



Bihar State Power Transmission Company Limited (BSPTCL)

Substitution Petition

For

**Prior Regulatory Approval of the Hon'ble Commission
for Work wise & Scheme wise
Capital Investment Plan and Capitalization**

Submitted to

Bihar Electricity Regulatory Commission

Submitted by,

Bihar State Power Transmission Company Limited (BSPTCL)

4th Floor, Vidyut Bhawan – I,

Jawaharlal Nehru Marg,

Patna – 800 021

__ November 2025

Before the Hon'ble Bihar Electricity Regulatory Commission,

Patna, Bihar

Filing No.:

Case No.:

IN THE MATTER OF:

Filing of the Substitution Petition for the prior approval of Work wise & Scheme wise Capital Investment Plan and Capitalization under BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018 & compliance with the directions issued by the Hon'ble BERC vide Tariff Order dated 28th March 2025 Case No. 27 of 2024 and Order dated 11th November 2025 along with the other guidelines and directions issued by the Hon'ble BERC from time to time and under the Electricity Act, 2003 read with the relevant guidelines.

AND

IN THE MATTER OF THE APPLICANT

Bihar State Power Transmission Company Limited (herein after referred to as 'BSPTCL' or 'The Petitioner'), which shall mean for the purpose of this Petition the Licensee, having its registered office at Vidyut Bhawan -I, Jawaharlal Nehru Marg, Patna - 800 021.

The Petitioner respectfully submits as under:

1. Bihar State Power Transmission Company Limited (herein after referred to as “BSPTCL” or “Petitioner”) is responsible to build, maintain and operate an efficient, co-ordinated and economical inter-State transmission system for smooth flow of electricity from a generating station to the load centers under section 39 of the Electricity Act, 2003.
2. The Hon'ble Commission (or “BERC”) notified the Bihar Electricity Regulatory Commission (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018 on 13th July 2018. The aforesaid Regulations specifies the procedure to be followed by the Transmission Licensee to obtain the necessary prior approval of the Hon'ble Commission on the works to be taken up under Capital Investment Plan.
3. Regulation 6.2 of BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018 provides for submission of Capital investment Plan every year with the ARR/Multi-year ARR Petition, as reproduced below:

“6.2 The Licensee(s) shall submit the Capital investment Plan every year with the ARR/Multi-year ARR petition and it should inter-alia contain:”

4. Further, the Hon'ble Commission, vide Tariff Order dated 28th March 2025 (Case No. 27 of 2024), directed BSPTCL to obtain prior regulatory approval from the Hon'ble Commission for the work-wise and scheme-wise capital expenditure and capitalization of certain projects/schemes undertaken during FY 2024-25, which are proposed to be capitalized during the control period FY 2025-26 to FY 2027-28. The relevant extracts of the Tariff Order are as follows:

“The Commission noted that petitioner has started the work on some of projects / schemes during FY 2024-25 which are proposed to be capitalized during the control period FY 2025-26 to FY 2027-28. The petitioner in its submission mention that it has undertaken such

projects based on its requirements during FY 2024-25 and therefore now seeks regulatory approval of the Commission for the same through this order.

The Commission cannot approve such projects / schemes through this Order without reviewing the details as required under BERC (Procedure for Filing Capital Investment and Capitalisation Plan) Regulations, 2018 for approval of the capital investment plan.

The Commission directs the Petitioner to approach the Commission with separate petition as envisaged in aforementioned Regulations for approval of the Commission. The new schemes /works can be considered under capitalisation in the true-up of ensuing years only if prior approval of the Commission is obtained by the petitioner in due course of time.

5. In compliance of the said directive, BSPTCL filed a Petition on 22nd September 2025 seeking prior approval of the Capex (hereinafter referred to as “**Main Petition**”). BSPTCL also filed additional submissions on 07th November 2025. Having appreciated the additional submissions, the Hon'ble Commission vide Order dated 11th November 2025, directed BSPTCL to submit a Substitution Petition. The relevant extracts of the said Order are as follows:

“.....Also, the petitioner was directed to substitute its petition incorporating the new facts which has been stated vide its letter dated 7.11.2025, before going forward to publish the abridge form of the petition.”

6. Accordingly, in compliance with the directions issued by the Hon'ble Commission vide Tariff Order dated 28th March 2025 and Order dated 11th November 2025, BSPTCL is filing this Substitute Petition seeking prior regulatory approval for the projects/schemes undertaken during FY 2024-25, which are proposed to be capitalized during the Control Period FY 2025-26 to FY 2027-28, in accordance with the BERC (Procedure for Filing Capital Investment and Capitalization Plan) Regulations, 2018. All relevant Annexures and supporting documents may be referred from the Main Petition (Case No. 38 of 2025) submitted before the Hon'ble Commission on 22nd September 2025.
7. Apart from the 42 projects submitted as per the Tariff Order dated 28th March 2025

- (Case No. 27 of 2024), BSPTCL also submits a list of 22 additional projects that will be capitalized during the control period FY 2025-26 to FY 2027-28, in accordance with the BERC (Procedure for Filing Capital Investment and Capitalization Plan) Regulations, 2018.
8. The present Petition is prepared in accordance with the provisions of the following Acts/Regulations namely:
- Electricity Act, 2003.
 - BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018, as amended time to time.
9. BSPTCL along with this substitute petition is submitting 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.
10. In view of the above, BSPTCL respectfully prays that the Hon'ble Commission may be pleased to consider and approve the following:
- a. Admit this Substitute Petition.
 - b. Examine the proposal submitted in the enclosed Petition for a favorable dispensation.
 - c. To kindly grant prior Regulatory approval as sought in this Petition for works to be carried out as submitted in this Petition.
 - d. To kindly approve the estimated cost for proposed capital investment as submitted in this Petition and accordingly approve the proposed funding for these projects.
 - e. To kindly pass through the difference in the cost estimates submitted in this Petition and actual Awarded cost discovered after the tender processing through competitive bidding, as the variation is beyond the control of BSPTCL.
 - f. Permit to propose suitable changes to the capital investment petition, prior to the final regulatory approval by the Hon'ble Commission.
 - g. Condone any inadvertent omission/errors/short comings and permit the petitioner to add/change/modify/alter this filing and make further submissions as may be required at a future date.



- h. Pass such Order as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

**Bihar State Power Transmission Company Limited (BSPTCL)
Patna.**

Place: Patna.

Date:November, 2025.

**Parwez Alam
Chief Engineer (STU)
BSPTCL**

(1) Introduction

1.1 Historical Background of Bihar State Power Transmission Company Limited (BSPTCL)

The erstwhile Bihar State Electricity Board (hereinafter referred to as 'Board' or 'BSEB') was originally constituted on 1st April 1958 under Section 5 of the Electricity (Supply) Act, 1948 and was engaged in the management of electricity generation, transmission, distribution, and related activities in the State of Bihar.

Under the 'Bihar State Electricity Reforms Transfer Scheme, 2012', the BESB was unbundled into five Companies, viz., Bihar State Power (Holding) Company Limited (BSPHCL), Bihar State Power Transmission Company Limited (BSPTCL), Bihar State Power Generation Company Limited (BSPGCL), South Bihar Power Distribution Company Limited (SBPDCL), and North Bihar Power Distribution Company Limited (NBPDC), with effect from 1st November 2012 vide Notification No. 17 dated 30th October 2012.

- **“Bihar State Power (Holding) Company Limited” or “BSP(H)CL”** BSP(H)CL is the Apex Holding Company that owns the share of the other four companies i.e., Bihar State Power Generation Company Limited, Bihar State Power Transmission Company Limited, South Bihar Power Distribution Company Limited and North Bihar Power Distribution Company Limited.
- **“Bihar State Power Generation Company Limited” or “BSPGCL”** BSPGCL is the Generating Company to which the Generating Undertakings of the Board have been transferred in accordance with this scheme.
- **“Bihar State Power Transmission Company Limited” or “BSPTCL”** BSPTCL is the Transmission Company to which the Transmission Undertakings of the Board have been transferred in accordance with this scheme.
- **“South Bihar Power Distribution Company Limited” or “SBPDCL” and “North Bihar Power Distribution Company Limited” or “NBPDC”** SBPDCL and NBPDC are the Distribution Companies to which the Distribution Undertakings of the Board have been transferred in accordance with this scheme.

1.2 Approach to Filing of Current Petition

1. Regulations 6 of BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018 specifies the procedure to be followed by the licensee to obtain the necessary prior approval of the Hon'ble Commission on the works to be taken up under Capital Investment Plan. The relevant extract of BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018 is as follows:

"6. Approval of Capital investment plan

6.1 The rolling capital investment plan shall be integral part of the ARR to be filed every year.....

.....Provided that under special circumstances Licensees may also file capital investment plan separately seeking approval thereon if it warrants so and not included in its earlier filing. Such application must contain all supporting documents inter-alia justification for filing separate petition, purpose of investment, capital structure, DPR, capitalization schedule, financing plan and cost benefit analysis etc"

2. The Hon'ble Commission vide Tariff Order dated 28th March, 2025 (Case No. 27 of 2024) directed BSPTCL to obtain prior regulatory approval of the Hon'ble Commission for the work-wise and scheme-wise capital expenditure and capitalization of certain projects/schemes undertaken during FY 2024-25, which are proposed to be capitalized during the control period FY 2025-26 to FY 2027-28. The relevant extracts of the Tariff Order are as follows:

"The Commission noted that petitioner has started the work on some of projects / schemes during FY 2024-25 which are proposed to be capitalized during the control period FY 2025-26 to FY 2027-28. The petitioner in its submission mention that it has undertaken such projects based on its requirements during FY 2024-25 and therefore now seeks regulatory approval of the Commission for the same through this order.

