the Supplier in any agreement entered into by it with any party including sub-contractor.



P.O.No.:JSWHEL/2018-19/0840000211

**Termination of Contract / Right of Acceptance:**

- 1) If the material is delivered beyond delivery time and is not as per quality parameters cited in quotation or discussed at the time of negotiation, we will have the right to reject the material or terminate / cancel the order without assigning any reason whatsoever.
- 2) In Case of reasonable doubt, the quality of the material shall be got tested in any reputed Third Party Laboratory at your cost.
- 3) We reserve the right to reject the material in case of detection of manufacturing defect at any stage of construction.
- (b) in the event of non adherence to the schedule and if deemed fit by the Engineer-in-Charge, we shall have right to offload the job and engage another supplier to complete the job at your risk & cost.

**Arbitration:**

- 1.1 It is expressly agreed by and between the Parties that:
- 1.2 any dispute arising out of or in connection with this Order including any question regarding the existence, interpretation, validity, frustration, notation, scope of the Order, performance of the Order, breach of Order, termination and consequences of termination of this Order shall be referred to and finally resolved by arbitration in accordance with the Rules of Indian Council of Arbitration (the "Rules") as amended and in force, from time to time;
- 1.3 This Order shall be exclusively governed by Indian law;
- 1.4 The dispute shall be decided by an Arbitral Tribunal consisting of three members, who shall be appointed in accordance with the Rules;
- 1.5 The costs, charges, fees and expenses of the arbitrator(s) shall be borne equally by the Parties to the arbitration, and save as aforesaid, the Parties shall bear its own legal and others costs;
- 1.6 The venue of such arbitration shall be in Mumbai only;
- 1.7 The courts at Mumbai alone shall have the exclusive jurisdiction to hear matters pertaining to the arbitration or any matter related thereto;
- 1.8 Arbitration proceedings shall be conducted in English language; and
- 1.9 Performance under the Order shall be continued during the arbitration proceedings unless otherwise directed by the Purchaser in writing or unless the matter is such that the performance cannot be possibly continued until the decision of arbitrator is obtained.

**Acceptance of Order:**

You are requested to confirm your unconditional acceptance of this order by signing the acceptance receipt attached with this order within 01 days of issuance of this order.

**EHS requirement:**

- (a) M/C Guarding including back-guarding :( for all rotating equipment)
1. Guarding to ensure non-contact of hand in moving parts of the machine from any position.
  2. Exposed shaft drives to have fixed guarding
  3. Mesh guards to be of finger proof.
  4. All guards , which are not fixed, should be interlocked
  5. Access to Rotary Air locks to be prevented by positive interlocks
  6. Exhaust Fans to have guarding enclosure on either side.
- (b) Electrical Safety in Panels :( for all electrical panels)
1. Padlock provision for doors
  2. Shrouding at the rear side against Busbar live contacts
  3. To comply with BS: 6423: 1983 & BS6626: 1985 standards on switch gear & Control Gear and IEE Wiring regulations BS 7671
  4. Equipment to have current state-of-art safety features eg. Earthing, fuses,RCCBsetc
  5. Equipment is labeled as per International colour& sign codes
  6. No taped joints in the wiring. Use of adaptors is allowed
  7. Use of MCBs in place of Switch fuse Units
  8. Double Earthing Provision for all mechanical & electrical equipment
- (c) Noise:( for all rotating equipment):Equipment should not to emit noise 70 dB(A) from 1 mtr distance from the machine
- (d) Asbestos:( for all packing , glands etc ) : Your products should not have traces of Asbestos in any form in the item
- (e) Chlorofluorocarbons (CFCs) & Ozone Depleting Substances (ODS):( for all oils, lubricants and equivalent type ) Your products should not have traces of CFCs and its derivatives and ODSs in any form in the item.
- (f) PolyChlorinatedBiphenyl (PCB):( for all oils , lubricants and equivalent type ) Your products should not have PCB in any form found in electrical transformers, capacitors, light ballasts)
- (g) Imported Equipment / Machinery: Equipment/ Machinery to have certification `CE` (Certificate the Europe )
- (h) Packaging Materials: 1. Total amounts of Hg,Pb,Cd and Cr6 in any packaging material does not exceed 100ppm and the packaging material



P.O.No.:JSWHEL/2018-19/0840000211

should not be bleached by a process involving chlorine.

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Plant GST No.:02AADCH3821L1ZU PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051







## PURCHASE ORDER

ANNEXURE-88

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

Vendor Code : 0010007408	Name : SERVO CONTROLS	Address : SURVEY #683, INDSL UDYAMBAG,SURVEY NO.683, BELGAUM-590008-Karnataka	ESTATE,
Ph.No : 0831-2407501	Mb.No. : 9448395732	Fax No. : 0831-2484496	
E-mail : sales@servocontrolsindia.com	PAN NO : AAPFS7362E	Vendor GST : 29AAPFS7362E1ZO	

P.O.No.:JSWHEL/2018-19/0840000175  
P.O.Date:25.06.2018  
Type:ECAP/A/EMT/4602002083  
Buyer Name:Pankaj Nainta  
Buyer Email:indents.gbsenergy@jsw.in  
PR.No/Date:4300000672/08.05.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. 0028/1819/SC Dated: 18.04.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR						
SR. NO.	ITEM CODE DESCRIPTION	UOM	QTY.	Over. Del%	UNIT PRICE	DELIVERY SCHEDULE (Date - Qty)
1	2200159651 SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01	EA	1.000	0.0	60,000.00	70800 28.08.2018
SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
2	2200159651 SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01	EA	1.000	0.0	60,000.00	70800 28.08.2018
SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
3	2200159651 SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01	EA	1.000	0.0	60,000.00	70800 28.08.2018
SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
4	2200159651 SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01	EA	1.000	0.0	60,000.00	70800 28.08.2018



P.O.No.:JSWHEL/2018-19/0840000175

SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freigt/Quantity - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
5	2200159651	EA	1,000	0.0	60,000.00	70800
SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01						
SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freigt/Quantity - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
6	2200159651	EA	1,000	0.0	60,000.00	70800
SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01						
SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freigt/Quantity - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
7	2200159651	EA	1,000	0.0	60,000.00	70800
SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01						
SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freigt/Quantity - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
8	2200159651	EA	1,000	0.0	60,000.00	70800
SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01						
SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freigt/Quantity - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
9	2200159651	EA	1,000	0.0	60,000.00	70800
SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01						
SENSOR,POSITION,TYPE:LINEAR ,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freigt/Quantity - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
10	2200159651	EA	1,000	0.0	60,000.00	70800
SNSR,POSITION,4 TO 20 mA,RHM0250MH201A01						

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:J40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



P.O.No.:JSWHEL/2018-19/0840000175

SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
11	2200159651	EA	1.000	0.0	60,000.00	70800
SNRS,POSITION,4 TO 20 mA,RHM0250MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 250 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 W IRE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0250MH201A01,MAKE:MTS-SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 10800.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
12	2200159652	EA	1.000	0.0	65,000.00	76700
SNRS,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
13	2200159652	EA	1.000	0.0	65,000.00	76700
SNRS,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
14	2200159652	EA	1.000	0.0	65,000.00	76700
SNRS,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
15	2200159652	EA	1.000	0.0	65,000.00	76700
SNRS,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
16	2200159652	EA	1.000	0.0	65,000.00	76700
SNRS,POSITION,4 TO 20 mA,RHM0165MH201A01						





