

**BEFORE THE
HON'BLE ELECTRICITY REGULATORY COMMISSION
VIDYUT BHAWAN - II, PATNA**

**Petition
For
True-Up of FY 2010-11, FY 2011-12, FY 2012-13, 2013-14, FY 2014-15, FY 2015-16,**

**For
Bihar State Hydroelectric Power Corporation Ltd.
(BHPC)
Patna**



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1. Background

1.1. Brief

Bihar State Hydroelectric Power Corporation Limited (BHPC) is a company wholly owned by the Government of Bihar and registered under the Companies Act 1956. It is responsible for exploring all possibilities of hydroelectric potential and its development in the Bihar state.

1.2. BHPC Responsibility

It is engaged in following activities to explore hydro potential.

- To plan, promote, organize, co-ordinate, finance, establish, develop and engage in the business of setting up electrical power projects particularly hydroelectric power in all its aspect including planning, investigation, research, design and preparation of preliminary feasibility and detailed project report, construction, generation, operation and maintenance of Hydroelectric Power stations and other projects, transmission, distribution and sale of power and to carry on all activities connected with power projects such as manufacture, inspection, supply, erection commissioning, running and maintaining the hydro power projects.
- To carry out the business of purchasing, selling, importing, producing, Trading, manufacturing and otherwise dealing in all aspects of planning, investigation, research, design and preparation of preliminary feasibility and detailed project report, construction, generation, operation and maintenance of Hydroelectric Power stations and other projects, transmission, distribution and sale of power, hydroelectric power development, ancillary and other allied industries and for that purpose to install, operate and manage all necessary plants establishments and works.
- To undertake and render services of all and every kind of buying, selling, exchanging, alternating, importing, exporting, producing and trading any equipment for establishing Hydroelectric Power and other projects required for civil, commercial and military purposes.
- To operate and maintain economically and efficiently the generating stations, tie lines, sub stations and main transmission lines, assigned to it by the State Government in accordance with the provision of section 39 of the Electricity (Supply) Act, 1948 and Electricity Act 2003.
- To take-up connection with power projects multipurpose program like construction of embankments, dams, canals, sub canals, distributaries, reservoirs, facilities, drinking water and take all necessary steps for soil conservation, afforestation and rehabilitation of displaced persons.

1.3. Bihar Electricity Regulatory Commission

Bihar Electricity Regulatory Commission (BERC) has been established by the Government of Bihar under Section 17 of the Electricity Regulatory Commissions Act, 1998 vide Government of Bihar Notification no. 1284 dated 15th April 2002. And the first proviso of Section 82 (1) which ensured the continuity of the Commission along with that of State Electricity Regulatory Commissions under Section 17 of Electricity Regulatory Commissions Act, 1998, and functioning as such immediately before the appointed date shall be the State Commission for the purpose of the Electricity Act, 2003.

Functions of BERC:

The Hon'ble State Commission, having the powers under Section 61 and 62 of the Electricity Act 2003 and the powers entitled under Bihar State Electricity Commission (Determination of Tariff) Regulation 2007 and amendments issued from time to time shall discharge the following functions, namely:

- a) Determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within that State: Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- b) Regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- c) Facilitate intra-state transmission and wheeling of electricity;
- d) Issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- e) Promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution license;
- f) Adjudicate upon the disputes between the licensees, and generating companies and to refer any dispute for arbitration;
- g) Levy fee for the purposes of this Act;
- h) Specify State Grid Code consistent with the Indian Electricity Grid Code specified with regard to grid standards;
- i) Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- j) Fix the trading margin in the intra-State trading of electricity, if considered, necessary; and
- k) discharge such other functions as may be assigned to it under this Act.

- l) The State Commission shall advise the State Government on all or any of the following matters, namely:
1. Promotion of competition, efficiency and economy in activities of the electricity industry;
 2. Promotion of investment in electricity industry;
 3. Reorganization and restructuring of electricity industry in the State;
 4. Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by State Government.

1.4. Context of Current Petition

The Hon'ble Commission has conducted the True up for FY 2009-10 of 9 plants of BHPC vide Order dated 14.12.2021. Further, Hon'ble Commission directed BHPC to file Petition for the True up of FY 2010-11, FY 2011-12, and FY 2012-13. In such context, BHPC submits that due to delay in appointment of consultant for the filling of petition, the said petition couldn't be filled.

Further, the Hon'ble Commission has initiated Suo moto proceedings vide case no. 30 of 2020. During the hearing held on 11.11.2022, the Hon'ble Commission allowed the petitioner an additional time till 06.12.2022 to submit the consolidated petition.

During the preparation of the consolidated petition as above, the Audited Accounts for the FY 2013-14, FY 2014-15, and FY 2015-16, were also available with the petitioner. In view of the same, the Petitioner is also filing the instant petition for the FY 2013-14, FY 2014-15, and FY 2015-16 along with ARR (Determination of Generation Tariff) for FY 2023-24. The Hon'ble Commission is requested to take cognizance of this development and admit the instant petition.

BHPC through office letter no. 572 dated 05.12.2022 submitted requests for another time extension because of the development stated in the para above. The Hon'ble Commission through letter no – Case no.-BERC- 30/2020/085 granted further time extension till 20.12.2022.

Accordingly, the Petitioner has prepared the Petition for the True-up of FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, FY 2015-16 and ARR for FY 2023-24 for its 13 plants. The details of all the 13 plants depicting with installed capacity, date of commissioning are as follows:

Table 1: BHPC Plants Details

S. No.	Plant name	Installed Cap (MW)	Date of Commissioning (CoD)
1	Agnoor	1	Unit 1- June-2006 Unit 2- June-2006
2	Barun	3.3	Unit 1- June-96 Unit 2- Mar-96

S. No.	Plant name	Installed Cap (MW)	Date of Commissioning (CoD)
3	Dehri-on-Sone	6.6	Unit 1- Jan-93 Unit 2- Mar-93 Unit 3- Aug-93 Unit 4- Apr-93
4	Dhelabagh	1	Unit 1- Aug-2006 Unit 2- Aug-2006
5	Jainagara	1	Unit 1- Dec-2008 Unit 2- Dec-2008
6	Koshi-Kataiya	19.2	1970-75
7	Nasriganj	1	Unit 1- July-2007 Unit 2- July-2007
8	Triveni	3	Feb-09
9	Valmikinagar	15	Unit 1- Sep-95 Unit 2- Jun-96 Unit 3- Nov-97
10	Shirkhinda	0.70	January 2010
11	Sebari	1	September 2010
12	Arwal	0.50	January 2012
13	Belsar	1	July 2012
	Total	54.3	

BHPC, along with this Petition is submitting the Tariff Formats (**Annexure A** of the Petition) with relevant data and information to the extent applicable and would make available any further information/additional data required by the Hon'ble Commission during the course of the proceedings.

1.5. Detail Regarding Cost and Time over-run

The Petitioner has commissioned Shirkhinda, Sebari, Arwal, and Belsar plants during the period FY 2009-10 to FY 2012-13 respectively. The plants were expected to be commissioned within the estimated period of time and the estimated cost but due to reasons which were not under the control of the petitioner, the said projects got delayed. The details of Time and Cost overrun pertaining to these plants is as shown in the table below for the kind consideration of the Hon'ble Commission.

The details of DPR as well as the copies of contracts is provided as **Annexure B** and **Annexure C** respectively.

Table 2: Detail of Cost & Time over-run for 4 Plants

Plant	Agreement date	Estimated Cost (Rs. in Cr)	Cost as Per Contract Agreement (Rs. In Cr)	Actual Expenditure as per audited accounts (Rs. in Cr)	Contract Period (months)	Date of Commissioning	Time overrun (in Years)
Shirkhinda	06.06.2005 for EM, 27.06.2005 for Civil	4.87	5.32	7.66	12 months for EM & 8 months for Civil	Jan-10	3.5 years approx.
Sebari	06.06.2005 for EM, 25.03.2009 for Civil	5.68	8.02	8.41	6 months for EM & 09 for Civil	Sep-10	1 years approx.
Arwal	-12.07.2006 for EM, 28.08.2004 for Civil	3.18	4.92	8.09	12 months for EM & 8 months for Civil	Jan-12	4.5 years approx.
Belsar	E/M and Civil 03.04.2006	5.7	8.36	11.80	24 months for TKC contract	July 2012	4 years approx..

The Petitioner submits the following reasons for the Cost and Time over-run of all 4 plants are as follow:

- The final design and drawing for construction of the projects were prepared by AHEC Roorkee which took considerable time. After finalization of the design and drawing quantities have been increased substantially which resulted in cost overrun.
- Heavy dewatering during construction also affected the cost and time.
- The plant lies in the Naxal belt. Very frequently there have been disturbances in construction resulted in delayed completion of the project.
- There was substantial delay in release of loan from NABARD.