The Commission cannot approve such projects / schemes through this Order without reviewing the details as required under BERC (Procedure for Filing Capital Investment and Capitalisation Plan) Regulations, 2018 for approval of the capital investment plan.

The Commission directs the Petitioner to approach the Commission with separate petition as envisaged in aforementioned Regulations for approval of the Commission. The new schemes /works can be considered under capitalisation in the true-up of ensuing years only if prior approval of the Commission is obtained by the petitioner in due course of time.”

3. In compliance of the said directive, BSPTCL filed a Petition on 22nd September 2025 seeking prior approval of the Capex (hereinafter referred to as “**Main Petition**”). BSPTCL also filed additional submissions on 07th November 2025. Having appreciated the additional submissions, the Hon'ble Commission vide Order dated 11th November 2025, directed BSPTCL to submit a Substitution Petition. The relevant extracts of the said Order are as follows:

“.....Also, the petitioner was directed to substitute its petition incorporating the new facts which has been stated vide its letter dated 7.11.2025, before going forward to publish the abridge form of the petition.”

4. Vide Additional information dated 07.11.2025, BSPTCL submitted that one associated transmission line of GSS Mairwa was inadvertently omitted from the list of schemes in the Petition filed on 22.9.2025 in Case No. 38 of 2025. This transmission line forms an integral part of the scheme listed at serial number 9 in Section 2.4 of the Main Petition. All supporting documents for this work, including the Government of Bihar approval letter, Detailed Project Report, and tender details, have been submitted as part of Annexure XXXIV of the Main Petition. BSPTCL therefore requested the Hon'ble Commission to treat this transmission line as part of the same scheme and to approve the project cost of Rs. 268.27 crore for the transmission line along with the GSS cost of Rs. 179.37 crore.
5. A consolidated table of all 63 projects as per the Main Petition, along with the associated transmission line of GSS Mairwa making a total of 64 projects, are submitted in the present Substitute Petition.

(2) Petition for Prior Approval of Investment Plan & Capitalization:

2.1 Background:

BSPTCL has filed its Tariff Petition for the Truing-Up of FY 2023-24, Annual Performance Review for FY 2024-25, Business Plan, and Multi-Year Aggregate Revenue Requirement (MYT ARR) for the control period FY 2025-26 to FY 2027-28, along with Transmission Charges for FY 2025-26, dated 15th November 2024. The Petition considered certain projects/schemes undertaken during FY 2024-25, which are proposed to be capitalized during the control period FY 2025-26 to FY 2027-28. BSPTCL also submitted a separate list of 42 projects, along with the estimated project costs and justification for undertaking these during FY 2025-26 to FY 2027-28. Accordingly, the Hon'ble BERC issued the Final Tariff Order dated 28th March 2025 under Case No. 27 of 2024.

The Hon'ble Commission, vide its Tariff Order dated 28th March 2025 (Case No. 27 of 2024), directed BSPTCL to obtain prior regulatory approval for the work-wise and scheme-wise capital expenditure and capitalization of certain projects/schemes undertaken during FY 2024-25, which are proposed to be capitalized during the FY 2025-26 to FY 2027-28.

Based on the directions of the Hon'ble Commission, BSPTCL submits the work-wise and scheme-wise capital expenditure and capitalization of certain projects/schemes undertaken during FY 2024-25, which are proposed to be capitalized during FY 2025-26 to FY 2027-28. Among the 42 projects submitted earlier, 18 schemes had already received the Commission's approval in earlier Orders, and for the remaining 24 schemes BSPTCL has now submitting the requisite documents.

Accordingly, BSPTCL has categorized the 42 projects into two parts: (a) the 18 schemes already approved, detailed in Section 2.2 below, and (b) the remaining 24 schemes claimed for approval, detailed in Section 2.3 below. The detail of such projects, which have obtained the Hon'ble Commission's approval through various Orders and are proposed to be capitalized during FY 2025-26 to FY 2027-28, are furnished in the subsequent sections.

Apart from the 42 projects submitted as per the Tariff Order dated 28th March 2025 (Case No. 27 of 2024), BSPTCL also submits a list of 22 additional projects that will be capitalized during the control period FY 2025-26 to FY 2027-28, in accordance with the BERC (Procedure for Filing Capital Investment and Capitalization Plan) Regulations, 2018. The same is detailed in Section 2.4 below.

2.2 Details of Schemes Already Approved by the Commission Proposed for Capitalization During FY 2025-26 to FY 2027-28:

List of projects already approved by the Commission are as follows:

Sl. No.	Description	Cost of Project (In Cr.)	Source of Funding	Order Details
1.	Augmentation of Existing GSS Ekma (1x20MVA+1x50MVA) by 3x50MVA capacity against NIT-36/PR/BSPTCL/2018	26.31	State Plan	Tariff Order dated 28/03/2025
2.	Construction of following on turnkey basis under IRF (i) Construction of 01 Nos. of 132/33 KV Transformer bays each at GSS Nirmali & GSS Rosera (ii) Construction of 01 No. 220/132 KV transformer bay at GSS Pusauli & (iii) Construction of new transformer foundation for 50 MVA Power Transformer at 03 locations against NIT No: - 46/PR/BSPTCL/2021	9.89	IRF	Order dated 05/02/2024 in Case No. 17/2023
3.	R&M of 02 nos. 220/132/33KV GSS Bodhgaya and Khagaul on turnkey basis against NIT No.- 24/PR/BSPTCL/2022	21.39	State Plan	Order dated 05/02/2024 in Case No. 17/2023
4.	R&M of 04 nos. 132/33KV GSS Jehanabad, Banjari, Shekhpura & Hajipur on turnkey basis against NIT No.-25/PR/BSPTCL/2022	36.28	State Plan	Order dated 05/02/2024 in Case No. 17/2023
5.	Completion of leftover portion of works for capacity augmentation of various GSS by replacement of transformers as detailed below: - (i) 02 No. 100 MVA transformer by 200 MVA transformer at GSS Hajipur (ii) 02 No. 100 MVA transformer by 200 MVA transformer at GSS Gopalganj (iii) 01 No. 160 MVA transformer by 200 MVA transformer at GSS Darbhanga against NIT No. 51/PR/BSPTCL/2022	82.73	Special Funded Central Scheme	Order dated 05/02/2024 in Case No. 17/2023



Sl. No.	Description	Cost of Project (In Cr.)	Source of Funding	Order Details
6.	Implementation of SAS for control & monitoring of existing 12 Nos. of 220/132/33 KV Substations (Hajipur, Khagaul, Fatuha, Gaurichak, Begusarai, Bodhgaya, Dehi-on-Sone, Pusauli, Darbhanga, Gopalganj, Madhepura & Bihta (New) including modification of existing IEDs and field equipment of BSPTCL against NIT No. 08/PR/BSPTCL/2023	99.6	PSDF	Order dated 05/02/2024 in Case No. 17/2023
7	Construction of (i) LILO of Barh-Patna 400KV D/C (Quad) Trans. Line at Bakhtiyarpur (New) (10RKM) (ii) Bakhtiyarpur (New) - Sheikhpura (new) 220 KV D/C Trans. Line (51RKM) (iii) Bakhtiyarpur (New) - Hathidah (new) 220 KV D/C Trans. Line (52RKM) (iv) Bakhtiyarpur (New) - Fatuha (BSPTCL) 220 KV D/C Trans. Line (28RKM) on turnkey basis. NIT: 77/PR/BSPTCL/2018	139.13	State Plan	Tariff order dated 19/03/2021
8	Construction of (2x500+2x160) MVA 400/220/132 KV GIS Grid Sub-Station Bakhtiyarpur with SAS under turnkey basis. NIT No. 15/PR/BSPTCL/2019. retendered from 73/2018	250.51	State Plan	Tariff order dated 19/03/2021
9	Construction of 04 Nos. 220 KV GIS Line Bays at GSS Sheikhpura (GIS, BGCL) & 02 nos. 220 KV GIS Line Bays at GSS Hathidah (GIS, BGCL) (Total 06 nos. of GIS Line Bays) on turnkey basis against NIT No. 08/PR/BSPTCL/2019	41.51	State Plan	Tariff order dated 19/03/2021
10	Construction of 2x80MVA, 132/33 KV Gas Insulated Sub- station at Board colony Patna on turnkey basis against NIT No. 17/PR/BSPTCL/2019 under State Plan	58.27	State Plan	Tariff order dated 19/03/2021
11	Construction of 132/33 KV 2X50 MVA GSS Barachatti (Dist.-Gaya) along with construction of 02 Nos. of 132 KV Line bays at GSS Chandauti & 132/33 KV 2X50 MVA Bhore (Dist-Gaya). NIT No.- 11/PR/BSPTCL/2021	91.25	State Plan	Tariff order dated 25/03/2022