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SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
17	2200159652	EA	1.000	0.0	65,000.00	76700
SNSR,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
18	2200159652	EA	1.000	0.0	65,000.00	76700
SNSR,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
19	2200159652	EA	1.000	0.0	65,000.00	76700
SNSR,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
20	2200159652	EA	1.000	0.0	65,000.00	76700
SNSR,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
21	2200159652	EA	1.000	0.0	65,000.00	76700
SNSR,POSITION,4 TO 20 mA,RHM0165MH201A01						
SENSOR,POSITION,TYPE:LINEAR,OUTPUT RANGE:4 TO 20 mA,MEASUREMENT RANGE:0 TO 165 MM,VOLTAGE RATING:24 VDC,ELECTRICAL CONNECTION:6 WI RE,MOUNTING:THREADED,CABLE LENGTH:20 M,INGRESS PROTECTION:IP68,MODEL:RHM0165MH201A01,MAKE:MTS SENSORS						
D/T/C: I/P 18% IGST_ND IGST_ND @ 18 % - 11700.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90318000						
22	2200131488	EA	1.000	0.0	24,000.00	28320
USB PGMR R-ANALOGUE:253 134-1						
ASSY/PARTS.OEM GENERAL,ITEM NAME:USB PROGRAMMER R-ANALOGUE;PART NO:253 134-1;MAKE:TEMPOSONIC						



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D/T/C: I/P 18% IGST_ND @ 18 % - 4320.00 Freigt/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 90319000	
Total Duties/Taxes & Charges: IGST_ND @ 18% - 240120.00	
UOM Description :	
EA - each ,	
Total PO Basic Value : 1334000	Total Taxes / Charges :240120.00
Total PO Value (in Figures):ONE MILLION FIVE HUNDRED SEVENTY-FOUR THOUSAND ONE HUNDRED TWENTY and ZERO Indian Rupee	
PRICE BASIS:FOR HBPCCL SITE SHOLTU	
Delivery Address: Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )	Insurance Type : By Buyer Freight Type : Freight Pre Paid Ins polley No : 0630017291 TATA AIG
PAYMENT TERMS:100% against dispatch Document through Bank.	
DELIVERY PERIOD:8-9 WEEKS FROM THE DATE OF RECEIPT OF VALUED PURCHASE ORDER AT VENDOR	
END	

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY





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P.O.No.:JSWHEL/2018-19/0840000178

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kuria Complex, Bandra (East) Mumbai 400051



P.O.No.:JSWHEL/2018-19/0840000178

**Annexure 1**  
**TECHNICAL SPECIFICATION/SERVICE SPECIFICATION**

Item No.: 1 Material/Service: 000000002200167008  
RELAY, PROTECTION, TYPE: NUMERICAL; APPLICATION: DISTANCE PROTECTION; AUXILIARY VOLTAGE: 220 V  
DC; CT SEC RATING: 1 A; PT SEC RATING: 110 V  
AC; RESET TYPE: PROGRAMMABLE; MOUNTING: FLUSH; OUTPUT CONTACT RATING: 10 A; NUMBER OF  
OUTPUTS: 32; OUTPUT CONTACT TYPE: PROGRAMMABLE; NUMBER  
OF INPUTS: 32; STANDARD: IEC 61850; MAKE: GE INDUSTRIAL SYSTEM; MODEL: D60



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Plant GST No.: 02AADCH3821L1ZU, PAN: AADCH3821L, CIN: U40101HP2014PLC000681,  
COMMISSIONERATE: CHANDIGARH-1, RANGE: SHIMLA, DIVISION: SHIMLA

Registered Office : JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051

**STANDARD TERMS AND CONDITIONS****Packing & Forwarding:**

Included in the prices, if not mentioned separately in order.

**Value Added Tax/Service Tax:**

You hereby are affirmed that all your rates and prices as contained in the supply are inclusive of all rates, duties levies and taxes as may be imposed by the Government of India / Government of Himachal Pradesh or any other appropriate Authority from time to time, unless otherwise as specified in this purchase orders.

**Entry Tax:**

Shall be borne by buyer

**Statutory variation in taxes & duties:**

Statutory variation in taxes & duties and/or imposition of any new tax/duty during the validity of the Order shall be to our account only in-case, if the break-up of taxes are mentioned in the Order.

**Road Permit (Way Bill):**

Necessary Way bill, if applicable shall be provided by us.

**Price Escalation /De-escalation:**

The negotiated prices, terms & conditions shall remain fixed, firm & binding till complete execution of the order.

**Dispatch:**

Material is in good packed condition to be consigned to the Manager (Stores).

**Documents Required For Payment:**

The following documents are required in original: 1. Delivery Challan and 2. Invoice. The stipulated payment shall be made only on receipt of these documents and on satisfactory receipt and acceptance of materials at site.

**Submission of Invoice:**

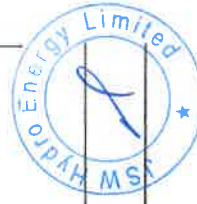
Your Invoice (in duplicate) has to be addressed & submitted to the Manger (Stores) who will process your Invoices for payment.

**Responsibility of completeness:**

- (a) Any scope of services which has not been specifically mentioned above but required for the completion of this order shall be rendered free of cost, unless expressly excluded in this order.
- (b) Any approval by us at any stage for any supply by you shall not relieve you of your obligations under this order.

**Force Majeure:**

- Force Majeure means an event or circumstance or combination of events and circumstances beyond the reasonable control of the Party that wholly or partly prevents or unavoidably delays an affected Party in the performance of its obligations under this Order, which amongst other, include Act of God, Natural Calamity, war, etc.
- If either Party is prevented from performing any of its obligations under this Order by such cases of Force Majeure, it shall give written notice to the other Party within 14 (fourteen) days of such occurrence to the events, describing the event and its effects supported by authentic evidences that are verifiable. The affected Party shall, having given notice, be wholly or partially excused performance of such obligation for so long as such Force Majeure prevents it from performing them. No Party shall have any claim/ compensation for the loss Incurred due to the force majeure conditions.
- The affected Party shall use all reasonable efforts to minimize any delay in its performance of the Order as a result of force Majeure Events.
- The Party unable to perform this Order due to the effect of Force Majeure Events occurrence may, after consultation with the other Party, extend the duration of this Order by a period commensurate to the time actually lost due to the Force Majeure occurrence. The other Party shall not claim compensation for the loss thus incurred.
- In case of an extension up to 90 (Ninety) days in the performance of this Order due to the effect of the Force Majeure occurrence, both Parties shall have friendly consultation on the performance of this Order or termination of the Order as provided in this Order.
- Notwithstanding the foregoing, Force Majeure shall not apply to any delay, default or failure (direct or indirect) in procuring the components and /or the materials for the manufacture of the Equipment by the Supplier; and/or any delay, default or failure (direct or indirect) by the Supplier in any agreement entered into by it with any party including sub-contractor.



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**Termination of Contract / Right of Acceptance:**

- 1) If the material is delivered beyond delivery time and is not as per quality parameters cited in quotation or discussed at the time of negotiation, we will have the right to reject the material or terminate / cancel the order without assigning any reason whatsoever.
- 2) In Case of reasonable doubt, the quality of the material shall be got tested in any reputed Third Party Laboratory at your cost.
- 3) We reserve the right to reject the material in case of detection of manufacturing defect at any stage of construction.
  - (b) In the event of non adherence to the schedule and if deemed fit by the Engineer-In-Charge, we shall have right to offload the job and engage another supplier to complete the job at your risk & cost.

**Arbitration:**

- 1.1 It is expressly agreed by and between the Parties that:
- 1.2 any dispute arising out of or in connection with this Order including any question regarding the existence, interpretation, validity, frustration, notation, scope of the Order, performance of the Order, breach of Order, termination and consequences of termination of this Order shall be referred to and finally resolved by arbitration in accordance with the Rules of Indian Council of Arbitration (the "Rules") as amended and in force, from time to time;
- 1.3 This Order shall be exclusively governed by Indian law;
- 1.4 The dispute shall be decided by an Arbitral Tribunal consisting of three members, who shall be appointed in accordance with the Rules;
- 1.5 The costs, charges, fees and expenses of the arbitrator(s) shall be borne equally by the Parties to the arbitration, and save as aforesaid, the Parties shall bear its own legal and others costs;
- 1.6 The venue of such arbitration shall be in Mumbai only;
- 1.7 The courts at Mumbai alone shall have the exclusive jurisdiction to hear matters pertaining to the arbitration or any matter related thereto;
- 1.8 Arbitration proceedings shall be conducted in English language; and
- 1.9 Performance under the Order shall be continued during the arbitration proceedings unless otherwise directed by the Purchaser in writing or unless the matter is such that the performance cannot be possibly continued until the decision of arbitrator is obtained.