The Petitioner is submitting supporting documents with regards to Cost and Time over –run in **Annexure D.**

1.6. Case of Kosi-Kataiya Plant

The Koshi-Kataiya plant was commissioned on 1970-75. The plant was handed over to BHPC in the year 2003 which also marked the ending of useful life of plant (i.e. 35 years of operation). Hence, the work of residual life assessment was assigned to AHEC, Roorkee of Koshi-Kataiya plant on July 2005 by BHPC. AHEC, Roorkee submitted the report on Dec 2006 with the recommendation for major R&M works of units to increase the useful life of plant. On the basis of the recommendation of AHEC, Roorkee, the matter was placed before the Govt. of Bihar and government sanctioned RS 35 crores and released RS 32.84 crores for R&M work in the year 2007. Based on the recommendation, BHPC invited the tender for R&M work which was awarded in the year November 2010.

Considering increased useful life of plant due to R&M work, we have included this project also in the True-up petition.

The claim for Interest on loan is made as capital expenditure were made on the said plant, which were funded by Loans. Claim for Interest on Loan is made as the methodology acknowledged by the Hon'ble Commission during the True-up of FY 2009-10.

The claim for O&M expense is made because Operation & maintenance was done. O&M is required even if the plan is in shutdown mode for safety reasons along with regular maintenance which is critical for its future performance.

1.7. Regulatory Provisions for filling of True-up Petition

Regulation 22 (4) of BERC (Terms and conditions for determination of Tariff) Regulations, 2007 deals with the True-up and review mechanism and in this regard provides as follows-

"The Commission shall undertake a review along with next Tariff Order, of the expenses and revenues approved by the Commission in the current year Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates / pre-actuals of the sale of electricity, income, and expenditure for the relevant year and permit necessary adjustments/changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review'.

After audited accounts of the year are made available, the Commission shall undertake a similar exercise as in sub-clause (1) above based on the final actual figures as per the audited accounts. This exercise based on the audited accounts shall be called 'Truing up'. The truing up exercise for any year shall not ordinarily be considered after more than one-year gap after 'Review'."

- I. It is evident from the above that the maximum time period allowed for the truing up exercise is one year from the review exercise. Herein the petitioner would like to request the Hon'ble Commission to take note of the following in admitting this True-up petition.
- II. While the Regulations as mentioned above allow for a maximum time period, they also mention that 'The truing up exercise for any year shall not ordinarily be considered after more than one-year gap after 'Review'. It is an agreed position that BHPC was not able to file a Review or True-up or Tariff petition for want of Audited Accounts which were not available for a significant period of time. The petitioner would hence like to submit that it was not an ordinary situation and the same could only be rectified very recently with the initiation of audit process of the Company's Accounts. As soon as Audited Accounts were available for the years FY 2010-11, FY 2011-12, and FY 2012-13, FY 2013-14, FY 2014-15, FY 2015-16 the petitioner is filing the True-up petition for the stated period.
- III. In light of the above, the petitioner requests the Hon'ble Commission to condone the delay in filling and admit the instant petition.

1.8. Prayers to the Hon'ble Commission

In the light of the submission here made, BHPC pleads before the Hon'ble Commission to:

- Condone the delay in filling of the instant petition and examine the proposal submitted by the Petitioner for a favorable dispensation;
- Pass suitable orders with respect to the True Up of FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, FY 2015-16, Determination of ARR for FY 2023-24 along with Tariff for the FY 2023-24 as submitted in this petition.
- Condone any inadvertent omissions, errors, shortcomings and permit BHPC to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date; and
- Pass such Order as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

**TRUE-UP for FY 2010-11, FY 2011-12,
FY 2012-13, FY 2013-14, FY 2014-15,
and FY 2015-16**

2. True-Up for FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, and FY 2015-16

2.1. Introduction

BHPC has received the tariff of RS 2.92 per kWh vide Tariff Order passed dated 14.12.2021 in Case no. 27 of 2019 for 9 plants namely Valmiki Nagar, Dehri, Barun, Kosi, Dhelabagh, Agnoor, Nasriganj, Jainagara & Triveni.

The petitioner is submitting the consolidated petition on a year-wise basis (i.e. for all years from FY 2010-11 to FY 2015-16) considering the Date of Commissioning (CoD) of the 4 plants as shown in the Table-1.

The following considerations have been made by the Petitioner for the True-Up of FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, and FY 2015-16:

- I. Opening Values of GFA, Equity, Loan, and Grant for the 9 plants namely Valmiki Nagar, Dehri, Barun, Kosi, Dhelabagh, Agnoor, Nasriganj, Jainagara & Triveni have been taken as per approved values by the Hon'ble Commission in the True-up order for FY 2009-10 (dated 14.12.2021).
- II. For the plants (Shirkhinda, Sebari, Arwal, and Belsar) commissioned during the period FY 2009-10 to FY 2012-13, the opening values of GFA, Equity, Loan, and Grants have been taken as per audited accounts. (Audited Accounts attached as **Annexure E**)
- III. Capitalization (GFA additions) is considered as per audited accounts of relevant years.
- IV. O&M is considered as per audited accounts of relevant years.
- V. Grant for the stations Shirkhinda, Sebari, Arwal, and Belsar amounting to Rs. 89.57 Lakh, Rs. 112.50 Lakh, Rs. 71.93 Lakh, and Rs. 112.50 Lakh respectively has been taken under consideration for the computation of various parameters of ARR. (Detail of Grant attached as **Annexure F**)

2.2. Regulatory Context

As per Regulation 22 – 'Review and Truing up' of Tariff Regulations, 2007, The true-up exercise has to be undertaken by the Hon'ble Commission based on final actual figures as per the audited accounts. The relevant extracts are reproduced hereunder:

"(1) The Commission shall undertake a review along with next Tariff Order, of the expenses and revenues approved by the Commission in the current year Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates / pre-actuals of the sale of electricity, income and expenditure for the relevant year and permit necessary adjustments / changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review'.

(2) After audited accounts of the year are made available, the Commission shall undertake a similar exercise as in sub-clause (1) above based on the final actual figures as per the audited accounts. This exercise based on the audited accounts shall be called 'Truing up'. The truing up exercise for any year shall not ordinarily be considered after more than one year gap after 'Review'.

(3) The Revenue gap of next year shall be adjusted as a result of Review and Truing up exercises.

(4) While approving adjustments towards revenue / expenses in future years, arising out of Review / Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses / revenues, Carrying costs shall be limited to the interest rate approved for working capital borrowings.

(5) For any revision of approvals, the licensee shall satisfy the Commission that the revision is necessary for the reasons beyond its control. In case additional supply is required to be made to any particular category, the licensee may, at any time during the year, make an application to the Commission for its approval, duly explaining the need for such change of consumer mix and additional supply of power and also indicating the manner in which the licensee proposes to meet the cost for such change of consumer mix and additional supply of power. The Commission may consider according approval to such proposals provided the cost of additional supply of power is met by the beneficiary category."

Accordingly, the Petitioner has been computed based on various items of ARR which are in accordance with the Regulation 54 of Tariff Regulation, 2007:

"The two-part tariff for sale of electricity from a hydro power generating station shall comprise of recovery of capacity charges and primary energy charges:

(i) Capacity charges: The capacity charges shall be computed in accordance with the following formula: Capacity charges = (Annual fixed charge – Primary Energy charge)

Note: Recovery through primary energy charge shall not be more than Annual Fixed Charge.

(ii) Annual Fixed Charges: Annual Fixed charges shall consist of;

(a) Interest on capital

(b) Depreciation, including Advance Against Depreciation

(c) Return on equity

(d) Operation and Maintenance expenses; and

(e) Interest on working capital"

The computation of the claim against each item of the ARR is explained in the subsequent sections.

2.3. Sale of Infirm Power

According to Regulation 52 of Tariff Regulations, 2007:

“Any revenue earned by the integrated utility / generating company from sale of infirm power shall be taken as reduction in capital cost and shall not be treated as revenue. The rate for infirm power shall be the same as the primary energy rate of the generating station.”

The petitioner submits that no records indicating infirm power is available. As per the provision, Hon’ble Commission may subtract the sale of infirm power from revenue from the sale of power.

2.4. Return on Equity (RoE)

According to the Regulation 53 of Tariff Regulation, 2007, debt to equity ratio should be treated as follow:

“(1) In case of all generating stations, the debt – equity ratio as on the date of commercial operation shall be 70:30 for determination of tariffs, provided that the commission may in appropriate cases consider equity higher than 30% for purpose of determination of tariff, where the generating company is able to establish to the satisfaction of the Commission that the deployment of equity more than 30% was in the interest of general public. Provided that

(i) in case of a generating station, the actual equity employed is less than 30%, the actual debt and equity employed shall be taken for determination of tariff

(ii) in case of existing projects the actual debt: equity ratio shall be used for tariff determination. However any expansion shall be governed by clause (1) above.