Sl. No.	Description	Cost of Project (In Cr.)	Source of Funding	Order Details
12	Construction of 02 no's 220 KV AIS line bays at Dehri on Sone BSPTCL with associated work mentioned in the scope of works on turnkey basis NIT No.- 25/PR/BSPTCL/2021	8.11	State Plan	Tariff order dated 25/03/2022
13	I. Construction of 132/33 KV 3x MVA GSS Nabinagar (Dist.: - Aurangabad) II. Construction of 132/33 KV 2x50 GSS Daudnagar (Dist.: - Aurangabad) NIT No-13/PR/BSPTCL/2021	89.65	BRGF	Tariff order dated 25/03/2022
14	LILO of 132 KV Sonenagar - Rihand (Ckt-I) Transmission line at GSS Nabinagar (RL-15 RKM) NIT No-14/PR/BSPTCL/2021	75.69	BRGF	Tariff order dated 25/03/2022
15	Construction of 2 nos. of 220KV GIS bays at GSS Dumraon (BGCL) & 01 no of 220KV GIS bay at Darbhanga (DMTCL) on turnkey basis against NIT No.: - 44/PR/BSPTCL/2021	30.92	State Plan	Tariff order dated 25/03/2022
16	Construction of 132/33 KV 2X50 MVA GSS Barari (Dist.- Bhagalpur), 132/33 KV 2X50 MVA GSS Bagha (Dist.-West Champaran) & 132/33 KV 2X50 MVA GSS Murliganj NIT No.: 10/PR/BSPTCL/2021	141.87	State Plan	Tariff order dated 25/03/2022
17	132 KV D/C Murliganj- Udaikishanganj T/L, LILO of one circuit of 132 KV D/C Ramnagar-Dhanha T/L & LILO of both circuit of 132 KV GIS Goradih-GSS Sabour T/L(15/PR/BSPTCL/2021)(BRGF)	164.77	BRGF	Tariff order dated 25/03/2022
18	Construction of new 3x180MVA, 132KV GIS GSS Mithapur at Agriculture Research Institute Mithapur, 2) Construction of 132 KV transmission line from GIS GSS Mithapur to GSS Karbigahia through 1200sqm XLPE underground cable with associated work including dismantling of existing cable system (RL-2.7 KM) NIT No.- 38/PR/BSPTCL/2021	136.13	State Plan	Tariff order dated 25/03/2022

1. The proposed capital investment under Sl. No. 1 in the table above pertains to the augmentation of the existing 132/33 kV GSS at Ekma (from 1×20 MVA + 1×50 MVA to 3×50 MVA capacity). This scheme has already been capitalized to the extent of ₹20.44 Crores in FY 2022-23, and the Hon'ble Commission approved the capitalization of ₹0.03 Crores in the True-Up for FY 2023-24, vide Case No. 27/2024 dated 28th March 2025. Accordingly, BSPTCL humbly submits that the remaining capital investment for FY 2025-26 to FY 2027-28 may kindly be considered.
2. The proposed capital investment under Sl. Nos. 2, in the table above pertains to the Construction of following on turnkey basis under IRF:
 - (i) Construction of 01 Nos. of 132/33 KV Transformer bays each at GSS Nirmali & GSS Rosera
 - (ii) Construction of 01 No. 220/132 KV transformer bay at GSS Pusauli &
 - (iii) Construction of new transformer foundation for 50 MVA Power Transformer at 03 locations for transformers

Bihar Discoms also submitted the requirement of 09 Nos. & 12 Nos. of 50 MVA Power Transformers for augmentation of existing 20 MVA Power Transformers with 50 MVA Power Transformers along with construction of Transformer Bays in various GSSs to meet the increasing demand of Bihar.

Accordingly, BSPTCL examined the proposal and decided to take immediate initiative for replacement/ addition of 10 No. of 50 MVA power Transformers as these GSSs had already crossed 90% of its transformer capacity.

There was also requirement of 01 Nos. of 132/33 KV transformer bays each at GSS Rosera & GSS Nirmali and dismantling of old foundation for 20 MVA transformer and construction of new transformer foundation for 50 MVA power transformers at 03 locations is needed to be taken up for smooth installation of transformers.

Construction of 01 No. of 220/132 KV Transformer Bay at GSS Pusauli for commissioning of 150 MVA Transformer repaired from BHEL was also required to meet load demand of the area.

Accordingly, BSPTCL has taken up for installation of 03 No. of 50 MVA power transformer, Construction of 01 Nos. of 132/33 KV Transformer bays each at GSS Nirmali & GSS Rosera and Construction of 01 Nos. of 220/132 KV Transformer bays each at GSS Nirmali & GSS Rosera vide NIT No. 46/PR/BSPTCL/2021. The Estimated project cost of the aforesaid works are Rs. 9.89 Cr.

It is pertinent to highlight that the technical justification and system need for these schemes have already been **approved by the Hon'ble Commission in its Order**

dated 05.02.2024 in Case No. 17/2023, which granted approval in principle to the above mentioned scheme forming part of this proposal.

BSPTCL submits the approval of the Board of Directors of BSPTCL for execution of the aforesaid work and NIT floated as **Annexure - A (Main Petition may be referred)**.

3. The proposed capital investment under Sl. Nos. 3 and 4, in the table above pertains to the following projects:
 - (i) R&M of 02 nos. 220/132/33KV GSS Bodhgaya and Khagaul on turnkey basis against NIT No.-24/PR/BSPTCL/2022
 - (ii) R&M of 04 nos. 132/33KV GSS Jehanabad, Banjari, Shekhpura & Hajipur on turnkey against NIT No- 25/PR/BSPTCL/2022

In view of the increasing power demand and consequent requirement of transmission system with additional capacity & efficiency, it is deemed essential to upgrade old grid substation of BSPTCL and accordingly, BSPTCL has taken initiative for renovation and modernization of its 02 nos. 220/132/33KV GSS Bodhgaya and Khagaul vide NIT No. 24/PR/BSPTCL/2022 and 04 nos. 132/33KV GSS Jehanabad, Banjari, Shekhpura & Hajipur vide NIT No. 25/PR/BSPTCL/2022. BSPTCL submits that these two projects have been funded through State Plan.

It is pertinent to highlight that the technical justification and system need for these schemes have already been **approved by the Hon'ble Commission in its Order dated 05.02.2024 in Case No. 17/2023**, which granted approval in principle to the above mentioned scheme forming part of this proposal.

BSPTCL submits that the Electricity Department, Government of Bihar has also approved the same vide Letter No. 02/BSPTCL-01/2022-2077 dated 21.06.2022 and Letter No. 02/BSPTCL-06/2015-1748 dated 20.05.2022, pursuant to which the NIT has been floated. The said approvals are attached herewith as **Annexure-B** and **Annexure-C (Main Petition may be referred)**, respectively.

4. The proposed capital investment under Sl. Nos. 5, in the table above pertains to the following projects:
 - (i) 02 No. 100 MVA transformer by 200 MVA transformer at GSS Hajipur
 - (ii) 02 No. 100 MVA transformer by 200 MVA transformer at GSS Gopalganj
 - (iii) 01 No. 160 MVA transformer by 200 MVA transformer at GSS Darbhanga

In view of the increasing power demand and consequent requirement of transmission system with additional capacity & efficiency, it is deemed essential to upgrade old transformers of BSPTCL and accordingly, BSPTCL has taken initiative

for capacity augmentation of various GSS by replacement of transformers vide NIT No. 51/PR/BSPTCL/2022.

It is pertinent to highlight that the technical justification and system need for these schemes have already been **approved by the Hon'ble Commission in its Order dated 05.02.2024 in Case No. 17/2023**, which granted approval in principle to the above mentioned scheme forming part of this proposal.

BSPTCL submits that it has received approval from the Department of Expenditure, Ministry of Finance, Government of India, vide F. No. 44(1)/PF-8/2023-24 (CAPEX)-Bihar dated 08th June 2023, for the execution of the aforementioned projects under the Special Assistance Fund, and has accordingly floated the NIT. The said approval is submitted herewith as **Annexure-D (Main Petition may be referred)**.

5. The proposed capital investment under Sl. Nos. 6, in the table above pertains to the following projects:
 - (i) Implementation of SAS for control & monitoring of existing 12 Nos. of 220/132/33 KV Substations (Hajipur, Khagaul, Fatuha, Gaurichak, Begusarai, Bodhgaya, Dehi-on-Sone, Pusauli, Darbhanga, Gopalganj, Madhepura & Bihta (New) including modification of existing IEDs and field equipment of BSPTCL

BSPTCL submits that automation system for monitoring & control of its sub stations are required to provide reliable and uninterrupted power supply to the consumers. Therefore, BSPTCL has taken initiative for Implementation of SAS for control & monitoring of existing 12 Nos. of 220/132/33 KV Substations (Hajipur, Khagaul, Fatuha, Gaurichak, Begusarai, Bodhgaya, Dehi-on-Sone, Pusauli, Darbhanga, Gopalganj, Madhepura & Bihta (New) including modification of existing IEDs and field equipment of BSPTCL vide NIT No. 08/PR/BSPTCL/2023. BSPTCL has received approval from the Ministry of Power, Govt. of India vide letter No. 10/1/2014-OM (Vol – V) [234849], dated 16.01.2023.

It is pertinent to highlight that the technical justification and system need for these schemes have already been **approved by the Hon'ble Commission in its Order dated 05.02.2024 in Case No. 17/2023**, which granted approval in principle to the above mentioned scheme forming part of this proposal.

BSPTCL has also obtained approval from its Board of Directors to meet the balance funding requirements through IRF, and has accordingly attached the NIT floated. The same is submitted herewith as **Annexure-E (Main Petition may be referred)**.

6. BSPTCL submits that the peak load in the state of Bihar has been consistently rising.



As per the 20th Electric Power Survey (EPS) published by the CEA, the peak demand in Bihar is projected to grow from 6,923 MW in FY 2021-22 to 10,553 MW in FY 2026-27. The proposed projects have been planned to cater to the anticipated increase in demand.