**Acceptance of Order:**

You are requested to confirm your unconditional acceptance of this order by signing the acceptance receipt attached with this order within 01 days of issuance of this order.

**EHS requirement:**

- (a) M/C Guarding including back-guarding : ( for all rotating equipment)
  1. Guarding to ensure non-contact of hand in moving parts of the machine from any position.
  2. Exposed shaft drives to have fixed guarding
  3. Mesh guards to be of finger proof.
  4. All guards , which are not fixed, should be interlocked
  5. Access to Rotary Air locks to be prevented by positive interlocks
  6. Exhaust Fans to have guarding enclosure on either side.
- (b) Electrical Safety In Panels :( for all electrical panels)
  1. Padlock provision for doors
  2. Shrouding at the rear side against Busbar live contacts
  3. To comply with BS: 6423: 1983 & BS6626: 1985 standards on switch gear & Control Gear and IEE Wiring regulations BS 7671
  4. Equipment to have current state-of-art safety features eg. Earthing, fuses,RCCBsetc
  5. Equipment is labeled as per International colour& sign codes
  6. No taped joints in the wiring. Use of adaptors is allowed
  7. Use of MCBs in place of Switch fuse Units
  8. Double Earthing Provision for all mechanical & electrical equipment
- (c) Noise: (for all rotating equipment):Equipment should not to emit noise 70 dB(A) from 1 mtr distance from the machine
- (d) Asbestos:( for all packing , glands etc ) : Your products should not have traces of Asbestos in any form in the Item
- (e) Chlorofluorocarbons (CFCs) & Ozone Depleting Substances (ODS):( for all oils, lubricants and equivalent type ) Your products should not have traces of CFCs and its derivatives and ODSs in any form in the Item.
- (f) PolyChlorinatedBiphenyl (PCB):( for all oils , lubricants and equivalent type ) Your products should not have PCB in any form found in electrical transformers, capacitors, light ballasts
- (g) Imported Equipment / Machinery: Equipment/ Machinery to have certification 'CE' (Certificate the Europe )
- (h) Packaging Materials: 1. Total amounts of Hg,Pb,Cd and Cr6 in any packaging material does not exceed 100ppm and the packaging material





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Should not be bleached by a process involving chlorine.



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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kuria Complex, Bandra (East) Mumbai 400051



## SERVICE ORDER

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

Vendor Code	: 0010030115		
Name	: SHASHI ENGICON PVT LTD		
Address	: MEHTA BHAWAN, OPP.	: A.I.R.,	: NEAR RAJDHANI HOTEL,,M.
Ph.No	: 01412379509		
Mb.No.	: 9829063706		
E-mail	: sales@shashlengicon.com		
PAN NO	: AACCS5706N		
Vendor GST	: 08AACCS5706N1Z0		

P.O.No.:JSWHEL/2018-19/08900000515  
 P.O.Date:19.09.2018  
 Type:ESRD/K/EMT/4602002084  
 Buyer Name:Sidhi Prasad Sakla  
 Buyer Email:indents.gbseenergy@jsw.in  
 PR.No/Date:4600001182/31.08.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. HBPCL/226 Dated: 18.07.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR				
SR. NO.	SERVICE SHORT DESCRIPTION	UOM	QTY.	TOTAL VALUE
1	ERECTION, COMM.INSTALL OF 400 KV RELAY	AU	1,000	40000
The above work contains following Services:				
1.1	3000009503 MNPR SPLY,SKLD,SVC ENGINEER SAC Code: 995461	mdy	1,000	40000.00
MANPOWER SUPPLY,TYPE:SKILLED,CATEGORY:SERVICE ENGINEER				
D/ T/C: I/P 18% GST_ND - 7200.00				
Total Duties/Taxes & Charges: I/P 18% GST_ND - 7200.00				
UOM Description : AU - Activity unit , mdy - Man Days ,				
Total PO Basic Value: 40000.00		Total Taxes / Charges : 7200.00		
Total PO Value (In Figures): FORTY-SEVEN THOUSAND TWO HUNDRED and ZERO Indian Rupee		Total PO Value: 47200.00		
<b>PRICE BASIS:DAP JSWHEL Site Kinnaur</b>				
<b>Contract Period</b> Start Date:19.09.2018 to End Date :30.11.2018				
<b>Delivery Address:</b> Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )				
<b>PAYMENT TERMS:</b> Payable in 15 days from SRN Date(Against RA Bill)				
Within 15 days after completion of Work and submission of Invoice.				
<b>WARRANTY CLAUSE:NA</b>				
<b>DELIVERY PERIOD:</b> As per Instructions of EIC. Completion period within 3-4 days				



P.O.No.:JSWHEL/2018-19/08900000515

**NOTE TO SUPPLIER:**

Refer your offer: SEPL/HBPCL/226 dt. 18.07.2018, for Service, Erection, Commissioning and Testing of 400 KV Feeder Protection D60 RELAY.

1 Completion Period: Within 3-4 days.

2. JSW Hydro Energy Ltd Scope: -

- a. Secondary test kit to be arrange by JSWHEL.
- b. Local transport, Lodging and Boarding at site shall be provided by JSWHEL on FOC basis.
- c. TO and FRO travelling shall be provided by JSWHEL.

From: Chandigarh to JSWHEL Site

&

From: JSWHEL Site to Chandigarh

- d. Technician shall be provide by JSWHEL for removal of existing relay, mounting and wiring of new relay.
- e. 15 days' Intimation to depute team at site.

3. Vendor Scope: -

- a. Testing & Commissioning of GE Make D60 Relay
- b. Removal of existing Alstom Make EPAC 3000 Relay.
- c. Mounting and Wiring of new protection relay (D60) with retrofitting
- d. Design and Re-Engineering of the protection scheme.
- e. Supply of required wiring material and blanking plates for mounting of protective scheme.
- f. Edequate training for O&M Engineers regarding operation of GE Make D60 Relay.
- g. Integration of D60 relay with existing GPS and PC (Ethernet switch & Cable will be arranged by HBPCL)
- h. To and FRO travelling from Ex-Work to Chandigarh: In GE/SEPL Scope.

4. Other terms & Condition as per Annexure (I) & (II), (C) & (h)

5. Engineer-In-Charge of this order is Mr. Himanshu Puri, M +91 8894289816, himanshu.puri@jsw.in

6. The major terms & Conditions shall be as mentioned on the body of the order. In case there is an overlap of terms and conditions mentioned elsewhere, the one mentioned on the body of the Purchase Order shall prevail.

7. Arbitration: As per Arbitration and Conciliation Act, 1996 by or any subsequent modifications and amendments thereof.

Please acknowledge the PO / WO by sending the confirmation email and material dispatch / Service execution information to commercialdesk.gbs@jsw.in within 3 days from receipt of this PO / WO. Phone number: +91 22 71453477 / 3442.

\* For After-delivery for Payment status please send email to vendorhelpdesk.gbs@jsw.in along with PO number and Invoice details.

\* To track payment status, please follow link : <https://vendorportal.jsw.in/VENDOR/viewHome.action>  
Also you can call on help line number 022-71453333 and dial Extn 1 to speak with Finance and Accounts team.

Any reduction/savings In taxes & duties on Seller's Input cost due to Implementation of GST shall be passed on to JSWHEL.