(2) The debt and equity amount arrived at in accordance with clause (1) shall be used for calculation of interest on loan, return on equity, Advance Against Depreciation and foreign exchange rate variation.”

Accordingly, the petitioner submits that no equity was infused during the FY 2010-11 to FY 2015-16, hence, the GFA additions for respective years are funded 100% on debt, where the debt has been computed as 100% of the GFA addition during the year less GFA deletion during the year less Grants during the year, as shown in the tables below:

Table 3: Equity & Debt addition for FY 2010-11

(Amount in Crore)

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
1	Agnoor	8.24	-	0.14
2	Dhelabagh	5.25	-	0.00

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
3	Jainagara	3.81	-	0.00
4	Nasriganj	4.24	-	0.30
5	Triveni	16.49	-	0.16
6	Valmikinagar	57.56	-	0.28
7	Dehri-on-sone	34.52	-	1.23
8	Barun	15.09	-	0.07
9	Koshikataiya	0.01	-	0.01
10	Shirkhinda	7.41	-	0.64
11	Sebari	8.83	-	1.55
	Total	161.45	-	4.38

Table 4: Equity & Debt addition for FY 2011-12

(Amount in Crore)

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
1	Agnoor	8.24	-	-
2	Dhelabagh	5.35	-	0.10
3	Jainagara	4.03	-	0.22
4	Nasriganj	4.25	-	0.01
5	Triveni	16.49	-	0.00
6	Valmikinagar	57.56	-	-
7	Dehri-on-sone	37.67	-	3.15
8	Barun	15.71	-	0.62
9	Koshikataiya	6.05	-	6.04
10	Shirkhinda	7.41	-	-

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
11	Sebari	9.84	-	1.01
12	Arwal	7.37	-	8.08
	Total	179.95	-	19.22

Table 5: Equity & Debt addition for FY 2012-13

(Amount in Crore)

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
1	Agnoor	9.11	-	0.88
2	Dhelabagh	10.31	-	4.96
3	Jainagara	5.22	-	1.19
4	Nasriganj	4.83	-	0.57
5	Triveni	16.49	-	0.00
6	Valmikinagar	58.77	-	1.22
7	Dehri-on-sone	37.70	-	0.03
8	Barun	15.93	-	0.22
9	Koshikataiya	22.07	-	16.02
10	Shirkhinda	7.87	-	0.46
11	Sebari	10.35	-	0.52
12	Arwal	8.18	-	0.82
13	Belsar	10.68	-	11.80
	Total	217.52	-	38.69

Table 6: Equity & Debt addition for FY 2013-14

(Amount in Crore)

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
1	Agnoor	9.12	-	0.01
2	Dhelabagh	10.31	-	0.00
3	Jainagara	5.32	-	0.09
4	Nasriganj	4.94	-	0.11
5	Triveni	16.50	-	0.00
6	Valmikinagar	58.82	-	0.04
7	Dehri-on-sone	40.07	-	2.36
8	Barun	15.93	-	0.00
9	Koshikataiya	22.09	-	0.02
10	Shirkhinda	7.87	-	0.00
11	Sebari	10.44	-	0.09
12	Arwal	8.19	-	0.01
13	Belsar	10.71	-	0.04
	Total	220.30	-	2.79

Table 7: Equity & Debt addition for FY 2014-15

(Amount in Crore)

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
1	Agnoor	9.12	-	0.0001
2	Dhelabagh	10.31	-	0.0001
3	Jainagara	5.32	-	0.0001
4	Nasriganj	4.94	-	0.0001

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
5	Triveni	16.50	-	0.0004
6	Valmikinagar	58.88	-	0.0603
7	Dehri-on-sone	40.08	-	0.0125
8	Barun	15.93	-	0.0004
9	Koshikataiya	22.09	-	0.0025
10	Shirkhinda	7.87	-	0.0034
11	Sebari	10.45	-	0.0001
12	Arwal	8.19	-	0.0001
13	Belsar	10.71	-	0.0001
	Total	220.38	-	0.0804

Table 8:Equity & Debt addition for FY 2015-16

(Amount in Crore)

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
1	Agnoor	9.12	-	-
2	Dhelabagh	10.31	-	-
3	Jainagara	5.32	-	-
4	Nasriganj	4.94	-	-
5	Triveni	16.50	-	-
6	Valmikinagar	58.88	-	-
7	Dehri-on-sone	40.08	-	0.0054
8	Barun	15.93	-	-
9	Koshikataiya	22.09	-	-
10	Shirkhinda	7.87	-	-

S. No.	Plant name	Net GFA (excluding Grant)	Addition to Equity	Addition to Debt
11	Sebari	10.45	-	-
12	Arwal	8.19	-	-
13	Belsar	10.71	-	-
	Total	220.39	-	0.0054

According to Regulation 55(3) of Tariff Regulation, 2007, Return on Equity shall be computed as follows:

“(a) The return on equity shall be computed on the equity base determined in accordance with Regulation 53 @ 14% per annum.

(b) In the case of existing projects, the actual debt equity shall be used for tariff determination. However, any expansion shall be governed by Regulation 53.

(c) Equity invested in foreign currency shall be allowed a return upto the prescribed limit in the same currency and the repayment on this account shall be made in Indian Rupee based on the exchange rate prevailing on the due date of billing.

(d) The premium raised by the integrated utility / generating company while issuing share capital and investment of internal resources created out of its free reserve, if any, for funding the project, shall also be reckoned as a paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station and forms part of approved financial package. The definition of equity thus would involve all net worth deployed in the capital of the unit.”

The additions to Equity has been considered zero as shown in the tables above for the respective years. The opening balance of Equity are in line with the approved numbers of Hon’ble Commission’s True-up order of FY 2009-10 dated 14.12.2021, no further equity has been infused in FY 2010-11 to FY 2015-16, hence, RoE has been claimed for 3 plants (Valmikinagar, Dehri-on-Sone, and Barun) as shown in the tables below.

Accordingly, return on equity has been computed for FY 2010-11 to FY 2015-16 in the respective tables as shown below:

Table 9: Return on Equity for FY 2010-11

(Amount in Crore)

S. No.	Plants name	Opening Equity	Additions To Equity	Closing Equity	Average Equity	RoE (@14% of Equity)
1	Valmikinagar	17.18	-	17.18	17.18	2.41
2	Dehri-on-sone	9.99	-	9.99	9.99	1.40
3	Barun	4.51	-	4.51	4.51	0.63
	Total	31.68	-	31.68	31.68	4.44

Table 10: Return on Equity for FY 2011-12

(Amount in Crore)

S. No.	Plants name	Opening Equity	Additions To Equity	Closing Equity	Average Equity	RoE (@14% of Equity)
1	Valmikinagar	17.18	-	17.18	17.18	2.41
2	Dehri-on-sone	9.99	-	9.99	9.99	1.40
3	Barun	4.51	-	4.51	4.51	0.63
	Total	31.68	-	31.68	31.68	4.44

Table 11: Return on Equity for FY 2012-13

(Amount in Crore)

S. No.	Plants name	Opening Equity	Additions To Equity	Closing Equity	Average Equity	RoE (@14% of Equity)
1	Valmikinagar	17.18	-	17.18	17.18	2.41
2	Dehri-on-sone	9.99	-	9.99	9.99	1.40

S. No.	Plants name	Opening Equity	Additions To Equity	Closing Equity	Average Equity	RoE (@14% of Equity)
3	Barun	4.51	-	4.51	4.51	0.63
	Total	31.68	-	31.68	31.68	4.44

Table 12: Return on Equity for FY 2013-14

(Amount in Crore)

S. No.	Plants name	Opening Equity	Additions To Equity	Closing Equity	Average Equity	RoE (@14% of Equity)
1	Valmikinagar	17.18	-	17.18	17.18	2.41
2	Dehri-on-sone	9.99	-	9.99	9.99	1.40
3	Barun	4.51	-	4.51	4.51	0.63
	Total	31.68	-	31.68	31.68	4.44

Table 13: Return on Equity for FY 2014-15

(Amount in Crore)

S. No.	Plants name	Opening Equity	Additions To Equity	Closing Equity	Average Equity	RoE (@14% of Equity)
1	Valmikinagar	17.18	-	17.18	17.18	2.41
2	Dehri-on-sone	9.99	-	9.99	9.99	1.40
3	Barun	4.51	-	4.51	4.51	0.63
	Total	31.68	-	31.68	31.68	4.44

Table 14: Return on Equity for FY 2015-16

(Amount in Crore)

S. No.	Plants name	Opening Equity	Additions To Equity	Closing Equity	Average Equity	RoE (@14% of Equity)
1	Valmikinagar	17.18	-	17.18	17.18	2.41
2	Dehri-on-sone	9.99	-	9.99	9.99	1.40
3	Barun	4.51	-	4.51	4.51	0.63
	Total	31.68	-	31.68	31.68	4.44

The petitioner requests the Hon'ble Commission to approve RoE of Rs 4.44 Cr. for FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15 and FY 2015-16 each year respectively as shown in the tables above.