The proposed capital investment in Sl. No. 7 & 8 in the table above pertains to the construction of a 400 KV D/C (Quad) Transmission Line at Barh–Patna, and three 220 KV D/C transmission lines connecting Bakhtiyarpur to Sheikhpura, Hathidah, and Fatuha, along with the establishment of a 400/220/132 KV GIS Grid Substation at Bakhtiyarpur equipped with SAS. The necessity and planning of this investment stem from the Bihar Transmission System Study carried out by BSPTCL in consultation with PGCIL, which assessed the infrastructure requirements to meet Bihar's projected peak power demand of 5620 MW by the end of the 12th Five-Year Plan (FY 2016–17). The study highlighted the urgent need for capacity enhancement and network strengthening to ensure secure, stable, and efficient power evacuation in view of the increasing load demand and upcoming generation capacities.

The proposed system addresses critical transmission bottlenecks and aligns with the broader transmission development strategy of the state. The project not only enhances interconnectivity between key nodes in the Bihar grid but also significantly improves voltage profile, system reliability, and redundancy—thereby strengthening the overall grid stability and operational flexibility of BSPTCL's network.

BSPTCL submits that this integrated transmission system was approved by the Government of Bihar vide Approval Letter No. BSPTCL-05/2017-515 dated 21.02.2019, and the Detailed Project Report (DPR) and Technical Sanction Letter submitted at the time of approval and NIT are enclosed as **Annexure-I (Main Petition may be referred)** for reference. The project is funded by the Government of Bihar in the ratio of 80% Debt and 20% Equity, as per the terms outlined in the aforementioned approval letter.

7. The proposed capital investment under Sl. No. 9 and 10 in the table above pertains:
 - I. Construction of 04 Nos. of 220 KV GIS Line Bays at GSS Sheikhpura (GIS, BGCL) and 02 Nos. at GSS Hathidah (GIS, BGCL)
 - II. Construction of 2x80 MVA, 132/33 KV Gas Insulated Substation (GIS) at Board Colony, Patna

The proposed GSSs and associated transmission infrastructure are required to:

- GIS Line Bays at Sheikhpura and Hathidah: Required to integrate upcoming transmission links, provide evacuation flexibility, and eliminate bottlenecks by

ensuring seamless power flow in the capital and adjacent regions. These bays are crucial for avoiding single-source connectivity issues and improving overall grid resilience.

- GIS Substation at Board Colony, Patna: Proposed in a high-load, space-constrained urban area. GIS technology ensures compact footprint and operational reliability. This substation will strengthen power delivery to critical residential and commercial zones and reduce voltage dips and technical losses.

These interventions are essential for meeting current and projected load requirements, reducing technical losses, and enhancing the reliability of power supply. The inclusion of residential infrastructure supports long-term operational efficiency and ease of maintenance.

BSPTCL submits that the proposed integrated transmission system was approved by the Government of Bihar vide Approval Letter No. Letter No. BSPTCL-03/2018-2028 dated 24.07.2018. The Detailed Project Report (DPR) and Technical Sanction Letter submitted at the time of approval along with the NIT for the projects under Sl. No. 9 and 10 are enclosed as **Annexure-II (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

8. The proposed capital investment under Sl. No. 11, 13, 14 and 17 in the table above pertains to the development of an integrated transmission system comprising the following major components:
 - I. Construction of 132/33 KV GSS at Barachatti (Gaya) (2×50 MVA) along with 2 nos. of 132 KV line bays at Chandauti GSS and Construction of 132/33 KV GSS at Bhore (Gaya) (2×50 MVA)
 - II. Construction of 132/33 KV 3x MVA GSS Nabinagar (Dist.: - Aurangabad) and Construction of 132/33 KV 2x50 GSS Daudnagar
 - III. LILO of 132 KV Sonenagar - Rihand (Ckt-I) Transmission line at GSS Nabinagar
 - IV. 132 KV D/C Transmission Line from Murliganj to Udaikishanganj, LILO of one circuit of Ramnagar–Dhanha 132 KV D/C line, and LILO of both circuits of Goradih–Sabour 132 KV GIS line

These schemes are aimed at addressing critical network strengthening needs in Gaya, Aurangabad, Madhepura, and West Champaran districts. The proposed GSSs and associated transmission infrastructure are required to:

- Alleviate overloading on existing substations including Bodhgaya, Sherghati, Ramnagar, Aurangabad, Rafiganj, and Goh.
- Improve voltage regulation and system reliability in areas where existing 33 KV feeders are long, congestion-prone, or pass through difficult terrain including

rail crossings and flood-prone regions.

- Ensure redundancy in supply through strong and proximate 132 KV/220 KV sources, including connections to 400/220/132 KV GSS Chandauti (New), 220/132/33 KV GSS Sonenagar (New), and 220 KV Raxaul GSS.
- Reduce feeder lengths, thereby improving maintenance efficiency, reducing technical losses, and enhancing the quality and continuity of supply to end consumers.

The combined capacity addition of 2×50 MVA per GSS will help off-load heavily burdened substations by 24–30 MW each, support multiple downstream PSSs, and meet the growing load demand in rural and semi-urban areas. These works are thus not only technically justified, but also necessary for achieving 24×7 reliable power in some of the state's most underserved regions.

BSPTCL submits that the proposed integrated transmission system was approved by the Government of Bihar vide Approval Letter No. BSPTCL-02/2020-911 dated 13.04.2020. The Detailed Project Report (DPR), the Technical Sanction Letter submitted at the time of approval, the supporting load flow studies substantiating the system requirements and impact, and the NIT for the projects are enclosed as **Annexure-III (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

9. The proposed capital investment under Sl. No. 12 and 15 in the table is a part of the power evacuation infrastructure from the Buxar Thermal Power Plant (2×660 MW), developed to supply 85% of its 1320 MW installed capacity to the state of Bihar which includes the following projects:
- I. Construction of 2 nos. 220 KV AIS line bays at Dehri (BSPTCL)
 - II. Construction of 2 nos. 220 KV GIS bays at GSS Dumraon (BGCL)
 - III. Construction of 1 no. 220 KV GIS bay at GSS Darbhanga (DMTCL)

These bay works form an integral part of the evacuation scheme technically approved by the Central Transmission Utility (CTU) and the Standing Committee on Power System Planning (CEA, Ministry of Power), and subsequently approved in the 1st meeting of ERPTC. The works are required to facilitate evacuation through the following transmission corridors:

- 400 KV DCDS line from BTPP to Naubatpur (BGCL) – 123 km
- 220 KV DCDS lines from BTPP to Dumraon (BGCL), Karmnasa (New), and Dehri – over 280 km total
- 220 KV single Zebra line to Darbhanga (DMTCL) – 120 km

The proposed bays are critical for integrating the transmission lines into the state grid, ensuring redundant and geographically distributed evacuation paths, and meeting the N-2 reliability criteria at strategic substations such as Dehri and Karamnasa. They will also enhance voltage stability and improve power quality in key load centers including Patna, Dumraon, and Darbhanga. These works will facilitate the timely operationalization of the Buxar Thermal Power Plant, a high-priority generating station for Bihar, and significantly strengthen the state's evacuation capacity at both 400 KV and 220 KV voltage levels.

BSPTCL submits that the proposed integrated transmission system was approved by the Government of Bihar vide Approval Letter No. BSPTCL-02/2021-1021 dated 31.03.2021. The Detailed Project Report (DPR) and Technical Sanction Letter submitted at the time of approval and NIT for the project are enclosed as **Annexure-IV (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

10. The proposed capital investment under Sl. No. 16 in the table is the construction of two new 132/33 KV Grid Sub-Stations, each with a transformation capacity of 2×50 MVA, at the following locations:
- I. Bagha (District – West Champaran)
 - II. Murliganj (District – Madhepura)

These substations are essential to address the growing electricity demand, network constraints, and voltage regulation issues in their respective regions. The proposed GSSs will enable:

- Decongestion of overloaded substations, thereby reducing technical losses and improving operational reliability.
- Strengthening of voltage profile and quality of supply, particularly in remote areas such as Bagha and Murliganj, which face feeder voltage drops due to long line lengths.
- Facilitation of downstream network expansion, including integration of 33/11 KV PSSs
- Support for rural electrification and urban growth, especially in load centers such as Bhagalpur and the flood-prone zone of West Champaran

Specifically, the GSS at Murliganj is critical for system stability in Madhepura district and will also support Udakishanganj GSS through associated line bay construction. The Bagha GSS will off-load Ramnagar GSS and provide redundancy in a flood-prone area.

BSPTCL submits that the proposed GSS Bagha was approved by the Government of Bihar vide Approval Letter No. BSPTCL-02/2020-2319 dated 07.07.2022. The proposed GSS Murliganj was approved vide Approval Letter No. BSPTCL-07/2019-3784 dated 07.11.2022. The Detailed Project Report (DPR), Technical Sanction Letter submitted at the time of approval and NIT for the project are enclosed as **Annexure-V (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

11. The proposed capital investment under Sl. Nos. 18 is the construction of a new 132/33 KV GIS Grid Sub-Station at ARI, Mithapur (Patna) with a transformation capacity of 3×80 MVA, along with associated transmission system works. This new substation is proposed to be constructed on land transferred by the Government of Bihar (GoB) from available agricultural land at ARI, Mithapur, and will facilitate the shifting of the existing 132/33 KV Mithapur GSS to a technically and operationally suitable location.