P.O.No.:JSWHEL/2018-19/0890000515

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY

Page No: 3 / 3

Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051





## PURCHASE ORDER

ANNEXURE - B10

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

Vendor Code : 0010027857
Name : MODY PUMP INDIA PVT LTD
Address : N-65, ANAND NAGAR, ADDITIONAL MIDC, AMBERNATH (EAST)
Ph.No : 0251-2621877-...
Mb.No. : 08983110109
E-mail : sangram@modypump.com
PAN NO : AAECM7153M
Vendor GST : 27AAECM7153M1Z1

P.O.No.:JSWHEL/2018-19/0840000193  
 P.O.Date:31.08.2018  
 Type:ECAP/A/EPH/4602001207  
 Buyer Name:Sidhi Prasad Sakla  
 Buyer Email:indents.gbsenergy@jsw.in  
 PR.No/Date:4300000694/24.05.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. JP/300518 Dated: 04.08.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR						
SR. NO.	ITEM CODE DESCRIPTION	UOM	QTY.	Over. Del%	UNIT PRICE	TOTAL DELIVERY SCHEDULE (Date - Qty)
1	2100525059 PMP_SBMRSBLE,DE-WATERING:0.680 M3/HR	EA	1,000	0.0	94,775.20	106148.2 15.09.2018
Detail Specification as per Annexure 1						
D/T/C: IGST_ND @ 12 % - 11373.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 84137010						
2	2100525059 PMP_SBMRSBLE,DE-WATERING:0.680 M3/HR	EA	1,000	0.0	94,775.20	106148.2 15.09.2018
Detail Specification as per Annexure 1						
D/T/C: IGST_ND @ 12 % - 11373.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 84137010						
Total Duties/Taxes & Charges: IGST_ND @ 12% - 22746.00						
UOM Description : EA - each ,						
Total PO Basic Value : 189550.4		Total Taxes / Charges : 22746.00		Total PO Value : 212296.4		
Total PO Value (In Figures):TWO HUNDRED TWELVE THOUSAND TWO HUNDRED NINETY-SIX and FORTY Indian Rupee						
PRICE BASIS:EW1 Ex Work		Delivery Address:		Insurance Type : By Buyer Freight Type : Freight To Pay Ins policy No : 0830017291 TATA AIG		
		Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )				
PAYMENT TERMS:Payment in 15 days from GRN date.						
INSPECTION: At HBPCCL Site						
WARRANTY CLAUSE:NG						
DELIVERY PERIOD:Ex-stock / within 6-7 days including the delivery period after the issuance of P.O.						
NOTE TO SUPPLIER:						
1. Make-Mody Pumps-Model-G506T with Control Panel & 10 Mtrs Cable						

Page No: 1 / 6

Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Corporate Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051





P.O.No.:JSWHEL/2018-19/08400000193

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kuria Complex, Bandra (East) Mumbai 400051



P.O.No.:JSWHEL/2018-19/0840000193

**Annexure 1**  
**TECHNICAL SPECIFICATION/SERVICE SPECIFICATION**

Item No.: 1 Material/Service: 000000002100525059  
PUMP,SUBMERSIBLE,TYPE:DE-WATERING;DISCHARGE CAPACITY:0.680 M3/HR,HEAD:36.57 MTR,IMPELLER  
MATERIAL:SS410,CASING MATERIAL:STEEL,TEMP  
ERATURE:68 DEGREE FAHRENHEIT,WORKING MEDIA:WATER,MOTOR POWER:3.7 KW,CONNECTION TYPE:3  
PHASE STAR,CABLE TYPE:SOOW,CABLE LENGTH:10 M  
TR,SPEED:2800 RPM,MODEL:G-M506T,MAKE:MODY  
Additional Specifications :  
Make-Mody Pumps-Model-G506T with Control Panel & 10 Mtrs Cable

Item No.: 2 Material/Service: 000000002100525059  
PUMP,SUBMERSIBLE,TYPE:DE-WATERING;DISCHARGE CAPACITY:0.680 M3/HR,HEAD:36.57 MTR,IMPELLER  
MATERIAL:SS410,CASING MATERIAL:STEEL,TEMP  
ERATURE:68 DEGREE FAHRENHEIT,WORKING MEDIA:WATER,MOTOR POWER:3.7 KW,CONNECTION TYPE:3  
PHASE STAR,CABLE TYPE:SOOW,CABLE LENGTH:10 M  
TR,SPEED:2800 RPM,MODEL:G-M506T,MAKE:MODY  
Additional Specifications :  
Make-Mody Pumps-Model-G506T with Control Panel & 10 Mtrs Cable



**STANDARD TERMS AND CONDITIONS****Packing & Forwarding:**

Included in the prices, if not mentioned separately in order.

**Value Added Tax/Service Tax:**

You hereby are affirmed that all your rates and prices as contained in the supply are inclusive of all rates, duties levies and taxes as may be imposed by the Government of India / Government of Himachal Pradesh or any other appropriate Authority from time to time, unless otherwise as specified in this purchase orders.

**Entry Tax:**

Shall be borne by buyer

**Statutory variation in taxes & duties:**

Statutory variation in taxes & duties and/or imposition of any new tax/duty during the validity of the Order shall be to our account only In-case, if the break-up of taxes are mentioned in the Order.

**Road Permit (Way Bill):**

Necessary Way bill, if applicable shall be provided by us.

**Price Escalation /De-escalation:**

The negotiated prices, terms & conditions shall remain fixed, firm & binding till complete execution of the order.

**Dispatch:**

Material is in good packed condition to be consigned to the Manager (Stores).

**Documents Required For Payment:**

The following documents are required in original: 1. Delivery Challan and 2. Invoice. The stipulated payment shall be made only on receipt of these documents and on satisfactory receipt and acceptance of materials at site.

**Submission of Invoice:**

Your Invoice (in duplicate) has to be addressed & submitted to the Manger (Stores) who will process your Invoices for payment.

**Responsibility of completeness:**

- (a) Any scope of services which has not been specifically mentioned above but required for the completion of this order shall be rendered free of cost, unless expressly excluded in this order.
- (b) Any approval by us at any stage for any supply by you shall not relieve you of your obligations under this order.

**Force Majeure:**

- Force Majeure means an event or circumstance or combination of events and circumstances beyond the reasonable control of the Party that wholly or partly prevents or unavoidably delays an affected Party in the performance of its obligations under this Order, which amongst other, include Act of God, Natural Calamity, war, etc.
- If either Party is prevented from performing any of its obligations under this Order by such cases of Force Majeure, it shall give written notice to the other Party within 14 (fourteen) days of such occurrence to the events, describing the event and its effects supported by authentic evidences that are verifiable. The affected Party shall, having given notice, be wholly or partially excused performance of such obligation for so long as such Force Majeure prevents it from performing them. No Party shall have any claim/ compensation for the loss incurred due to the force majeure conditions.
- The affected Party shall use all reasonable efforts to minimize any delay in its performance of the Order as a result of force Majeure Events.
- The Party unable to perform this Order due to the effect of Force Majeure Events occurrence may, after consultation with the other Party, extend the duration of this Order by a period commensurate to the time actually lost due to the Force Majeure occurrence. The other Party shall not claim compensation for the loss thus incurred.
- In case of an extension up to 90 (Ninety) days in the performance of this Order due to the effect of the Force Majeure occurrence, both Parties shall have friendly consultation on the performance of this Order or termination of the Order as provided in this Order.
- Notwithstanding the foregoing, Force Majeure shall not apply to any delay, default or failure (direct or indirect) in procuring the components and /or the materials for the manufacture of the Equipment by the Supplier; and/or any delay, default or failure (direct or indirect) by the Supplier in any agreement entered into by it with any party including sub-contractor.



P.O.No.:JSWHEL/2018-19/0840000193

**Termination of Contract / Right of Acceptance:**

- 1) If the material is delivered beyond delivery time and is not as per quality parameters cited in quotation or discussed at the time of negotiation, we will have the right to reject the material or terminate / cancel the order without assigning any reason whatsoever.
- 2) In Case of reasonable doubt, the quality of the material shall be got tested in any reputed Third Party Laboratory at your cost.
- 3) We reserve the right to reject the material in case of detection of manufacturing defect at any stage of construction.
- (b) In the event of non adherence to the schedule and if deemed fit by the Engineer-in-Charge, we shall have right to offload the job and engage another supplier to complete the job at your risk & cost.