2.5. Depreciation

According to Regulation 55(2)(a) of Tariff Regulation, 2007, the Depreciation shall be computed as follows:

“(i) The value base for the purpose of depreciation shall be the historical cost of the asset.

(ii) Depreciation shall be calculated annually, based on the straight-line method over the useful life of the asset and at rates prescribed by the Central Electricity Regulatory Commission

(iii) The residual value of the asset shall be considered as 10% and the depreciation shall be allowed upto a maximum of 90% of the historical capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded from the capital cost for purposes of depreciation while computing 90% of the historical cost of the asset. The historical capital cost for purposes of depreciation of the asset shall include Additional Capitalisation on account of Foreign Exchange Rate Variation as allowed by the Central Government / Central Electricity Regulatory Commission

(iv) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.

(v) Depreciation shall be chargeable from the first year of operation of the asset. For part of the year, depreciation shall be charged on pro rata basis.”

The petitioner in line with the methodology adopted by the Hon'ble Commission in True-up order of FY 2009-10 (ref. Order dated 14.12.2021) for the computation of depreciation has considered the similar approach for working out the overall depreciation for FY 2010-11 to FY 2015-16 as summarised in the tables below:

Table 15: Depreciation during FY 2010-11

(Amount in Crore)

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
1	Agnoor	8.24	4.94	3.29	0.26	0.11	0.37
2	Dhelabagh	5.25	3.15	2.10	0.17	0.07	0.24
3	Jainagara	3.81	2.29	1.53	0.12	0.05	0.17
4	Nasriganj	4.24	2.55	1.70	0.13	0.06	0.19
5	Triveni	16.49	9.89	6.60	0.52	0.22	0.74
6	Valmikinagar	57.56	34.53	23.02	1.82	0.77	2.59
7	Dehri-on-sone	34.52	20.71	13.81	1.09	0.46	1.55
8	Barun	15.09	9.05	6.04	0.48	0.20	0.68
9	Koshikataiya	0.01	0.01	0.00	0.00	0.00	0.00
10	Shirkhinda	7.41	4.45	2.96	0.23	0.10	0.33
11	Sebari	8.83	5.30	3.53	0.28	0.12	0.40
	Total	161.45	96.87	64.58	5.11	2.16	7.27

Table 16: Depreciation during FY 2011-12

(Amount in Crore)

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
1	Agnoor	8.24	4.94	3.29	0.26	0.11	0.37
2	Dhelabagh	5.35	3.21	2.14	0.17	0.07	0.24

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
3	Jainagara	4.03	2.42	1.61	0.13	0.05	0.18
4	Nasriganj	4.25	2.55	1.70	0.13	0.06	0.19
5	Triveni	16.49	9.89	6.60	0.52	0.22	0.74
6	Valmikinagar	57.56	34.53	23.02	1.82	0.77	2.59
7	Dehri-on-sone	37.67	22.60	15.07	1.19	0.50	1.70
8	Barun	15.71	9.42	6.28	0.50	0.21	0.71
9	Koshikataiya	6.05	3.63	2.42	0.19	0.08	0.27
10	Shirkhinda	7.41	4.45	2.96	0.23	0.10	0.33
11	Sebari	0.34	0.20	0.14	0.01	0.00	0.02
12	Arwal	7.37	4.42	2.95	0.23	0.10	0.33
	Total	170.46	102.28	68.18	5.40	2.28	7.68

Table 17: Depreciation during FY 2012-13

(Amount in Crore)

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
1	Agnoor	9.11	5.47	3.64	0.29	0.12	0.41
2	Dhelabagh	10.31	6.19	4.12	0.33	0.14	0.46
3	Jainagara	5.22	3.13	2.09	0.17	0.07	0.24
4	Nasriganj	4.83	2.90	1.93	0.15	0.06	0.22
5	Triveni	16.49	9.90	6.60	0.52	0.22	0.74
6	Valmikinagar	58.77	35.26	23.51	1.86	0.79	2.65
7	Dehri-on-sone	37.70	22.62	15.08	1.19	0.50	1.70

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
8	Barun	15.93	9.56	6.37	0.50	0.21	0.72
9	Koshikataiya	22.07	13.24	8.83	0.70	0.29	0.99
10	Shirkhinda	7.87	4.72	3.15	0.25	0.11	0.35
11	Sebari	10.35	6.21	4.14	0.33	0.14	0.47
12	Arwal	8.18	4.91	3.27	0.26	0.11	0.37
13	Belsar	10.68	6.41	4.27	0.34	0.14	0.48
	Total	217.52	130.51	87.01	6.89	2.91	9.80

Table 18: Depreciation during FY 2013-14

(Amount in Crore)

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
1	Agnoor	9.12	5.47	3.65	0.29	0.12	0.41
2	Dhelabagh	10.31	6.19	4.12	0.33	0.14	0.46
3	Jainagara	5.32	3.19	2.13	0.17	0.07	0.24
4	Nasriganj	4.94	2.96	1.98	0.16	0.07	0.22
5	Triveni	16.50	9.90	6.60	0.52	0.22	0.74
6	Valmikinagar	58.82	35.29	23.53	1.86	0.79	2.65
7	Dehri-on-sone	40.07	24.04	16.03	1.27	0.54	1.80
8	Barun	15.93	9.56	6.37	0.50	0.21	0.72
9	Koshikataiya	22.09	13.25	8.83	0.70	0.30	0.99
10	Shirkhinda	7.87	4.72	3.15	0.25	0.11	0.35
11	Sebari	10.44	6.27	4.18	0.33	0.14	0.47

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
12	Arwal	8.19	4.91	3.28	0.26	0.11	0.37
13	Belsar	10.71	6.43	4.29	0.34	0.14	0.48
	Total	220.30	132.18	88.12	6.98	2.94	9.92

Table 19: Depreciation during FY 2014-15

(Amount in Crore)

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
1	Agnoor	9.12	5.47	3.65	0.29	0.12	0.41
2	Dhelabagh	10.31	6.19	4.12	0.33	0.14	0.46
3	Jainagara	5.32	3.19	2.13	0.17	0.07	0.24
4	Nasriganj	4.94	2.96	1.98	0.16	0.07	0.22
5	Triveni	16.50	9.90	6.60	0.52	0.22	0.74
6	Valmikinagar	58.88	35.33	23.55	1.87	0.79	2.65
7	Dehri-on-sone	40.08	24.05	16.03	1.27	0.54	1.81
8	Barun	15.93	9.56	6.37	0.50	0.21	0.72
9	Koshikataiya	22.09	13.25	8.84	0.70	0.30	0.99
10	Shirkhinda	7.87	4.72	3.15	0.25	0.11	0.35
11	Sebari	10.45	6.27	4.18	0.33	0.14	0.47
12	Arwal	8.19	4.91	3.28	0.26	0.11	0.37
13	Belsar	10.71	6.43	4.29	0.34	0.14	0.48
	Total	220.38	132.23	88.15	6.98	2.94	9.93

Table 20: Depreciation during FY 2015-16

(Amount in Crore)

S. No.	Plants name	Net GFA (excl. Grants)	P&M @60% of Net GFA	Civil @40% of Net GFA	Depreciation on P&M @ 5.28%	Depreciation on Civil @3.34%	Total Depreciation
1	Agnoor	9.12	5.47	3.65	0.29	0.12	0.41
2	Dhelabagh	10.31	6.19	4.12	0.33	0.14	0.46
3	Jainagara	5.32	3.19	2.13	0.17	0.07	0.24
4	Nasrganj	4.94	2.96	1.98	0.16	0.07	0.22
5	Triveni	16.50	9.90	6.60	0.52	0.22	0.74
6	Valmikinagar	58.88	35.33	23.55	1.87	0.79	2.65
7	Dehri-on-sone	40.08	24.05	16.03	1.27	0.54	1.81
8	Barun	15.93	9.56	6.37	0.50	0.21	0.72
9	Koshikataiya	22.09	13.25	8.84	0.70	0.30	0.99
10	Shirkhinda	7.87	4.72	3.15	0.25	0.11	0.35
11	Sebari	10.45	6.27	4.18	0.33	0.14	0.47
12	Arwal	8.19	4.91	3.28	0.26	0.11	0.37
13	Belsar	10.71	6.43	4.29	0.34	0.14	0.48
	Total	220.39	132.23	88.16	6.98	2.94	9.93

2.6. Interest on Capital/Loan

According to the Regulation 55(1) of Tariff Regulation, 2007, interest on loan shall be computed as follows:

“(i) Interest on loan capital shall be computed loan wise on the loans arrived at in manner indicated in Regulation 53.