The proposed GIS substation will serve as a multi-nodal supply point, catering to:

- GSS Karbigahiya
- PMRC/DMRC Rail Sub-Stations
- Existing and future 33/11 KV PSS in the Mithapur zone

The scheme includes:

- I. Construction of 132/33 KV GIS GSS with 3×80 MVA Power Transformers and associated 33 KV feeders
- II. 02 nos. 132 KV GIS bays each for:
 - Incoming lines from Gaurichak and Jakkanpur GSS
 - Outgoing lines to GSS Karbigahiya and PMRC/DMRC RSS
 - 01 no. bus coupler (B/C) bay
- III. CRB, 132 KV & 33 KV PEB buildings and related civil infrastructure
- IV. Laying of 132 KV 1200 sq.mm XLPE underground cable from Mithapur GIS to Karbigahiya (RL: 2.7 km), including dismantling of the existing cable system

The relocation of the existing GSS is necessitated due to space constraints and growing operational demands in the region. The new location offers adequate space for future expansions (including provision for 2×33/11 KV PSS), falls within the 132 KV corridor, and minimizes ROW issues. Additionally, the underground XLPE cable ensures a compact, reliable, and secure transmission route in the urban environment of Patna. This integrated scheme will significantly improve voltage reliability, enable seamless power evacuation to metro and city loads, and ensure long-term infrastructure resilience for the capital city.



BSPTCL submits that the proposed integrated transmission system was approved by the Government of Bihar vide Approval Letter No. BSPTCL-02/2015-2190 dated 01.09.2021. The Detailed Project Report (DPR) and Technical Sanction Letter submitted at the time of approval and NIT are enclosed as **Annexure-VI (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.



2.2 Details of remaining Projects Proposed for Capitalization During FY 2025-26 to FY 2027-28:

List of remaining projects Proposed for Capitalization During FY 2025-26 to FY 2027-28 are as follows:

Sl. No.	Full Project Name	Original Cost of Project (in Cr)	Source of Funding	Purpose of the Project
1	Construction of (i) 2x500 MVA + 2x200 MVA, 400/220/132 KV AIS Sub-Station at Chhapra (New), (ii) 132 KV Chhapra(New) - Raghunathpur DCDS with Single Moose conductor. (line length- 80 km) & (iii) 132 KV Chhapra(New) - Maharajganj DCDS (45 km) with Single Moose conductor. (line length-45 km) NIT No.- 23/PR/BSPTCL/2023	482.89	State Plan	New AIS substation at Chhapra
2	Construction of 03 nos. MD+6 tower with pile foundation for shifting the existing 33KV Baruar line, 33KV Nepal (Sirha) line & 11KV Hanuman Nagar line on turnkey basis under deposit head of NBPDC. NIT No.- 16/PR/BSPTCL/2024	7.04	Deposit Work	Tower shifting for 33 KV line
3	Construction of newly proposed 2x50MVA, 132/33 KV GSS Sarairanjan (Sarairanjan Block in Samastipur District) with Construction of associated 02 nos. 132KV Line bays at 220/132/33 KV GSS Tajpur & Construction of 132KV D/C Tajpur - Sarairanjan Tr. Line with ACSR Panther Conductor (Line length- 25 RKM) on Turnkey basis under State Plan NIT No.- 34/PR/BSPTCL/2023	74.43	State Plan	New GSS at Samastipur
4	Construction of 400 KV, 220 KV transmission line associated to 400/220/132 KV Chhapra (New) & Construction of 220 KV GIS Bays & 132 KV AIS Bays for power evacuation from 400/220/132 KV Chhapra (New) NIT No: 06/PR /BSPTCL/2024	452.49	State Plan	400 KV GIS bay addition
5	Construction of 02 nos. of 400KV GIS bays at GSS Naubatpur (BGCL) NIT No.- 40/PR/BSPTCL/2023	34.74	State Plan	132 KV line & GSS interconnection
6	2nd circuit stringing of 12 nos. of 132 KV transmission line of BSPTCL along with	146.03	Special Funded	New GSS at Tajpur with quarters



Sl. No.	Full Project Name	Original Cost of Project (in Cr)	Source of Funding	Purpose of the Project
	construction of 12 nos. of 132 KV line bays in connecting GSS NIT No.- 24/PR/BSPTCL/2024		Central Scheme	
7	(i) Construction of (2x160MVA+3x50 MVA), 220/132/33KV GSS, Tajpur (Dist.-Samastipur) with SAS including Residential Quarters under turnkey basis. (ii)Construction of (2x160MVA+3x50 MVA), 220/132/33KV GSS, Thakurganj (Dist.-Kishanganj) with SAS including Residential Quarters NIT No.- 49/PR/BSPTCL/2022	241.85	State Plan	New 132/33 KV GSS across Bihar
8	132/33KV GSS Bagha, West Champaran	67.9	BRGF Special Plan	New GSS at Bagha
9	Construction of 2x80 MVA, 132/33 KV GSS, Maithi and LILO of both circuit of 132 KV D/C Musahari – SKMCH Transmission line on Zebra Conductor	134.42	State Plan	New GSS at Mathili
10	Construction of 2x80 MVA 132/33 KV GSS Roh (Dist.-Nawada) with Construction of 02 nos. of 132 KV GIS Bays at 400/220/132KV GIS Narhat (BGCL) along with construction of 132KV D/C Transmission Line from GSS Roh to GIS Narhat (BGCL) (46 RKM) & Construction of 132KV D/C Transmission Line from GSS Roh to GSS Warisaliganj (22 RKM)	138	State Plan	New GSS at Roh
11	Construction Of Newly Proposed 2x80MVA, 132/33 KV GSS Mahua (District-Vaishali) With Construction Of Associated 02 Nos. 132KV Line Bays At 220/132/33 KV GSS Tajpur And Associated Transmission Lines (I) Construction Of 132 KV D/C Mahua-Tajpur Transmission Line With ACSR Panther Conductor (Line Length - 35 Rkm) (Ii) Construction Of LILO Of 132 KV Hajipur(New)-Samastipur(Old) Transmission Line At Mahua With ACSR Panther Conductor (Line Length - 20 Rkm)	164	State Plan	New GSS at Mahua



Sl. No.	Full Project Name	Original Cost of Project (in Cr)	Source of Funding	Purpose of the Project
12	Construction of 2x80 MVA 132/33 KV GSS Halsi (Dist.-Lakhisarai) with its corresponding 02 Nos. GIS Line bays at BGCL Sheikhpursarai along with Construction of 132 KV DCDS BGCL Sheikhopursarai-Halsi transmission line (with ACSR Panther conductor and OPGW) (RKM-40KM) & Construction of 132 KV DCDS LILO transmission line from GSS Halsi to existing 132 KV S/C Jamui-Lakhisarai transmission line (RKM-21 KM) on Turnkey basis. NIT: 44/PR/BSPTCL/2025	172	State Plan	New GSS at Laikhaisar
13	132/33KV GSS Barari, Bhagalpur NIT No.: 10/PR/BSPTCL/2021	156.32	State Plan	New GSS at Barari
14	220/132/33KV GSS Korha, Katihar	118.1	State Plan	New GSS at Korha
15	2nd Source Connectivity of existing GSS of BSPTCL	442.82	State Plan	Second source for existing GSS
16	Construction of 2x80MVA, 132/33 KV GSS Senuwariya (Amwaman), District-West Champaran with Construction of associated 02 nos. 132KV Line bays at 220/132/33 KV Raxaul(New) and associated transmission Lines (i) Construction of 132KV D/C Raxaul(New)-Senuwariya (Amwaman) Transmission line with ACSR Panther Conductor (Line length=15 RKM) (ii) Construction of LILO of 132KV Motihari-Bettiah S/C transmission line at GSS Senuwariya (Amwaman) with ACSR Panther Conductor (Line Length - 01 RKM).	88.99	State Plan	Extension of 33KV bays in GSS
17	Construction of new 220/132/33 KV GSS at Darbhanga along with construction of associated 132 KV & 220 KV transmission line and construction of 02 Nos. of 132 KV line bays at 132/33 KV GSS Madhubani including extension of control room building at GSS Madhubani.	347.48	Yet to be Approved	New GSS
18	132/33KV GSS Bhawanipur, Purnea	118.07	Yet to be Approved	New GSS
19	132/33KV GSS Akhgaon, Bhojpur	150	Yet to be Approved	New GSS



Sl. No.	Full Project Name	Original Cost of Project (in Cr)	Source of Funding	Purpose of the Project
20	Construction of Newly Proposed 2x80 MVA, 132/33KV GSS Warisnagar, Samastipur with LILO of SC 132 KV Darbhanga- Samastipur (Old) Transmissionn Line at Waisnagar with HTLS conductor (Line Length -18 KM)	132	State Plan	New GSS
21	220/33KV GSS Bairiya, Patna	175	Yet to be Approved	New GSS
22	132/33KV GSS Amarapur, Banka	340	Yet to be Approved	New GSS
23	Supply, Erection, Testing and Commissioning of 07 Nos. of 80 MVA Power Transformer & 12 Nos. of 50 MVA Power Transformer and its associated works by manufacturers in different GSSs of BSPTCL.	123.44	Special Assistance to States for Capital Investment 2024-25	Power transformer augmentation
24	220/132/33KV GSS Begusarai	325	Yet to be Approved	New GSS

1. The proposed capital investment under Sl. Nos. 1 and 4 pertains to the construction of a strategically important 400/220/132 KV AIS Grid Sub-Station at Chhapra (New) along with associated 132 KV transmission infrastructure. This project is planned as part of the long-term grid strengthening and load-serving strategy for the Saran division and surrounding districts, which are experiencing continuous growth in demand and operational constraints. The proposed project includes the following components:
 - I. Establishment of a 400/220/132 KV AIS Substation at Chhapra (New) with:
 - 2×500 MVA transformers (400/220 KV)
 - 2×200 MVA transformers (220/132 KV)
 - II. Construction of 132 KV Chhapra (New) – Raghunathpur DCDS Transmission Line (approx. 80 km) with Single Moose conductor
 - III. Construction of 132 KV Chhapra (New) – Maharajganj DCDS Transmission Line (approx. 45 km) with Single Moose conductor
 - IV. Construction of 132 KV Chhapra (New) – Mashrakh DCDS Transmission Line, line length: 47 km

The substation at Chhapra (New) will serve as a regional power hub, facilitating the injection of bulk power from the 400 KV backbone into the 220 KV and 132 KV networks to meet the growing load in the Chhapra, Siwan, Raghunathpur, Maharajganj, Mashrakh, and adjacent areas.