**Arbitration:**

- 1.1 It is expressly agreed by and between the Parties that:
- 1.2 any dispute arising out of or in connection with this Order including any question regarding the existence, interpretation, validity, frustration, notation, scope of the Order, performance of the Order, breach of Order, termination and consequences of termination of this Order shall be referred to and finally resolved by arbitration in accordance with the Rules of Indian Council of Arbitration (the "Rules") as amended and in force, from time to time;
- 1.3 This Order shall be exclusively governed by Indian law;
- 1.4 The dispute shall be decided by an Arbitral Tribunal consisting of three members, who shall be appointed in accordance with the Rules;
- 1.5 The costs, charges, fees and expenses of the arbitrator(s) shall be borne equally by the Parties to the arbitration, and save as aforesaid, the Parties shall bear its own legal and others costs;
- 1.6 The venue of such arbitration shall be in Mumbai only;
- 1.7 The courts at Mumbai alone shall have the exclusive jurisdiction to hear matters pertaining to the arbitration or any matter related thereto;
- 1.8 Arbitration proceedings shall be conducted in English language; and
- 1.9 Performance under the Order shall be continued during the arbitration proceedings unless otherwise directed by the Purchaser in writing or unless the matter is such that the performance cannot be possibly continued until the decision of arbitrator is obtained.

**Acceptance of Order:**

You are requested to confirm your unconditional acceptance of this order by signing the acceptance receipt attached with this order within 01 days of issuance of this order.

**EHS requirement:****(a) M/C Guarding including back-guarding :( for all rotating equipment)**

1. Guarding to ensure non-contact of hand in moving parts of the machine from any position.
2. Exposed shaft drives to have fixed guarding
3. Mesh guards to be of finger proof.
4. All guards , which are not fixed, should be interlocked
5. Access to Rotary Air locks to be prevented by positive interlocks
6. Exhaust Fans to have guarding enclosure on either side.

**(b) Electrical Safety in Panels :( for all electrical panels)**

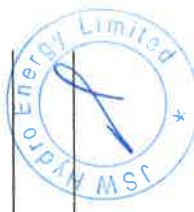
1. Padlock provision for doors
2. Shrouding at the rear side against Busbar live contacts
3. To comply with BS: 6423: 1983 & BS6626: 1985 standards on switch gear & Control Gear and IEE Wiring regulations BS 7671
4. Equipment to have current state-of-art safety features eg. Earthing, fuses,RCCBsetc
5. Equipment is labeled as per international colour& sign codes
6. No taped joints in the wiring. Use of adaptors is allowed
7. Use of MCBs in place of Switch fuse Units
8. Double Earthing Provision for all mechanical & electrical equipment

**(c) Noise: (for all rotating equipment):Equipment should not to emit noise 70 dB(A) from 1 mtr distance from the machine****(d) Asbestos:( for all packing , glands etc ) : Your products should not have traces of Asbestos in any form in the item****(e) Chlorofluorocarbons (CFCs) & Ozone Depleting Substances (ODS):( for all oils, lubricants and equivalent type ) Your products should not have traces of CFCs and its derivatives and ODSs in any form in the item.****(f) PolyChlorinatedBiphenyl (PCB):( for all oils , lubricants and equivalent type ) Your products should not have PCB in any form found in electrical transformers, capacitors, light ballasts)****(g) Imported Equipment / Machinery: Equipment/ Machinery to have certification ' CE' (Certificate ` the Europe )****(h) Packaging Materials: 1. Total amounts of Hg,Pb,Cd and Cr6 in any packaging material does not exceed 100ppm and the packaging material**

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



P.O.No.:JSWHEL/2018-19/0840000193

should not be bleached by a process involving chlorine.

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051







Annexure B-11

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

## SERVICE ORDER

Vendor Code : 0020036074  
 Name : Mehta Fabrication Works  
 Address : Badhal  
 JEORI-172101-Himachal Pradesh  
 Ph.No : 9816965766  
 E-mail : mehtadeepak21july@gmail.com  
 PAN NO : CTDPM7816A  
 Vendor GST : 02CTDPM7816A1Z5

P.O.No.:JSWHEL/0018-19/08900000580  
 P.O.Date:14.01.2019  
 Type:ESRD/K/EMT/4602002084  
 Buyer Name:Pankaj Nainta  
 Buyer Email:indents.gbsenergy@jsw.in  
 PR.No/Date:4600001361/14.01.2019

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. E-mail Dated: 27.12.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR						
SR. NO.	SERVICE SHORT DESCRIPTION	UOM	QTY.	TOTAL VALUE	COMPLETION DATE	
1	Erection and commissioning	AU	1.000	86302.08	27.02.2019	
The above work contains following Services:						
SR.NO	SERVICE CODE		QTY.	UoM	UNIT PRICE	TOTAL BASIC VALUE
1.1	3000004192		86302.080	MT	1.00	86302.08
FAB,HND RLG AND TOE GUARD;MS,W EREC SAC Code: 995458						
Detail Specification as per Annexure 1						
D/ T/C: I/P 18% (CGST + SGST)_ND - 15534.38						
2	TRANSPORT AND INSURANCE	AU	1.000	3840	27.02.2019	
The above work contains following Services:						
SR.NO	SERVICE CODE		QTY.	UoM	UNIT PRICE	TOTAL BASIC VALUE
2.1	3000004192		3840.000	MT	1.00	3840.00
FAB,HND RLG AND TOE GUARD;MS,W EREC SAC Code: 995458						
Detail Specification as per Annexure 1						
D/ T/C: I/P 18% (CGST + SGST)_ND - 691.20						
3	SUPPLY OF MATERIAL	AU	1.000	520630.83	27.02.2019	
The above work contains following Services:						
SR.NO	SERVICE CODE		QTY.	UoM	UNIT PRICE	TOTAL BASIC VALUE
3.1	3000004192		520630.830	MT	1.00	520630.83
FAB,HND RLG AND TOE GUARD;MS,W EREC SAC Code: 995458						
Detail Specification as per Annexure 1						
D/ T/C: I/P 18% (CGST + SGST)_ND - 93713.54						

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Corporate Office :JSW Centre, Bandra Kuria Complex, Bandra (East) Mumbai 400051



Total Duties/Taxes & Charges: I/P 18% (CGST + SGST)_ND - 109939.12		Total Taxes / Charges : 109939.12		Total PO Value: 720712.03	
UOM Description :					
AU - Activity unit , MT - Metric Tonne ,					
Total PO Basic Value: 610772.91					
Total PO Value (In Figures):SEVEN HUNDRED TWENTY THOUSAND SEVEN HUNDRED TWELVE and THREE Indian Rupee					
PRICE BASIS:FOR Baspa II HEP		Contract Period			
		Start Date:14.01.2019 to End Date :27.02.2019			
		Delivery Address:			
		Main Store,			
		JSW Hydro Energy Limited			
		BASPA-II H.E.P			
		Shoitsu Colony, P.O. - Tapri			
		District - Kinnaur			
		PIN-172104			
		-Himachal Pradesh ( India )			
PAYMENT TERMS:Payable in 7 days from SRN Date(Against RA Bill)					
INSPECTION By EIC					
DELIVERY PERIOD:Delivery/Completion Time in days: 15 days after receipt of order					
<b>NOTE TO SUPPLIER:</b>					
1. Scope of Work as per annexure - A.					
2. Price breakup & Qty as per annexure - B.					
3. Drawing annexure - C.					
4. Local transport, accommodation: shall be provided by JSWHEL on FOC basis.					
5. Boarding , Lodging and Local Conveyance: In JSW Scope.					
6. Fooding: Shall be provided by JSWHEL on Chargeable basis					
7. Mobilization Time: 3 weeks after receipt of order .					
8. Manpower Insurance : In Vendor Scope					
9. Safety, PPE, HR Compliances etc : In Vendor Scope.					
10. The EIC of this Order is Mr Rakesh Kumar, Mob:9816471656.					
11. Other term and conditions as per Annex-I,II,C and H, attached.					