“(ii) In the case of existing projects, the actual debt equity ratio shall be used for tariff determination. However, any expansion shall be governed by Regulation 53.

“(iii) The generating company / integrated utility shall make every effort to refinance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such refinancing shall be borne by the beneficiaries.

(iv) The charges on loan terms and conditions shall be reflected from the date of such swapping and benefit shall be passed to the beneficiaries.

(v) In case of any dispute, any of the parties may approach the Commission with proper application. The beneficiaries shall not, however, withhold payment to the generating company / integrated utility during pendency of the dispute, unless the Commission specifically directs such non-payment, relating to swapping of the loan.

(vi) In case any moratorium period is availed of by the integrated utility / generating company, depreciation provided for in the tariffs during the period of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

(vii) The integrated utility or the generating company shall not make any profit on account of swapping of loan and interest thereon.

(viii) The integrated utility or the generating company, may at its discretion, swap loans having floating rate of interest with loans having fixed rate of interest or vice – versa at its own cost and gains or losses as a result of such swapping shall accrue to the utility / generating company. Provided that the beneficiaries shall be liable to pay interest for the loans initially contracted whether on floating or fixed rate of interest.”

For all the plants under BHPC the debt is funded by Government of Bihar (GoB) and NABARD, the weighted average rate of Interest on Actual Loans from GoB and NABARD comes out to be 10.86%, 10.46%, 8.76%, 8.65%, 8.50%, and 8.41% for respective years as shown in Table-22. (GoB Loan Detail submitted as **Annexure J**)

The working of the same is shown below (in Table-21 and Table-22), where the opening and closing balances of the loans are taken as per the audited accounts of the relevant years.

Table 21: Loan Balances for FY 2010-11 to FY 2015-16

(Amount in Crore)

Source	GoB				NABARD			
Year	Opening	Closing	Average	Rate	Opening	Closing	Average	Rate
FY 2010-11	176.37	180.76	178.57	13.00%	75.80	99.89	87.84	6.50%
FY 2011-12	180.76	182.72	181.74	13.00%	99.89	133.52	116.71	6.50%
FY 2012-13	182.72	197.09	189.91	10.50%	133.52	158.50	146.01	6.50%
FY 2013-14	197.09	213.09	205.09	10.50%	158.50	192.72	175.61	6.50%
FY 2014-15	213.09	223.09	218.09	10.50%	192.72	243.34	218.03	6.50%
FY 2015-16	223.09	223.09	223.09	10.50%	243.34	243.34	243.34	6.50%

Table 22: Computation of Weighted Rate of Interest for FY 2010-11 to FY 2015-16

Year	Weight of GoB	Weight of NABARD	Wt. Rate of GoB	Wt. Rate of NABARD	Total Wt. Interest Rate
FY 2010-11	0.67	0.33	8.71%	2.14%	10.86%
FY 2011-12	0.61	0.39	7.92%	2.54%	10.46%
FY 2012-13	0.57	0.43	5.94%	2.83%	8.76%
FY 2013-14	0.54	0.46	5.66%	3.00%	8.65%
FY 2014-15	0.50	0.50	5.25%	3.25%	8.50%
FY 2015-16	0.48	0.52	5.02%	3.39%	8.41%

Accordingly, computation of Interest on Loan, considering the above-mentioned weighted interest rates (Table-22) and addition to debt as mentioned in the tables in the section above (Table-3 to Table-8), is computed for FY 2010-11 to FY 2015-16 in the respective tables below:

Table 23: Interest Expense during FY 2010-11

(Amount in Crore)

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
(A)	(B)	(C)	(D)	(E)	(F) = (C) + (D) - (E)	(G) = (C + F)/2	(H)	(I) = (G) X (H)
1	Agnoor	6.72	0.1355	0.37	6.48	6.60	10.86%	0.72
2	Dhelabagh	4.37	0.0018	0.24	4.14	4.25	10.86%	0.46
3	Jainagara	3.58	0.0031	0.17	3.41	3.50	10.86%	0.38
4	Nasriganj	3.47	0.3021	0.19	3.58	3.53	10.86%	0.38
5	Triveni	15.50	0.1577	0.74	14.92	15.21	10.86%	1.65

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
6	Valmikinagar	7.70	0.2764	2.59	5.38	6.54	10.86%	0.71
7	Dehri-on-sone	0.54	1.2322	1.40	0.37	0.45	10.86%	0.05
8	Barun	1.75	0.0699	0.68	1.14	1.45	10.86%	0.16
9	Koshikataiya	-	0.0106	0.00	0.01	0.01	10.86%	0.00
10	Shirkhinda	7.66	0.6444	0.33	7.97	7.82	10.86%	0.85
11	Sebari	8.41	1.5500	0.40	9.56	8.98	10.86%	0.98
	Total	59.70	4.3839	7.12	56.96	58.33		6.33

Table 24: Interest Expense during FY 2011-12

(Amount in Crore)

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
(A)	(B)	(C)	(D)	(E)	(F) = (C) + (D) - (E)	(G) = (C + F)/2	(H)	(I) = (G) X (H)
1	Agnoor	6.48	-	0.37	6.11	6.30	10.46%	0.66
2	Dhelabagh	4.14	0.10	0.24	3.99	4.06	10.46%	0.42
3	Jainagara	3.41	0.22	0.18	3.45	3.43	10.46%	0.36
4	Nasriganj	3.58	0.01	0.19	3.40	3.49	10.46%	0.37
5	Triveni	14.92	0.00	0.74	14.18	14.55	10.46%	1.52
6	Valmikinagar	5.38	-	2.59	2.79	4.09	10.46%	0.43
7	Dehri-on-sone	0.37	3.15	1.70	1.82	1.10	10.46%	0.11
8	Barun	1.14	0.62	0.71	1.05	1.10	10.46%	0.11
9	Koshikataiya	0.01	6.04	0.27	5.77	2.89	10.46%	0.30
10	Shirkhinda	7.97	-	0.33	7.64	7.81	10.46%	0.82

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
11	Sebari	9.56	1.01	0.02	10.55	10.05	10.46%	1.05
12	Arwal	-	8.08	0.33	7.75	3.88	10.46%	0.41
	Total	56.96	19.22	7.68	68.51	62.73		6.56

Table 25: Interest Expense during FY 2012-13

(Amount in Crore)

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
(A)	(B)	(C)	(D)	(E)	(F) = (C) + (D) - (E)	(G) = (C + F)/2	(H)	(I) = (G) X (H)
1	Agnoor	6.11	0.88	0.41	6.58	6.35	8.76%	0.56
2	Dhelabagh	3.99	4.96	0.46	8.49	6.24	8.76%	0.55
3	Jainagara	3.45	1.19	0.24	4.40	3.92	8.76%	0.34
4	Nasriganj	3.40	0.57	0.22	3.76	3.58	8.76%	0.31
5	Triveni	14.18	0.004	0.74	13.44	13.81	8.76%	1.21
6	Valmikinagar	2.79	1.22	2.65	1.36	2.08	8.76%	0.18
7	Dehri-on-sone	1.82	0.03	1.70	0.15	0.99	8.76%	0.09
8	Barun	1.05	0.22	0.72	0.55	0.80	8.76%	0.07
9	Koshikataiya	5.77	16.02	0.99	20.80	13.29	8.76%	1.16
10	Shirkhinda	7.64	0.46	0.35	7.74	7.69	8.76%	0.67
11	Sebari	10.55	0.52	0.47	10.60	10.57	8.76%	0.93
12	Arwal	7.75	0.82	0.37	8.20	7.98	8.76%	0.70
13	Belsar	-	11.80	0.48	11.32	5.66	8.76%	0.50
	Total	68.51	38.69	9.80	97.40	82.95		7.27

Table 26: Interest Expense during FY 2013-14

(Amount in Crore)

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
(A)	(B)	(C)	(D)	(E)	(F) = (C) + (D) - (E)	(G) = (C + F)/2	(H)	(I) = (G) X (H)
1	Agnoor	6.58	0.0084	0.41	6.18	6.38	8.65%	0.55
2	Dhelabagh	8.49	0.0030	0.46	8.03	8.26	8.65%	0.71
3	Jainagara	4.40	0.0948	0.24	4.26	4.33	8.65%	0.37
4	Nasriganj	3.76	0.1145	0.22	3.65	3.70	8.65%	0.32
5	Triveni	13.44	0.0027	0.74	12.70	13.07	8.65%	1.13
6	Valmikinagar	1.36	0.0427	1.40	-	0.68	8.65%	0.06
7	Dehri-on-sone	0.15	2.3629	1.80	0.71	0.43	8.65%	0.04
8	Barun	0.55	0.0029	0.56	-	0.28	8.65%	0.02
9	Koshikataiya	20.80	0.0168	0.99	19.82	20.31	8.65%	1.76
10	Shirkhinda	7.74	0.0006	0.35	7.39	7.57	8.65%	0.65
11	Sebari	10.60	0.0926	0.47	10.22	10.41	8.65%	0.90
12	Arwal	8.20	0.0053	0.37	7.84	8.02	8.65%	0.69
13	Belsar	11.32	0.0386	0.48	10.88	11.10	8.65%	0.96
	Total	97.40	2.7858	8.52	91.67	94.53		8.18