The proposed transmission lines are critical to creating multiple evacuation corridors, improving grid redundancy, and ensuring N-1 compliance. The use of high-capacity Moose conductors and double circuit design will improve thermal limits, reduce technical losses, and ensure stable voltage profiles during peak demand.

Key benefits of the proposed scheme include:

- Decongest existing overloaded substations in western Bihar
- Improve voltage stability and reliability of power supply in fast-growing districts
- Facilitate integration of new 33/11 KV substations and support urban/rural electrification
- Create a flexible and scalable network architecture through a multi-voltage-level design (400/220/132 KV)

Given the strategic location, increased load density, and future readiness of the region, this project forms an essential part of BSPTCL's transmission infrastructure roadmap.

Accordingly, BSPTCL requests the Hon'ble Commission to treat the above as capital investments and grant regulatory approval.

BSPTCL submits that the proposed transmission system was approved by the Government of Bihar vide Approval Letter No. BSPTCL-01/2020-410 dated 24.01.2025. The Detailed Project Report (DPR) and Technical Sanction Letter submitted at the time of approval and NIT are enclosed as **Annexure-VII (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

2. The proposed capital investment under Sl. Nos. 2 pertains to the construction of the barrage on the Kamla River in Madhubani district—an important infrastructure project of the Water Resources Department—is currently impeded by the presence of three critical power lines: the 33 KV Baruar line, the 33 KV Nepal (Sirha) line, and the 11 KV Hanuman Nagar line.

To facilitate the timely completion of the barrage and ensure uninterrupted power supply to the surrounding areas, BSPTCL proposes the shifting of these lines by constructing three MD+6 towers with pile foundations on a turnkey basis.

This relocation is essential not only for the smooth execution of the barrage project but also for safeguarding the operational integrity and safety of the transmission infrastructure in the region. Given the site conditions—particularly the annual 550 m active work area of the barrage—pile foundations have been selected to ensure structural stability and longevity.

The work is proposed under the Deposit Head of NBPDC, with preliminary approval required to enable demand sanction from the concerned department.

In view of the above, approval of the proposed capital expenditure is requested, as it will resolve a critical construction bottleneck, maintain reliable power supply, and support an important public infrastructure initiative.

The Technical Sanction Letter dated 02.05.2023 and the letter from the Deposit Head of NBPDC dated 20.04.2023 and NIT are enclosed as **Annexure-VIII (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

3. The proposed capital investment under Sl. Nos. 3 pertains to the construction of a new 2×50 MVA, 132/33 KV Grid Sub-Station (GSS) at Sarairanjan in Sarairanjan Block of Samastipur District, along with associated transmission infrastructure, under the State Plan. The scope of the project includes:

- I. Construction of 2×50 MVA, 132/33 KV GIS GSS at Sarairanjan
- II. Construction of 2 nos. 132 KV line bays at 220/132/33 KV GSS Tajpur

III. Construction of 132 KV D/C Tajpur–Sarairanjan Transmission Line with ACSR Panther conductor (Line length: 25 RKM)

This project has been conceptualized to address the poor voltage profile and reliability issues currently being experienced by several downstream PSSs—Madhopur, Parsauni, Nonauli, Sagaruli, and Dhokaraha—that are fed via long and heavily loaded 33 KV feeders from existing sources such as Mothari, Betiaha, Raxaul, and New GSSs.

As demonstrated in the load flow analysis and load-distance matrix, the new GSS at Sarairanjan will:

- Reduce the 33 KV feeder length by up to 31.5 km for certain PSSs, directly resulting in voltage improvement and technical loss reduction
- Improve power supply reliability during peak hours by creating a more localized and robust 132/33 KV transformation point
- Alleviate the load on upstream substations, particularly at GSS Betiah and GSS Raxaul (New)
- Support future load growth and upcoming 33/11 KV PSSs in the expanding Sarairanjan region of Samastipur

The shorter transmission route and newly proposed line bays will improve the stability and maintainability of the system and ensure that the supply to agricultural, domestic, and commercial consumers in the region is reliable and of improved quality.

Accordingly, BSPTCL requests the Hon'ble Commission to treat the above as a capital investment and grant regulatory approval.

BSPTCL submits that this project has been approved by the Government of Bihar vide Approval Letter No. BSPTCL-13/2023-4546 dated 29.11.2023. The Detailed Project Report (DPR) and Technical Sanction Letter submitted at the time of approval and NIT are enclosed as **Annexure-IX (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

4. The proposed capital investment under Sl. No. 5 in the table is a part of the power evacuation infrastructure from the Buxar Thermal Power Plant (2×660 MW), developed to supply 85% of its 1320 MW installed capacity to the state of Bihar which includes the following projects:

I. Construction of 2 nos. 400 KV GIS bays at GSS Naubatpur (BGCL)

This bay works form an integral part of the evacuation scheme technically approved by the Central Transmission Utility (CTU) and the Standing Committee on Power System Planning (CEA, Ministry of Power), and subsequently approved in the 1st meeting of ERPTC. The works are required to facilitate evacuation through the following transmission corridors:



- 400 KV DCDS line from BTPP to Naubatpur (BGCL) – 123 km
- 220 KV DCDS lines from BTPP to Dumraon (BGCL), Karamnasa (New), and Dehri – over 280 km total
- 220 KV single Zebra line to Darbhanga (DMTCL) – 120 km

The proposed bays are critical for integrating the transmission lines into the state grid, ensuring redundant and geographically distributed evacuation paths, and meeting the N-2 reliability criteria at strategic substations such as Dehri and Karamnasa. They will also enhance voltage stability and improve power quality in key load centers including Patna, Dumraon, and Darbhanga. These works will facilitate the timely operationalization of the Buxar Thermal Power Plant, a high-priority generating station for Bihar, and significantly strengthen the state's evacuation capacity at both 400 KV and 220 KV voltage levels.

Accordingly, BSPTCL requests the Hon'ble Commission to treat these as capital investments and grant regulatory approval.

BSPTCL submits that the proposed integrated transmission system was approved by the Government of Bihar vide Approval Letter No. BSPTCL-02/2021-1021 dated 31.03.2021. The Detailed Project Report (DPR) and Technical Sanction Letter submitted at the time of approval and NIT for the project are enclosed as **Annexure-IV (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

5. The proposed capital investment under Sl. Nos. 6 pertains to the 2nd circuit stringing of 12 nos. of 132 KV transmission lines, along with the construction of 12 corresponding 132 KV line bays at the connecting Grid Sub-Stations (GSSs), under a new scheme approved for strengthening the state transmission network.

The scope of work includes:

- I. 2nd circuit stringing on 12 existing 132 KV transmission lines where towers were originally constructed as double-circuit
- II. Construction of 12 new 132 KV line bays at the corresponding GSSs to facilitate full operationalization of the second circuit

This initiative is essential to address operational and reliability challenges arising from the current network configuration, where several substations connected to these lines are supplied through only a single-circuit source. The absence of redundancy in such cases poses a risk to uninterrupted power supply, particularly during maintenance shutdowns or unforeseen breakdowns.

The proposed scheme offers the following technical and strategic benefits:

- Enhances grid reliability by providing an alternate power path during contingencies, thus ensuring uninterrupted supply to critical load centres.
- Leverages existing double circuit tower infrastructure, making 2nd circuit stringing technically feasible and economically efficient.
- Facilitates load balancing and voltage stability across connected substations, supporting BSPTCL's objective of ensuring quality and resilient power delivery.
- Increases the effective transmission capacity in the short term without the need for constructing new corridors, thereby optimizing cost and right-of-way (ROW) usage.

BSPTCL submits that this scheme was approved by the Government of Bihar vide Approval Letter No. BSPTCL-02/2023-2993 dated 16.08.2024. The Detailed Project Report (DPR) and the Technical Sanction Letter submitted at the time of approval and NIT are enclosed as **Annexure-X (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

6. The proposed capital investment under Sl. No. 7 in the table above pertains:
- I. Construction of (2x160MVA + 3x50 MVA), 220/132/33 KV GSS, Tajpur (Dist.-Samastipur) with SAS and Residential Quarters
 - II. Construction of (2x160MVA + 3x50 MVA), 220/132/33 KV GSS, Thakurganj (Dist.-Kishanganj) with SAS

The proposed GSSs and associated transmission infrastructure are required to:

- GIS GSS at Tajpur (Samastipur): Will serve as a major grid node in northern Bihar, addressing long-standing voltage issues and frequent outages. It will enable reliable bulk power transfer and improve network stability.
- GIS GSS at Thakurganj (Kishanganj): Will address chronic reliability concerns in border districts, especially in areas currently dependent on long radial 33 KV feeders. The substation will reduce power interruptions and enhance inter-district connectivity.