Thanking You

Yours sincerely,

For JSW Hydro Energy Limited

AUTHORIZED SIGNATORY



**Annexure 1**  
**TECHNICAL SPECIFICATION/SERVICE SPECIFICATION**

Item No.: 1.1 Material/Service: 000000003000004192

FABRICATION,TYPE:HAND RAILING AND TOE GUARD;MATERIAL:MS,CONSUMABLE SUPPLY BY:VENDOR,TOOLS AND TACKLES BY:VENDOR,HANDLING EQUIPMENT BY:VENDOR,WORK TO BE DONE AT:JSW,WORKING HEIGHT:0-10 MTR,SCAFFOLDING BY:VENDOR,SHIFTING OF MATERIALS:VENDOR,ADDITIONAL INFORMATION:WITH ERECTION

Item No.: 2.1 Material/Service: 000000003000004192

FABRICATION,TYPE:HAND RAILING AND TOE GUARD;MATERIAL:MS,CONSUMABLE SUPPLY BY:VENDOR,TOOLS AND TACKLES BY:VENDOR,HANDLING EQUIPMENT BY:VENDOR,WORK TO BE DONE AT:JSW,WORKING HEIGHT:0-10 MTR,SCAFFOLDING BY:VENDOR,SHIFTING OF MATERIALS:VENDOR,ADDITIONAL INFORMATION:WITH ERECTION

Item No.: 3.1 Material/Service: 000000003000004192

FABRICATION,TYPE:HAND RAILING AND TOE GUARD;MATERIAL:MS,CONSUMABLE SUPPLY BY:VENDOR,TOOLS AND TACKLES BY:VENDOR,HANDLING EQUIPMENT BY:VENDOR,WORK TO BE DONE AT:JSW,WORKING HEIGHT:0-10 MTR,SCAFFOLDING BY:VENDOR,SHIFTING OF MATERIALS:VENDOR,ADDITIONAL INFORMATION:WITH ERECTION





ANNEXURE-B.12

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

## PURCHASE ORDER

Vendor Code	: 0010029580
Name	: CHANDIGARH TRADING HOUSE
Address	: 258-A, FF, SHANTI NAGAR,,GALI NO - 2, MANIMAJRA,CH CHANDIGARH-160022-Chandigarh
Ph.No	: 01724613400
Mb.No.	: 9876005990
E-mail	: info@cth.co.in
PAN NO	: AENPB8093F
Vendor GST	: 04AENPB8093F1ZI

P.O.No.:JSWHEL/2018-19/0840000185  
 P.O.Date:17.08.2018  
 Type:ECAP/A/EPH/4602001207  
 Buyer Name:Pankaj Nainta  
 Buyer Email:Indents.gbsenergy@jsw.in  
 PR.No/Date:4300000701/22.05.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. CTH/JSW/20 Dated: 20.06.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR							
SR. NO.	ITEM CODE DESCRIPTION	UOM	QTY.	Over. Del%	UNIT PRICE	TOTAL VALUE	DELIVERY SCHEDULE (Date - Qty)
1	3200004352 DST CLCTR,600 CFM,20 LTR,WLDNG FUMES	EA	1.000	0.0	118,655.00	118655	10.09.2018
Detail Specification as per Annexure 1							
D/T/C: IGST_ND @ 18 % - 21358.00 Freight/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 84213920							
Total Duties/Taxes & Charges: IGST_ND @ 18% - 21358.00							
UOM Description : EA - each ,							
Total PO Basic Value :		118655		Total Taxes / Charges :21358.00		Total PO Value : 140013	
Total PO Value (In Figures):ONE HUNDRED FORTY THOUSAND THIRTEEN and ZERO Indian Rupee							
PRICE BASIS:EW3 Ex-Work Chandigarh							
Delivery Address:				Insurance Type : By Buyer			
Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )				Freight Type : Freight Pre Paid Ins policy No : 0830017291 TATA AIG			
PAYMENT TERMS:Payment in 30 days from GRN date.							
INSPECTION: At HBPCCL Site							
WARRANTY CLAUSE:01 (One) year from the date of commissioning or 13 months from the date of supply whichever is earlier.							
DELIVERY PERIOD:Within 2 -3Weeks from the date of issue of PO.							





P.O.No.:JSWHEL/2018-19/0840000185

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051





P.O.No.:JSWHEL/2018-19/0840000185

**Annexure 1**  
**TECHNICAL SPECIFICATION/SERVICE SPECIFICATION**

Item No.: 1 Material/Service: 00000003200004352  
DUST COLLECTOR,TYPE:FUME COLLECTOR;COLLECTOR FILTER CLEANING:REVERSE AIR,TYPE OF  
COLLECTOR:SOURCE COLLECTOR,AIR FLOW:600 CFM,FILTE  
RING MEDIA:SPUNBOUND POLYESTER,MINIMUM PARTICLE SIZE FILTERED:0.5 µ,FILTER MATERIAL:POLYESTER  
NEEDLE FELT,OPERATING TEMPERATURE:55 D  
EG.C,BIN CAPACITY:20 LTR,APPLICATION:WELDING FUMES  
Additional Specifications :  
CLEANTEK Make Portable Welding Fume extraction system , Model: FE200 (Activated carbon filter, PTFE Cartridge  
filter.)

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:J40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



**STANDARD TERMS AND CONDITIONS****Packing & Forwarding:**

Included in the prices, if not mentioned separately in order.

**Value Added Tax/Service Tax:**

You hereby are affirmed that all your rates and prices as contained in the supply are inclusive of all rates, duties levies and taxes as may be imposed by the Government of India / Government of Himachal Pradesh or any other appropriate Authority from time to time, unless otherwise as specified in this purchase orders.

**Entry Tax:**

Shall be borne by buyer

**Statutory variation in taxes & duties:**

Statutory variation in taxes & duties and/or imposition of any new tax/duty during the validity of the Order shall be to our account only in-case, if the break-up of taxes are mentioned in the Order.

**Road Permit (Way Bill):**

Necessary Way bill, if applicable shall be provided by us.

**Price Escalation /De-escalation:**

The negotiated prices, terms & conditions shall remain fixed, firm & binding till complete execution of the order.

**Dispatch:**

Material is in good packed condition to be consigned to the Manager (Stores).

**Documents Required For Payment:**

The following documents are required in original: 1. Delivery Challan and 2. Invoice. The stipulated payment shall be made only on receipt of these documents and on satisfactory receipt and acceptance of materials at site.

**Submission of Invoice:**

Your invoice (in duplicate) has to be addressed & submitted to the Manger (Stores) who will process your invoices for payment.

**Responsibility of completeness:**

- (a) Any scope of services which has not been specifically mentioned above but required for the completion of this order shall be rendered free of cost, unless expressly excluded in this order.
- (b) Any approval by us at any stage for any supply by you shall not relieve you of your obligations under this order.

**Force Majeure:**

1. Force Majeure means an event or circumstance or combination of events and circumstances beyond the reasonable control of the Party that wholly or partly prevents or unavoidably delays an affected Party in the performance of its obligations under this Order, which amongst other, include Act of God, Natural Calamity, war, etc.
  2. if either Party is prevented from performing any of its obligations under this Order by such cases of Force Majeure, it shall give written notice to the other Party within 14 (fourteen) days of such occurrence to the events, describing the event and its effects supported by authentic evidences that are verifiable. The affected Party shall, having given notice, be wholly or partially excused performance of such obligation for so long as such Force Majeure prevents it from performing them. No Party shall have any claim/ compensation for the loss incurred due to the force majeure conditions.
3. The affected Party shall use all reasonable efforts to minimize any delay in its performance of the Order as a result of force Majeure Events.
4. The Party unable to perform this Order due to the effect of Force Majeure Events occurrence may, after consultation with the other Party, extend the duration of this Order by a period commensurate to the time actually lost due to the Force Majeure occurrence. The other Party shall not claim compensation for the loss thus incurred.
5. In case of an extension up to 90 (Ninety) days in the performance of this Order due to the effect of the Force Majeure occurrence, both Parties shall have friendly consultation on the performance of this Order or termination of the Order as provided in this Order.
6. Notwithstanding the foregoing, Force Majeure shall not apply to any delay, default or failure (direct or indirect) in procuring the components and /or the materials for the manufacture of the Equipment by the Supplier; and/or any delay, default or failure (direct or indirect) by the Supplier in any agreement entered into by it with any party including sub-contractor.