Table 27: Interest Expense during FY 2014-15

(Amount in Crore)

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
(A)	(B)	(C)	(D)	(E)	(F) = (C) + (D) - (E)	(G) = (C + F)/2	(H)	(I) = (G) X (H)
1	Agnoor	6.18	0.0001	0.41	5.77	5.97	8.50%	0.51
2	Dhelabagh	8.03	0.0001	0.46	7.56	7.79	8.50%	0.66
3	Jainagara	4.26	0.0001	0.24	4.02	4.14	8.50%	0.35
4	Nasriganj	3.65	0.0001	0.22	3.42	3.54	8.50%	0.30
5	Triveni	12.70	0.0004	0.74	11.95	12.32	8.50%	1.05
6	Valmikinagar	-	0.0603	0.06	-	-	8.50%	-
7	Dehri-on-sone	0.71	0.0125	0.73	-	0.36	8.50%	0.03
8	Barun	-	0.0004	0.00	-	-	8.50%	-
9	Koshikataiya	19.82	0.0025	0.99	18.83	19.33	8.50%	1.64
10	Shirkhinda	7.39	0.0034	0.35	7.04	7.21	8.50%	0.61
11	Sebari	10.22	0.0001	0.47	9.75	9.99	8.50%	0.85
12	Arwal	7.84	0.0001	0.37	7.47	7.66	8.50%	0.65
13	Belsar	10.88	0.0001	0.48	10.39	10.63	8.50%	0.90
	Total	91.67	0.0804	5.54	86.21	88.94		7.56

Table 28: Interest Expense during FY 2015-16

(Amount in Crore)

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
(A)	(B)	(C)	(D)	(E)	(F) = (C) + (D) - (E)	(G) = (C + F)/2	(H)	(I) = (G) X (H)

S. No.	Plant name	Opening loan	Addition during the year	Repayment	Net closing balance	Average	Interest rate	Interest expense
1	Agnoor	5.77	-	0.41	5.35	5.56	8.41%	0.47
2	Dhelabagh	7.56	-	0.46	7.10	7.33	8.41%	0.62
3	Jainagara	4.02	-	0.24	3.78	3.90	8.41%	0.33
4	Nasriganj	3.42	-	0.22	3.20	3.31	8.41%	0.28
5	Triveni	11.95	-	0.74	11.21	11.58	8.41%	0.97
6	Valmikinagar	-	-	-	-	-	8.41%	-
7	Dehri-on-sone	-	0.0054	0.01	-	-	8.41%	-
8	Barun	-	-	-	-	-	8.41%	-
9	Koshikataiya	18.83	-	0.99	17.84	18.34	8.41%	1.54
10	Shirkhinda	7.04	-	0.35	6.68	6.86	8.41%	0.58
11	Sebari	9.75	-	0.47	9.28	9.51	8.41%	0.80
12	Arwal	7.47	-	0.37	7.10	7.29	8.41%	0.61
13	Belsar	10.39	-	0.48	9.91	10.15	8.41%	0.85
	Total	86.21	0.0054	4.76	81.46	83.83		7.05

The petitioner requests the Hon'ble Commission to approve Interest Expense of Rs. 6.33 Cr., Rs. 6.56 Cr., Rs. 7.27 Cr., Rs. 8.18 Cr., Rs. 7.56 Cr., and Rs. 7.05 Cr. for FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, and FY 2015-16 respectively.

2.7. Operational and Maintenance Expenses

The petitioner submits that the O&M expenses (which includes Employee Expenses, Repair & Maintenance Expenses, and Administrative & General Expenses) are taken as per Audited Accounts for FY 2010-11 to FY 2015-16. The Petitioner has further prorated the actual O&M Expenses amongst all the plants based on their generation capacity, and are presented in the table below:

Table 29: O&M expenses during FY 2010-11 to FY 2015-16

(Amount in Crore)

S. No.	Plants name	Capacity (MW)	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Agnoor	1.00	0.21	0.22	0.24	0.23	0.15	0.14
2	Dhelabagh	1.00	0.21	0.22	0.24	0.23	0.15	0.14
3	Jainagara	1.00	0.21	0.22	0.24	0.23	0.15	0.14
4	Nasriganj	1.00	0.21	0.22	0.24	0.23	0.15	0.14
5	Triveni	3.00	0.62	0.66	0.72	0.69	0.45	0.41
6	Valmikinagar	15.00	3.09	3.31	3.59	3.43	2.24	2.05
7	Dehri-on-sone	6.60	1.36	1.46	1.58	1.51	0.99	0.90
8	Barun	3.30	0.68	0.73	0.79	0.76	0.49	0.45
9	Koshikataiya	19.20	3.95	4.24	4.60	4.39	2.87	2.62
10	Shirkhinda	0.70	0.14	0.15	0.17	0.16	0.10	0.10
11	Sebari	1.00	0.21	0.22	0.24	0.23	0.15	0.14
12	Arwal	0.50	-	0.11	0.12	0.11	0.07	0.07
13	Belsar	1.00	-	-	0.24	0.23	0.15	0.14
	Total	52.80	10.87	11.77	13.01	12.42	8.12	7.42

2.8. Interest on Working Capital

According to the Regulation 55(5) of Tariff Regulations, 2007, Interest on Working Capital is to be computed as follows:

“(a) The working capital shall cover the following: -

(i) Operation and Maintenance expenses for one month;

(ii) Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation;

(iii) Receivables equivalent to two months of fixed charges for sale of energy, calculated on normative capacity index.

(b) Rate of interest on working capital shall be the short-term prime lending rate of State Bank of India as on 1st April of the year in which the generation unit/station is declared under commercial operation. The interest on working capital shall be payable on normative basis notwithstanding that the integrated utility / generating company has not taken working capital loan from any outside agency."

The rate of interest for the computation of interest on working capital based upon the aforesaid regulations and as per the Hon'ble Commission's True-up order (dated 14.12.2021) for FY 2009-10.

The petitioner in line with the above has accordingly computed the Interest on Working Capital for the FY 2010-11 to FY 2015-16 in the respective tables as shown below:

Table 30: Interest on Working Capital during FY 2010-11

(Amount in Crore)

S. No.	Plant	O&M exp for 1 month	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
1	Agnoor	0.02	0.09	0.22	0.33	10.75%	0.04
2	Dhelabagh	0.02	0.06	0.15	0.23	10.75%	0.02
3	Jainagara	0.02	0.04	0.13	0.19	12.75%	0.02
4	Nasriganj	0.02	0.05	0.13	0.20	12.75%	0.03
5	Triveni	0.05	0.19	0.52	0.75	12.75%	0.10
6	Valmikinagar	0.26	0.65	1.53	2.43	15.30%	0.37
7	Dehri-on-sone	0.11	0.39	0.77	1.27	18.00%	0.23
8	Barun	0.06	0.17	0.37	0.60	15.75%	0.09
9	Koshikataiya	0.33	0.00	0.68	1.01	12.75%	0.13
10	Shirkhinda	0.01	0.08	0.23	0.32	11.75%	0.04
11	Sebari	0.02	0.09	0.27	0.38	12.25%	0.05
	Total	0.91	1.81	5.00	7.72		1.11

Table 31: Interest on Working Capital during FY 2011-12

(Amount in Crore)

S. No.	Plant	O&M exp for 1 month	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
1	Agnoor	0.02	0.09	0.21	0.33	10.75%	0.03
2	Dhelabagh	0.02	0.06	0.15	0.23	10.75%	0.02
3	Jainagara	0.02	0.05	0.13	0.19	12.75%	0.02
4	Nasriganj	0.02	0.05	0.13	0.20	12.75%	0.03
5	Triveni	0.06	0.19	0.50	0.74	12.75%	0.09
6	Valmikinagar	0.28	0.65	1.52	2.44	15.30%	0.37
7	Dehri-on-sone	0.12	0.42	0.82	1.36	18.00%	0.25
8	Barun	0.06	0.18	0.38	0.62	15.75%	0.10
9	Koshikataiya	0.35	0.07	0.83	1.25	12.75%	0.16
10	Shirikhinda	0.01	0.08	0.22	0.32	11.75%	0.04
11	Sebari	0.02	0.10	0.22	0.34	12.25%	0.04
12	Arwal	0.01	0.08	0.15	0.24	12.75%	0.03
	Total	0.98	2.02	5.27	8.27		1.19