These interventions are essential for meeting current and projected load requirements, reducing technical losses, and enhancing the reliability of power supply. The inclusion of SAS infrastructure supports long-term operational efficiency and ease of maintenance.

Accordingly, BSPTCL requests the Hon'ble Commission to treat these as capital investments and grant regulatory approval.

BSPTCL submits that the proposed integrated transmission system was approved by the Government of Bihar vide Approval Letter No. Letter No. BSPTCL-03/2018-2028

dated 24.07.2018. The Detailed Project Report (DPR) and Technical Sanction Letter submitted at the time of approval along with the NIT for the projects are enclosed as **Annexure-II (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

7. The proposed capital investment under Sl. Nos. 8 pertains to the construction of a 132/33 KV, 2×50 MVA Grid Sub-Station at Bagha in West Champaran district under the Backward Region Grant Fund (BRGF) – State Component, to address the persistent power quality and reliability issues in the region.

This area is presently dependent on a single long 33 KV supply from Ramnagar, leading to voltage drops, high technical losses, and no alternate power source during outages. The proposed GSS will:

- Off-load Ramnagar GSS
- Improve voltage regulation and system reliability
- Enable redundant 132 KV supply paths in this flood-prone zone
- Support future 33/11 KV PSSs and load growth

The project was included as part of a proposal submitted by the Government of Bihar to NITI Aayog, and was recommended for funding from the unallocated ₹491.37 Cr under the Special Plan for Bihar (12th Five-Year Plan). NITI Aayog and the Department of Expenditure have recommended release of ₹489.93 Cr, which includes this GSS.

Accordingly, BSPTCL requests the Hon'ble Commission to treat this as a capital investment and grant regulatory approval.

The project was sanctioned under the BRGF scheme vide Approval Letter No. dated 20.01.2022 enclosed as **Annexure-XI (Main Petition may be referred)** for the Commission's reference.

8. The proposed capital investment under Sl. Nos. 9 pertains to the construction of a new 132/33 KV, 2×80 MVA Grid Sub-Station along with associated transmission infrastructure at Maithi in Muzaffarpur district. This project is essential to cater to the exponentially growing peak demand and to ensure reliable and stable power distribution in the area between Muzaffarpur and Darbhanga districts, particularly along the NH-57 corridor. The proposed GSS at Maithi is strategically planned to:

- Off-load the heavily burdened SKMCH and Musahari GSSs
- Improve voltage regulation and reduce technical losses in the rapidly urbanizing region

- Enhance power supply reliability to residential, commercial, and institutional consumers
- Serve as a key transformation node along the Muzaffarpur–Darbhanga axis, supporting future 33/11 KV PSSs

Given the criticality of this region to the state's load center and the absence of intermediate 132/33 KV transformation points, the proposed GSS will provide redundancy, operational flexibility, and long-term capacity to the transmission system.

Accordingly, BSPTCL requests the Hon'ble Commission to treat this proposal as a capital investment and grant regulatory approval.

The Detailed Project Report (DPR) and the Technical Sanction Letter submitted at the time of approval are enclosed as **Annexure-XII (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

9. The proposed capital investment under Sl. Nos. 10 pertains to the construction of a new 132/33 KV Grid Sub-Station (GSS) along with associated transmission infrastructure at Roh, located in Pakribarwan block of Nawada district, to address the growing peak load demand and improve the quality and reliability of power supply in the region.

At present, the area is served through long and overloaded 33 KV lines connected to Nawada and Warisaliganj GSSs, which has led to significant voltage drops, technical losses, and limited supply reliability. The proposed GSS at Roh will:

- Off-load Nawada and Warisaliganj GSSs
- Shorten the feeder length, thereby reducing technical losses and improving power quality
- Serve as a new nodal source for several existing 33 KV PSSs at Roh, Kawakol, Kadirganj, Kachna, and Govindpur
- Support upcoming PSSs at Pali, Phuldih, and Kuchila, as planned by DISCOM

The establishment of this GSS will significantly enhance the efficiency and resilience of the sub-transmission network in Nawada district, ensuring stable voltage and reliable supply in both rural and semi-urban areas.

Accordingly, BSPTCL requests the Hon'ble Commission to treat this proposal as a capital investment and grant regulatory approval.

BSPTCL submits that the project was approved by the Government of Bihar vide

Letter No. BSPTCL-11/2024-947 dated 28.02.2025. The Detailed Project Report (DPR) and the Technical Sanction Letter submitted at the time of approval are enclosed as **Annexure-XIII (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

10. The proposed capital investment under Sl. Nos. 11 pertains to the construction of a new 132/33 KV, 2×50 MVA Grid Sub-Station along with associated transmission infrastructure at Mahua, located in Vaishali district, to cater to the growing power demand and address voltage reliability issues in the region. Currently, several existing and upcoming 33 KV PSSs in and around Mahua—including Piroi, Chehrakala, Dabhaich, Patepur, Maudachtur, and Rajapakar—are being fed through very long 33 KV feeders, resulting in:

- Significant technical losses
- Frequent voltage drops and supply disruptions
- Operational constraints during peak load hours

The proposed GSS at Mahua will:

- Reduce the average 33 KV feeder length by up to 30–40 km
- Improve voltage stability and power reliability
- Reduce technical losses, thereby improving system efficiency
- Enable the integration and reliable supply to upcoming PSSs at Mirjanagr, Chhattwara, and Baligaon

The substation will serve as a critical supply node supporting both existing and planned infrastructure, ensuring that the increasing demand in the Vaishali district is met in a sustainable and reliable manner.

Accordingly, BSPTCL requests the Hon'ble Commission to treat this proposal as a capital investment and grant regulatory approval.

BSPTCL submits that the project has been approved by the Government of Bihar vide Approval Letter No. BSPTCL-10/2024-952 dated 28.02.2025. The Detailed Project Report (DPR) and the Technical Sanction Letter submitted at the time of approval are enclosed as **Annexure-XIV (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

11. The proposed capital investment under Sl. Nos. 12 pertains to the construction of 132/33 KV, 2×50 MVA Grid Sub-Station along with associated transmission infrastructure at Halsi in Lakhisarai district to address the growing electricity demand and ensure reliable power distribution across the region. Presently, several 33 KV PSSs—Lahuara, Kaindi, Aure, Siyani, Chewara, Sikandra, and Aliganj—are

connected through long 33 KV feeders from Lakhisarai GSS, resulting in significant voltage drops, high technical losses, and reduced operational reliability during peak hours.

The proposed GSS at Halsi will:

- Off-load the existing Lakhisarai GSS
- Improve voltage stability and power quality
- Reduce feeder lengths, thereby minimizing losses and enhancing system efficiency
- Provide reliable supply to upcoming PSSs at Tarhari and Kumar, as planned by the DISCOM

This investment will play a key role in strengthening the transmission network and supporting sustained load growth in the Lakhisarai district.

Accordingly, BSPTCL requests the Hon'ble Commission to treat this proposal as a capital investment and grant regulatory approval.

BSPTCL submits that the proposed GSS Halsi was approved by the Government of Bihar vide Approval Letter No. BSPTCL-10/2024-953 dated 28.02.2025. The Detailed Project Report (DPR) and the Technical Sanction Letter submitted at the time of approval and NIT are enclosed as **Annexure-XV (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

12. The proposed capital investment under Sl. No. 13 in the table is the construction of a new 132/33 KV Grid Sub-Stations, each with a transformation capacity of 2×50 MVA, at the following location:

I. Barari (District – Bhagalpur)

This substation is essential to address the growing electricity demand, network constraints, and voltage regulation issues in their respective regions. The proposed GSSs will enable:

- Decongestion of overloaded substations, thereby reducing technical losses and improving operational reliability.
- Facilitation of downstream network expansion, including integration of 33/11 KV PSSs

Accordingly, BSPTCL requests the Hon'ble Commission to treat this as capital investment and grant regulatory approval.



BSPTCL submits that the proposed GSS Barari was approved by the Government of Bihar vide Approval Letter No. BSPTCL-02/2020-2319 dated 07.07.2022. The Detailed Project Report (DPR) and NIT for the project are enclosed as **Annexure-V (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

13. The proposed capital investment under Sl. Nos. 14 pertains to the establish a new 220/132/33 KV Grid Substation (GSS) at Korha, Katihar, a strategically significant location in the north-eastern part of Bihar. This region currently faces persistent reliability and voltage stability issues due to its dependence on long 132 KV radial feeders from distant substations. Such a network configuration results in higher technical losses, voltage fluctuations, and frequent supply interruptions—particularly during peak load periods and agricultural demand seasons.

The Korha GSS will act as a major nodal point in the transmission network for the Katihar district and adjoining areas, providing the following key benefits:

- **Voltage Profile Improvement:** Direct feeding at the 220 KV level will significantly improve voltage regulation and reduce system losses by shortening power transmission distances.
- **Load Growth Readiness:** With industrial, commercial, and agricultural demand increasing rapidly in the Katihar region, the proposed substation will ensure adequate capacity to meet the projected load for the next 15–20 years.
- **Reliability & Redundancy:** Integration at 220 KV level will reduce dependency on single-source radial feeders and create multiple feeding options, enhancing grid resilience.
- **Support for Rural Electrification & Economic Development:** Strengthened transmission capacity will facilitate uninterrupted power supply to both rural and urban consumers, boosting economic activity and quality of life.
- **System Integration & Future Upgrades:** The Korha GSS will improve interconnection between neighboring districts and serve as a critical link for future transmission expansions in North Bihar.