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**Termination of Contract / Right of Acceptance:**

- 1) If the material is delivered beyond delivery time and is not as per quality parameters cited in quotation or discussed at the time of negotiation, we will have the right to reject the material or terminate / cancel the order without assigning any reason whatsoever.
- 2) In case of reasonable doubt, the quality of the material shall be got tested in any reputed Third Party Laboratory at your cost.
- 3) We reserve the right to reject the material in case of detection of manufacturing defect at any stage of construction.
- (b) In the event of non adherence to the schedule and if deemed fit by the Engineer-in-Charge, we shall have right to offload the job and engage another supplier to complete the job at your risk & cost.

**Arbitration:**

- 1.1 It is expressly agreed by and between the Parties that:
- 1.2 any dispute arising out of or in connection with this Order including any question regarding the existence, interpretation, validity, frustration, notation, scope of the Order, performance of the Order, breach of Order, termination and consequences of termination of this Order shall be referred to and finally resolved by arbitration in accordance with the Rules of Indian Council of Arbitration (the "Rules") as amended and in force, from time to time;
- 1.3 This Order shall be exclusively governed by Indian law;
- 1.4 The dispute shall be decided by an Arbitral Tribunal consisting of three members, who shall be appointed in accordance with the Rules;
- 1.5 The costs, charges, fees and expenses of the arbitrator(s) shall be borne equally by the Parties to the arbitration, and save as aforesaid, the Parties shall bear its own legal and others costs;
- 1.6 The venue of such arbitration shall be in Mumbai only;
- 1.7 The courts at Mumbai alone shall have the exclusive jurisdiction to hear matters pertaining to the arbitration or any matter related thereto;
- 1.8 Arbitration proceedings shall be conducted in English language; and
- 1.9 Performance under the Order shall be continued during the arbitration proceedings unless otherwise directed by the Purchaser in writing or unless the matter is such that the performance cannot be possibly continued until the decision of arbitrator is obtained.

**Acceptance of Order:**

You are requested to confirm your unconditional acceptance of this order by signing the acceptance receipt attached with this order within 01 days of issuance of this order.

**EHS requirement:**

- (a) M/C Guarding including back-guarding :( for all rotating equipment)
  1. Guarding to ensure non-contact of hand in moving parts of the machine from any position.
  2. Exposed shaft drives to have fixed guarding
  3. Mesh guards to be of finger proof.
  4. All guards , which are not fixed, should be interlocked
  5. Access to Rotary Air locks to be prevented by positive interlocks
  6. Exhaust Fans to have guarding enclosure on either side.
- (b) Electrical Safety in Panels :( for all electrical panels)
  1. Padlock provision for doors
  2. Shrouding at the rear side against Busbar live contacts
  3. To comply with BS: 6423: 1983 & BS6626: 1985 standards on switch gear & Control Gear and IEE Wiring regulations BS 7671
  4. Equipment to have current state-of-art safety features eg. Earthing, fuses,RCCBsetc
  5. Equipment is labeled as per international colour& sign codes
  6. No taped joints in the wiring. Use of adaptors is allowed
  7. Use of MCBs in place of Switch fuse Units
  8. Double Earthing Provision for all mechanical & electrical equipment
- (c) Noise: (for all rotating equipment):Equipment should not to emit noise 70 dB(A) from 1 mtr distance from the machine
- (d) Asbestos:( for all packing , glands etc ) : Your products should not have traces of Asbestos in any form in the item
- (e) Chlorofluorocarbons (CFCs) & Ozone Depleting Substances (ODS):( for all oils, lubricants and equivalent type ) Your products should not have traces of CFCs and its derivatives and ODSs in any form in the item.
- (f) PolyChlorinatedBiphenyl (PCB):( for all oils , lubricants and equivalent type ) Your products should not have PCB in any form found in electrical transformers, capacitors, light ballasts)
- (g) Imported Equipment / Machinery: Equipment/ Machinery to have certification ' CE' (Certificate` the Europe )
- (h) Packaging Materials: 1. Total amounts of Hg,Pb,Cd and Cr6 in any packaging material does not exceed 100ppm and the packaging material

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kuria Complex, Bandra (East) Mumbai 400051



P.O.No.:JSWHEL/2018-19/0840000185

should not be bleached by a process involving chlorine.

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Plant GST No.:02AADCH3821LTZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kuria Complex, Bandra (East) Mumbai 400051





ANNEXURE- B13

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

## PURCHASE ORDER

Vendor Code	: 0010029629
Name	: GALAXY SALES CORPORATION
Address	: SHOP NO 410/2,,NEAR GSS SCHOOL,,VPO MALOYA CHANDIGARH-160025-Chandigarh
Ph.No	: 9317797581
Mb.No.	: 9878644663
E-mail	: galaxysalescorps@gmail.com
PAN NO	: CZKPK0965R
Vendor GST	: 04CZKPK0965R1ZP

P.O.No.:JSWHEL/2018-19/08400000165  
 P.O.Date:05.04.2018  
 Type:ECAP/A/EMT/4602002084  
 Buyer Name:Sidhi Prasad Sakla  
 Buyer Email:indents.gbsenergy@jsw.in  
 PR.No/Date:4300000680/08.03.2018

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. GSC/2018/302 Dated: 26.02.2018 & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR						
SR. NO.	ITEM CODE DESCRIPTION	UOM	QTY.	Over. Del%	UNIT PRICE	TOTAL DELIVERY SCHEDULE (Date - Qty)
1	2200164948 PWR SUPY,UN INTRPT,ON LNE,15 KVA,1 PH	EA	1.000	0.0	105,000.00	20.04.2018
Detail Specification as per Annexure 1						

D/T/C: I/P 18% IGST\_ND @ 18 % - 18900.00 Freigt/Quantity - 0.00 Pkg&Frwd Charges % - 0.00 Pkg&Frwd Charges Amt - 0.00 HSN Code: 85049090

Total Duties/Taxes & Charges: IGST\_ND @ 18% - 18900.00

UOM Description :  
EA - each .

Total PO Basic Value : 105000  
 Total Taxes / Charges : 18900.00  
 Total PO Value : 123900

Delivery Address:	
Main Store, JSW Hydro Energy Limited BASPA-II H.E.P Sholtu Colony, P.O. - Tapri District - Kinnaur PIN-172104 -Himachal Pradesh ( India )	Insurance Type : By Buyer Freight Type : Freight Pre Paid Ins policy No : TATA AIG-0830017291

PAYMENT TERMS: Payment in 15 days from GRN date.

WARRANTY CLAUSE: Uniline UPS Warranty One Year Only

DELIVERY PERIOD: within 15 days after receipt order.

## NOTE TO SUPPLIER:

15.0KVA/220VDC (Input1Ph -220 VDC.- Output1Ph- 230 VAC.)Uniline make, Model: Maxilime,  
 Installation will be done by Vendor onsite, TO & FRO: Vendor Scope, EIC of this order is Mr. Vikas Gupta.