Table 32: Interest on Working Capital during FY 2012-13

(Amount in Crore)

S. No.	Plant	O&M exp for 1 month	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
1	Agnoor	0.02	0.10	0.21	0.33	10.75%	0.04

S. No.	Plant	O&M exp for month ¹	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
2	Dhelabagh	0.02	0.12	0.21	0.35	10.75%	0.04
3	Jainagara	0.02	0.06	0.14	0.22	12.75%	0.03
4	Nasriganj	0.02	0.05	0.13	0.21	12.75%	0.03
5	Triveni	0.06	0.19	0.46	0.71	12.75%	0.09
6	Valmikinagar	0.30	0.66	1.53	2.49	15.30%	0.38
7	Dehri-on- sone	0.13	0.42	0.84	1.39	18.00%	0.25
8	Barun	0.07	0.18	0.38	0.63	15.75%	0.10
9	Koshikataiya	0.38	0.25	1.16	1.80	12.75%	0.23
10	Shirkhinda	0.01	0.09	0.21	0.31	11.75%	0.04
11	Sebari	0.02	0.11	0.28	0.41	12.25%	0.05
12	Arwal	0.01	0.09	0.20	0.31	12.75%	0.04
13	Belsar	0.02	0.12	0.21	0.35	14.50%	0.05
	Total	1.08	2.44	5.98	9.50		1.35

Table 33: Interest on Working Capital during FY 2013-14

(Amount in Crore)

S. No.	Plant	O&M exp for month ¹	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
1	Agnoor	0.02	0.10	0.20	0.33	10.75%	0.04
2	Dhelabagh	0.02	0.12	0.24	0.38	10.75%	0.04

S. No.	Plant	O&M exp for month ¹	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
3	Jainagara	0.02	0.06	0.15	0.22	12.75%	0.03
4	Nasriganj	0.02	0.06	0.13	0.21	12.75%	0.03
5	Triveni	0.06	0.19	0.44	0.68	12.75%	0.09
6	Valmikinagar	0.29	0.66	1.49	2.43	15.30%	0.37
7	Dehri-on- sone	0.13	0.45	0.83	1.41	18.00%	0.25
8	Barun	0.06	0.18	0.37	0.61	15.75%	0.10
9	Koshikataiya	0.37	0.25	1.23	1.84	12.75%	0.24
10	Shirkhinda	0.01	0.09	0.20	0.30	11.75%	0.04
11	Sebari	0.02	0.11	0.27	0.40	12.25%	0.05
12	Arwal	0.01	0.09	0.20	0.30	12.75%	0.04
13	Belsar	0.02	0.12	0.29	0.43	14.50%	0.06
	Total	1.04	2.47	6.05	9.56		1.36

Table 34: Interest on Working Capital during FY 2014-15

(Amount in Crore)

S. No.	Plant	O&M exp for month ¹	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
1	Agnoor	0.01	0.10	0.18	0.30	10.75%	0.03
2	Dhelabagh	0.01	0.12	0.22	0.35	10.75%	0.04
3	Jainagara	0.01	0.06	0.13	0.20	12.75%	0.03

S. No.	Plant	O&M exp for month ¹	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
4	Nasriganj	0.01	0.06	0.12	0.18	12.75%	0.02
5	Triveni	0.04	0.19	0.39	0.61	12.75%	0.08
6	Valmikinagar	0.19	0.66	1.27	2.12	15.30%	0.32
7	Dehri-on-sone	0.08	0.45	0.74	1.27	18.00%	0.23
8	Barun	0.04	0.18	0.32	0.54	15.75%	0.09
9	Koshikataiya	0.24	0.25	0.95	1.44	12.75%	0.18
10	Shirkhinda	0.01	0.09	0.18	0.28	11.75%	0.03
11	Sebari	0.01	0.11	0.25	0.38	12.25%	0.05
12	Arwal	0.01	0.09	0.19	0.29	12.75%	0.04
13	Belsar	0.01	0.12	0.27	0.40	14.50%	0.06
	Total	0.68	2.47	5.20	8.35		1.19

Table 35: Interest on Working Capital during FY 2015-16

(Amount in Crore)

S. No.	Plant	O&M exp for month ¹	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
1	Agnoor	0.01	0.10	0.17	0.29	10.75%	0.03
2	Dhelabagh	0.01	0.12	0.21	0.34	10.75%	0.04
3	Jainagara	0.01	0.06	0.12	0.19	12.75%	0.02
4	Nasriganj	0.01	0.06	0.11	0.18	12.75%	0.02

S. No.	Plant	O&M exp for month ¹	Maintenance spares @1%	Receivables equivalent to 2 months of fixed charge	Working Capital Requirement	Rate of Interest %	Interest on Working Capital
5	Triveni	0.03	0.19	0.37	0.59	12.75%	0.07
6	Valmikinagar	0.17	0.66	1.24	2.07	15.30%	0.32
7	Dehri-on- sone	0.08	0.45	0.72	1.25	18.00%	0.22
8	Barun	0.04	0.18	0.31	0.53	15.75%	0.08
9	Koshikataiya	0.22	0.25	0.89	1.36	12.75%	0.17
10	Shirkhinda	0.01	0.09	0.18	0.27	11.75%	0.03
11	Sebari	0.01	0.11	0.24	0.36	12.25%	0.04
12	Arwal	0.01	0.09	0.18	0.28	12.75%	0.04
13	Belsar	0.01	0.12	0.25	0.39	14.50%	0.06
	Total	0.62	2.47	5.00	8.08		1.15

The petitioner requests the Hon'ble Commission to approve Interest on Working Capital of Rs. 1.11 Cr., Rs. 1.19 Cr., Rs. 1.35 Cr., Rs. 1.36 Cr., Rs. 1.19 Cr., and Rs. 1.15 Cr. for FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, and FY 2015-16 respectively.

2.9. Aggregate Revenue Requirement (ARR)

In line with the Regulation 55 of Tariff Regulations 2007, the petitioner submits that the Annual Revenue Requirement (ARR) by aggregating all the expenses as exhibited in the previous sections i.e. Depreciation, Interest on Loan, O&M expenses, Return on Equity, and Interest on Working Capital. The petitioner herein claimed ARR for the True-up of FY 2010-11 to FY 2015-16 as detailed in the respective table below:

Table 36: Annual Revenue Requirement for FY 2010-11 to FY 2015-16

(Amount in Crore)

S. No.	Particular	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	O&M	10.87	11.77	13.01	12.42	8.12	7.42
2	Interest on Loan	6.33	6.56	7.27	8.18	7.56	7.05
3	Depreciation	7.27	7.68	9.80	9.92	9.93	9.93
4	Return on Equity	4.44	4.44	4.44	4.44	4.44	4.44
5	Interest on Working Capital	1.11	1.19	1.35	1.36	1.19	1.15
6	Annual Revenue Requirement	30.03	31.64	35.86	36.33	31.23	29.98

The following tables shows the plant-wise ARR computation for relevant years.

Table 37: Annual Revenue Requirement (Plant-wise) for FY 2010-11

(Amount in Crore)

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
1	Agnoor	0.21	0.72	0.37	-	0.04	1.33
2	Dhelabagh	0.21	0.46	0.24	-	0.02	0.93
3	Jainagara	0.21	0.38	0.17	-	0.02	0.78
4	Nasriganj	0.21	0.38	0.19	-	0.03	0.81
5	Triveni	0.62	1.65	0.74	-	0.10	3.11
6	Valmikinagar	3.09	0.71	2.59	2.41	0.37	9.17
7	Dehri-on-sone	1.36	0.05	1.55	1.40	0.23	4.59
8	Barun	0.68	0.16	0.68	0.63	0.09	2.24

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
9	Koshikataiya	3.95	0.00	0.00	-	0.13	4.08
10	Shirkhinda	0.14	0.85	0.33	-	0.04	1.36
11	Sebari	0.21	0.98	0.40	-	0.05	1.63
	Total	10.87	6.33	7.27	4.44	1.11	30.03

Table 38: Annual Revenue Requirement (Plant-wise) for FY 2011-12

(Amount in Crore)

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
1	Agnoor	0.22	0.66	0.37	-	0.03	1.29
2	Dhelabagh	0.22	0.42	0.24	-	0.02	0.91
3	Jainagara	0.22	0.36	0.18	-	0.02	0.79
4	Nasriganj	0.22	0.37	0.19	-	0.03	0.80
5	Triveni	0.66	1.52	0.74	-	0.09	3.02
6	Valmikinagar	3.31	0.43	2.59	2.41	0.37	9.11
7	Dehri-on-sone	1.46	0.11	1.70	1.40	0.25	4.91
8	Barun	0.73	0.11	0.71	0.63	0.10	2.28
9	Koshikataiya	4.24	0.30	0.27	-	0.16	4.97
10	Shirkhinda	0.15	0.82	0.33	-	0.04	1.34
11	Sebari	0.22	1.05	0.02	-	0.04	1.33