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P.O.No.:JSWHEL/2018-19/08400000165

Thanking You  
Yours sincerely,  
For JSW Hydro Energy Limited



AUTHORIZED SIGNATORY



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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051

P.O.No.:JSWHEL/2018-19/0840000165

### Annexure 1 TECHNICAL SPECIFICATION/SERVICE SPECIFICATION

Item No.: 1 Material/Service: 000000002200164948  
 POWER SUPPLY,UNINTERRUPTED,TYPE:ON LINE,CAPACITY:15 KVA,INPUT VOLTAGE:220/230 VAC,OUTPUT  
 VOLTAGE:220 +15% /-20% VAC,PHASE:1 PH,VOL  
 TAGE REGULATION:+15% /- 20%,PANEL DISPLAY:DIGITAL,DIMENSION:780 (H) x 600 (W) x 870(D)  
 MM,MAKE:UNILINE,MODEL:MXHS

Additional Specifications :  
 OWER SUPPLY,UNINTERRUPTED,TYPE:ON LINE,CAPACITY:15 KVA,INPUT VOLTAGE:220/230 VAC,OUTPUT  
 VOLTAGE:220 +15% /-20% VAC,PHASE:1 PH,VOL  
 TAGE REGULATION:+15% /- 20%,PANEL DISPLAY:DIGITAL,DIMENSION:780 (H) x 600 (W) x 870(D)  
 MM,MAKE:UNILINE,MODEL:MXHS

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
 COMMISSIONERATE:CHANDIGARH-1, RANGE:SHIMLA, DIVISION:SHIMLA

Registered Office :JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai 400051



**STANDARD TERMS AND CONDITIONS****Packing & Forwarding:**

Included in the prices, if not mentioned separately in order.

**Value Added Tax/Service Tax:**

You hereby are affirmed that all your rates and prices as contained in the supply are inclusive of all rates, duties levies and taxes as may be imposed by the Government of India / Government of Himachal Pradesh or any other appropriate Authority from time to time, unless otherwise as specified in this purchase orders.

**Entry Tax:**

Shall be borne by buyer

**Statutory variation in taxes & duties:**

Statutory variation in taxes & duties and/or imposition of any new tax/duty during the validity of the Order shall be to our account only in-case, if the break-up of taxes are mentioned in the Order.

**Road Permit (Way Bill):**

Necessary Way bill, if applicable shall be provided by us.

**Price Escalation /De-escalation:**

The negotiated prices, terms & conditions shall remain fixed, firm & binding till complete execution of the order.

**Dispatch:**

Material is in good packed condition to be consigned to the Manager (Stores).

**Documents Required For Payment:**

The following documents are required in original: 1. Delivery Challian and 2. Invoice. The stipulated payment shall be made only on receipt of these documents and on satisfactory receipt and acceptance of materials at site.

**Submission of Invoice:**

Your Invoice (In duplicate) has to be addressed & submitted to the Manger (Stores) who will process your Invoices for payment.

**Responsibility of completeness:**

- (a) Any scope of services which has not been specifically mentioned above but required for the completion of this order shall be rendered free of cost, unless expressly excluded in this order.
- (b) Any approval by us at any stage for any supply by you shall not relieve you of your obligations under this order.

**Force Majeure:**

- Force Majeure means an event or circumstance or combination of events and circumstances beyond the reasonable control of the Party that wholly or partly prevents or unavoidably delays an affected Party in the performance of its obligations under this Order, which amongst other, include Act of God, Natural Calamity, war, etc.
- If either Party is prevented from performing any of its obligations under this Order by such cases of Force Majeure, it shall give written notice to the other Party within 14 (fourteen) days of such occurrence to the events, describing the event and its effects supported by authentic evidences that are verifiable. The affected Party shall, having given notice, be wholly or partially excused performance of such obligation for so long as such Force Majeure prevents it from performing them. No Party shall have any claim/ compensation for the loss incurred due to the force majeure conditions.
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- The Party unable to perform this Order due to the effect of Force Majeure Events occurrence may, after consultation with the other Party, extend the duration of this Order by a period commensurate to the time actually lost due to the Force Majeure occurrence. The other Party shall not claim compensation for the loss thus incurred.
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- Notwithstanding the foregoing, Force Majeure shall not apply to any delay, default or failure (direct or indirect) in procuring the components and /or the materials for the manufacture of the Equipment by the Supplier; and/or any delay, default or failure (direct or indirect) by the Supplier in any agreement entered into by it with any party including sub-contractor.



**Termination of Contract / Right of Acceptance:**

- 1) If the material is delivered beyond delivery time and is not as per quality parameters cited in quotation or discussed at the time of negotiation, we will have the right to reject the material or terminate / cancel the order without assigning any reason whatsoever.
- 2) In Case of reasonable doubt, the quality of the material shall be got tested in any reputed Third Party Laboratory at your cost.
- 3) We reserve the right to reject the material in case of detection of manufacturing defect at any stage of construction.
- (b) In the event of non adherence to the schedule and if deemed fit by the Engineer-In-Charge, we shall have right to offload the job and engage another supplier to complete the job at your risk & cost.

**Arbitration:**

- 1.1 It is expressly agreed by and between the Parties that:
- 1.2 any dispute arising out of or in connection with this Order including any question regarding the existence, interpretation, validity, frustration, notation, scope of the Order, performance of the Order, breach of Order, termination and consequences of termination of this Order shall be referred to and finally resolved by arbitration in accordance with the Rules of Indian Council of Arbitration (the "Rules") as amended and in force, from time to time;
- 1.3 This Order shall be exclusively governed by Indian law;
- 1.4 The dispute shall be decided by an Arbitral Tribunal consisting of three members, who shall be appointed in accordance with the Rules;
- 1.5 The costs, charges, fees and expenses of the arbitrator(s) shall be borne equally by the Parties to the arbitration, and save as aforesaid, the Parties shall bear its own legal and others costs;
- 1.6 The venue of such arbitration shall be in Mumbai only;
- 1.7 The courts at Mumbai alone shall have the exclusive jurisdiction to hear matters pertaining to the arbitration or any matter related thereto;
- 1.8 Arbitration proceedings shall be conducted in English language; and
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1. Guarding to ensure non-contact of hand in moving parts of the machine from any position.
  2. Exposed shaft drives to have fixed guarding
  3. Mesh guards to be of finger proof.
  4. All guards , which are not fixed, should be interlocked
  5. Access to Rotary Air locks to be prevented by positive interlocks
  6. Exhaust Fans to have guarding enclosure on either side.
- (b) Electrical Safety In Panels :( for all electrical panels)
1. Padlock provision for doors
  2. Shrouding at the rear side against Busbar live contacts
  3. To comply with BS: 6423: 1983 & BS6626: 1985 standards on switch gear & Control Gear and IEE Wiring regulations BS 7671
  4. Equipment to have current state-of-art safety features eg. Earthing, fuses,RCCBsetc
  5. Equipment is labeled as per International colour& sign codes
  6. No taped joints in the wiring. Use of adaptors is allowed
  7. Use of MCBs in place of Switch fuse Units
  8. Double Earthing Provision for all mechanical & electrical equipment
- (c) Noise: (for all rotating equipment):Equipment should not to emit noise 70 dB(A) from 1 mtr distance from the machine
- (d) Asbestos:( for all packing , glands etc ) : Your products should not have traces of Asbestos in any form in the item
- (e) Chlorofluorocarbons (CFCs) & Ozone Depleting Substances (ODS):( for all oils, lubricants and equivalent type ) Your products should not have traces of CFCs and its derivatives and ODSs in any form in the item.
- (f) PolyChlorinatedBiphenyl (PCB):( for all oils , lubricants and equivalent type ) Your products should not have PCB in any form found in electrical transformers, capacitors, light ballasts)
- (g) Imported Equipment / Machinery: Equipment/ Machinery to have certification `CE` (Certificate` the Europe )
- (h) Packaging Materials: 1. Total amounts of Hg,Pb,Cd and Cr6 in any packaging material does not exceed 100ppm and the packaging material



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should not be bleached by a process involving chlorine.

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Plant GST No.:02AADCH3821L1ZU,PAN:AADCH3821L, CIN:U40101HP2014PLC000681,  
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