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
12	Arwal	0.11	0.41	0.33	-	0.03	0.88
	Total	11.77	6.56	7.68	4.44	1.19	31.64

Table 39: Annual Revenue Requirement (Plant-wise) for FY 2012-13

(Amount in Crore)

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
1	Agnoor	0.24	0.56	0.41	-	0.04	1.24
2	Dhelabagh	0.24	0.55	0.46	-	0.04	1.29
3	Jainagara	0.24	0.34	0.24	-	0.03	0.85
4	Nasriganj	0.24	0.31	0.22	-	0.03	0.80
5	Triveni	0.72	1.21	0.74	-	0.09	2.76
6	Valmikinagar	3.59	0.18	2.65	2.41	0.38	9.21
7	Dehri-on-sone	1.58	0.09	1.70	1.40	0.25	5.02
8	Barun	0.79	0.07	0.72	0.63	0.10	2.31
9	Koshikataiya	4.60	1.16	0.99	-	0.23	6.99
10	Shirkhinda	0.17	0.67	0.35	-	0.04	1.23
11	Sebari	0.24	0.93	0.47	-	0.05	1.68
12	Arwal	0.12	0.70	0.37	-	0.04	1.23
13	Belsar	0.24	0.50	0.48	-	0.05	1.27

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
	Total	13.01	7.27	9.80	4.44	1.35	35.86

Table 40: Annual Revenue Requirement (Plant-wise) for FY 2013-14

(Amount in Crore)

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
1	Agnoor	0.23	0.55	0.41	-	0.04	1.23
2	Dhelabagh	0.23	0.71	0.46	-	0.04	1.45
3	Jainagara	0.23	0.37	0.24	-	0.03	0.87
4	Nasriganj	0.23	0.32	0.22	-	0.03	0.80
5	Triveni	0.69	1.13	0.74	-	0.09	2.65
6	Valmikinagar	3.43	0.06	2.65	2.41	0.37	8.92
7	Dehri-on-sone	1.51	0.04	1.80	1.40	0.25	5.00
8	Barun	0.76	0.02	0.72	0.63	0.10	2.22
9	Koshikataiya	4.39	1.76	0.99	-	0.24	7.38
10	Shirkhinda	0.16	0.65	0.35	-	0.04	1.21
11	Sebari	0.23	0.90	0.47	-	0.05	1.65
12	Arwal	0.11	0.69	0.37	-	0.04	1.22
13	Belsar	0.23	0.96	0.48	-	0.06	1.73
	Total	12.42	8.18	9.92	4.44	1.36	36.33

Table 41: Annual Revenue Requirement (Plant-wise) for FY 2014-15

(Amount in Crore)

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
1	Agnoor	0.15	0.51	0.41	-	0.03	1.10
2	Dhelabagh	0.15	0.66	0.46	-	0.04	1.31
3	Jainagara	0.15	0.35	0.24	-	0.03	0.77
4	Nasriganj	0.15	0.30	0.22	-	0.02	0.70
5	Triveni	0.45	1.05	0.74	-	0.08	2.32
6	Valmikinagar	2.24	-	2.65	2.41	0.32	7.62
7	Dehri-on-sone	0.99	0.03	1.81	1.40	0.23	4.45
8	Barun	0.49	-	0.72	0.63	0.09	1.93
9	Koshikataiya	2.87	1.64	0.99	-	0.18	5.69
10	Shirkhinda	0.10	0.61	0.35	-	0.03	1.11
11	Sebari	0.15	0.85	0.47	-	0.05	1.51
12	Arwal	0.07	0.65	0.37	-	0.04	1.13
13	Belsar	0.15	0.90	0.48	-	0.06	1.59
	Total	8.12	7.56	9.93	4.44	1.19	31.23

Table 42: Annual Revenue Requirement (Plant-wise) for FY 2015-16

(Amount in Crore)

S. No.	Plant	O&M	Interest on Loan	Depreciation	RoE	Interest on Working Capital	ARR
1	Agnoor	0.14	0.47	0.41	-	0.03	1.05
2	Dhelabagh	0.14	0.62	0.46	-	0.04	1.25
3	Jainagara	0.14	0.33	0.24	-	0.02	0.73
4	Nasriganj	0.14	0.28	0.22	-	0.02	0.66
5	Triveni	0.41	0.97	0.74	-	0.07	2.20
6	Valmikinagar	2.05	-	2.65	2.41	0.32	7.42
7	Dehri-on-sone	0.90	-	1.81	1.40	0.22	4.33
8	Barun	0.45	-	0.72	0.63	0.08	1.88
9	Koshikataiya	2.62	1.54	0.99	-	0.17	5.33
10	Shirkhinda	0.10	0.58	0.35	-	0.03	1.06
11	Sebari	0.14	0.80	0.47	-	0.04	1.45
12	Arwal	0.07	0.61	0.37	-	0.04	1.09
13	Belsar	0.14	0.85	0.48	-	0.06	1.53
	Total	7.42	7.05	9.93	4.44	1.15	29.98

The petitioner requests the Hon'ble Commission to approve ARR of Rs. 30.03 Cr., Rs. 31.64 Cr., Rs. 35.86 Cr., Rs. 36.33 Cr., Rs. 31.23 Cr., and Rs.29.98 Cr. for the True-up of FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, and FY 2015-16 respectively.

2.10. Saleable Energy

The petitioner submits that the net actual energy generation for FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, and FY 2015-16 of all operation plants is 26.50 MUs, 39.01 MUs,

50.48 MUs, 52.43 MUs, 31.36 MUs, and 31.75 MUs respectively. The detailed plant-wise generation data is provided as **Annexure G**.

The reason for less saleable energy generation than the designed generation capacity is that most of the plants for which True-up Petition has been filed are Canal Based plants. Hence, the generation from such plants are based on the discharge of water to the canal depending on irrigation requirement and availability of BSEB network for evacuating power.

The petitioner submits that the generation depends on the discharge of water in the canals which is controlled by the irrigation department, therefore, the flow of water is not under the direct control of BHPC. Hence, the petitioner humbly requests the Hon'ble Commission to allow Tariff as per actual saleable energy for the respective years.

2.11. Computation of Trued-up Tariff for FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, and FY 2015-16

Based on the Annual Revenue Requirement (ARR) as claimed in the petition above and the MUs generated by the Petitioner, the petitioner requests the Hon'ble Commission to kindly approve the True-up for the FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, and FY 2015-16 as shown in the table below:

Table 43: Trued-up Tariff for FY 2010-11 to FY 2015-16

(Amount in Crore)

S. No.	Particular	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Net ARR as per this True-up Petition (in Rs.) (A)	30.03	31.64	35.86	36.33	31.23	29.98
2	Actual Saleable Energy (MUs) (B)	26.50	39.01	50.48	52.43	31.36	31.75
3	Tariff for True-up years (Rs/kWh) (C= A/B*10)	11.33	8.11	7.10	6.93	9.96	9.44

2.12. Revenue Gap and the Proposed Treatment

The petitioner submits the computation of revenue gap for FY 2010-11 to FY 2015-16 as shown in the table below.

The petitioner requests the Hon'ble Commission to consider the impact Revenue Gap in the ARR of FY 2023-24.

Table 44: Revenue Gap for FY 2010-11 to FY 2015-16

(Amount in Crore)

S. No.	Particular	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Revenue as per Audited Accounts	6.60	10.20	12.99	13.54	8.17	8.26
2	Actual Saleable Energy (MUs)	26.50	39.01	50.48	52.43	31.36	31.75
3	Trued-up ARR	30.03	31.64	35.86	36.33	31.23	29.98
4	Revenue Gap/(Surplus)	23.43	21.44	22.87	22.79	23.06	21.73

4. List of Annexures

- Annexure A – Tariff Formats
- Annexure B – DPR of 4 Plants (Arwal, Sebari, Shirkhinda, and Belsar)
- Annexure C – Contract Agreement of 4 Plants (Arwal, Sebari, Shirkhinda, and Belsar)
- Annexure D – Supporting documents for delay and time over-run of the 4 Plants (Arwal, Sebari, Shirkhinda, and Belsar)
- Annexure E – Audited Accounts of FY 2009-10 to FY 2015-16
- Annexure F – Grant Details
- Annexure G – Generation Data for FY 2010-11 to FY 2015-16
- Annexure H – GFA, Equity, and Loan addition for the period of FY 2016-17 to FY 2020-21.
- Annexure I – Capital Cost Break-up for 4 Plants (Arwal, Sebari, Shirkhinda, and Belsar)
- Annexure J – Government of Bihar Loan Details