Given these considerations, the proposed capital expenditure is not only justified but necessary to ensure reliable, efficient, and future-ready power supply to the region.

The GoB Approval Letter No. BSPTCL-07/2017-514 dated 21/02/2019 is attached in **Annexure-XVI (Main Petition may be referred)** for the reference of the Hon'ble Commission.

14. The proposed capital investment under Sl. Nos. 15 ensures uninterrupted power supply and enhance the operational reliability of the transmission system, BSPTCL proposes the establishment of second source connectivity for the following 06 Grid

Sub-Stations (GSSs), which currently operate with a single source of power:

- I. 132/33 KV GSS Bakhri
- II. 132/33 KV GSS Sherghati
- III. 132/33 KV GSS Piro
- IV. 132/33 KV GSS Sheohar
- V. 132/33 KV GSS Barsoi
- VI. 132/33 KV GSS Ramnagar

The lack of an alternate source at these substations poses significant risks of power outages during breakdowns or maintenance, severely affecting supply reliability and consumer services. To address this critical gap and strengthen the transmission network, BSPTCL proposes the construction of 19 nos. of 132 KV line bays and 02 nos. of 132 KV GIS bays in the associated GSSs to establish second source connectivity. This investment will significantly improve system redundancy, support continuous power flow during contingencies, and bolster the quality of power supply across the region.

Accordingly, BSPTCL humbly requests the Hon'ble Commission to treat this as a capital investment and grant regulatory approval.

The Detailed Project Report (DPR) and the Technical Sanction Letter are enclosed as **Annexure-XVII (Main Petition may be referred)**, and the scheme has been duly approved by the Government of Bihar vide Letter No. BSPTCL-04/2024-634 dated 07.02.2025.

15. The proposed capital investment under Sl. Nos. 16 pertains to the construction of 2x80 MVA, 132/33 KV GSS at Senuwariya (Amwaman), District – West Champaran. In order to address the persistent issues of poor power quality, significant voltage drops, and low voltage in the areas of Madhopur, Harsidhi, Nanosati, Sagauli, and Dhokaraha in West Champaran district, BSPTCL proposes the construction of a new 2x80 MVA, 132/33 KV Grid Sub-Station at Senuwariya (Amwaman). These areas are presently being fed from the existing GSS at Motihari/Bettiah/Raxaul (New) through an extended 33 KV line, which is resulting in high technical losses and reduced operational reliability, especially during peak load conditions.

The proposed sub-station will help reduce the feeder length of existing 33 KV lines and bring the source of power closer to the load centers, thereby improving the quality and reliability of power supply in the region. It will also enhance system stability and support the expected growth in demand from the surrounding PSSs.

The scope of the proposed capital work includes:

- I. Construction of 2x80 MVA, 132/33 KV GSS at Senuwariya (Amwaman)
- II. Construction of 02 nos. of 132 KV line bays at 220/132/33 KV GSS Raxaul (New)
- III. Construction of 132 KV D/C Raxaul (New) – Senuwariya (Amwaman) transmission line using ACSR Panther conductor (Line length: 15 RKM)
- IV. Construction of LILO of 132 KV Motihari – Bettiah S/C transmission line at GSS Senuwariya (Amwaman) with ACSR Panther conductor (Line length: 01 RKM)

Accordingly, BSPTCL requests the Hon'ble Commission to treat this as a capital investment and grant regulatory approval. The Detailed Project Report (DPR) and Technical Sanction Letter are enclosed as **Annexure-XVIII (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

16. The proposed capital investment under Sl. Nos. 17 pertains to the construction of New 220/132/33 KV GSS at Darbhanga with Associated Transmission Infrastructure. In light of the establishment of AIIMS at Bahadurpur (Darbhanga), and considering the urgent requirement for reliable and uninterrupted power supply to support sophisticated medical equipment, BSPTCL proposes the construction of a new 220/132/33 KV Grid Substation at Darbhanga. This facility will ensure dedicated and quality power supply of 20 MVA from two alternate sources to AIIMS and also strengthen the regional transmission system.

At present, eight 132/33 KV GSSs are dependent on the 220/132 KV Darbhanga (New) Grid, resulting in overloading of ICTs and increased vulnerability to outages. During any fault or maintenance on the source grid or interlinking transmission lines (e.g., between Darbhanga, Gangwara, Pandaul, or Madhubani), the system experiences acute power shortages, frequently leading to load shedding and poor voltage conditions. Even under normal operations, the transfer bus of Darbhanga (New) is routinely engaged, highlighting its overburdened state.

To mitigate these risks, ensure system redundancy, and cater to the growing medical and residential load, it is imperative to construct a new 220/132/33 KV GSS at Darbhanga. This substation will:

- Serve as a stable and alternate power source to AIIMS
- Act as a relieving node for Darbhanga (New), enhancing reliability
- Improve voltage profile and reduce instances of load shedding
- Strengthen the regional grid by interlinking with other major substations

Accordingly, BSPTCL seeks regulatory approval for the proposed capital investment under the relevant investment regulations of the Hon'ble Commission.

The Detailed Project Report (DPR) and Technical Sanction Letter are enclosed as **Annexure-XIX (Main Petition may be referred)** for reference.

17. The proposed capital investment under Sl. Nos. 18 and 19 involve establishing new 132/33 KV Grid Substations at Bhawanipur and Akhgaon. These areas are presently dependent on long 33 KV radial feeders from distant substations, resulting in poor voltage regulation, high technical losses, and inadequate reliability, especially during peak demand.

The new substations will directly address these issues by:

- Improving voltage profile and ensuring compliance with statutory voltage limits.
- Reducing technical losses through shorter supply routes and upgraded equipment.
- Enhancing reliability by providing additional redundancy in the network.
- Meeting projected load growth in line with the state's future demand trajectory.

This proposal is aligned with the long-term vision for Bihar's transmission network and forms part of the 2034–35 transmission resource adequacy plan. The schemes were discussed in the Minutes of the CEA Meeting on Bihar's 2034–35 transmission requirements held on 18.10.2024 and annexed in **Annexure-XXII (Main Petition may be referred)** for reference of the Hon'ble Commission.

18. The proposed capital investment under Sl. No. 20 pertains to the Construction of a New 2x80 MVA, 132/33 KV GSS at Warisnagar, Samastipur along with Associated Transmission Works. To address the rising power demand and operational constraints in Warisnagar Subdivision and surrounding areas, BSPTCL has proposed this Grid Substation, which will involve the LILO of the existing 132 KV Darbhanga–Samastipur (Old) S/C Transmission Line at Warisnagar using HTLS conductor (Line Length – 18 RKM).

The existing power supply to the region is dependent on a long 33 KV radial network from distant substations at Samastipur, Rosera, Dalsingsarai, and Shahpur Patori. This results in poor voltage regulation, high technical losses, and unreliable supply, especially in areas such as Khanpur, Kalyanpur, Madhurapur, Hayaghat, and Hathaudi. Eight PSSs (existing and upcoming) with a total load exceeding 50 MW are currently affected.

The proposed GSS at Warisnagar will significantly improve voltage profile, reduce technical losses, and ensure reliable and quality power to consumers by shortening the supply route and eliminating over-dependence on distant feeders.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB Approval Letter No. BSPTCL-04/2025-638



dated 07/02/2025, DPR and Technical Sanction Letter submitted to BERC are attached as part of **Annexure-XX (Main Petition may be referred)** for reference.

19. The proposed capital investment under Sl. Nos. 21 involve establishing a 220/33 KV Grid Substation at Bairiya, Patna. This project is essential to provide reliable power supply to the proposed Primary Sub-Stations (PSS) at Nandlal Chhapra, Bhogipur/Sahpur, Simra, and to strengthen supply to the existing PSSs in the region.

The need for this project arises from the rapid development in the surrounding areas, including the construction of the new Inter-State Bus Terminal (ISBT) and the Patna Metro, which are expected to significantly increase electricity demand. The Bairiya GSS will play a critical role in meeting this rising load requirement and ensuring uninterrupted power supply to consumers in the vicinity.

From a technical perspective, the location is intersected by the 220 KV Gaurichak-Jakanpur (BGCL) and Gaurichak-Fatuha transmission lines, making it feasible to adopt a 220/33 KV, 3×100 MVA configuration. Utilizing 220 KV voltage level for power transmission will also minimize technical losses compared to 132 KV, thereby improving efficiency and system reliability.

Accordingly, BSPTCL seeks regulatory approval for this capital investment. This project was discussed and agreed upon in the 11th Meeting of the State Level Standing Committee held on 12.07.2024, details of which are attached in **Annexure-XXIII (Main Petition may be referred)** for reference of the Hon'ble Commission.

20. The proposed capital investment under Sl. No. 22 relates to the construction of a 2×80 MVA, 132/33 kV Grid Sub-Station at Amarpur (District: Banka) along with associated transmission works. This project is essential for strengthening the intra-state transmission system, meeting the growing demand in Amarpur and nearby areas, and ensuring reliable evacuation and distribution of power.

The scheme will also support existing 33 kV PSSs in Amarpur, Phullidumar, Laxmipur Chiraiya, Shakhkund, Shambhuganj, and Rajoun, as well as upcoming PSSs in Englishmore and Bhitiya as planned by the DISCOM. Further, the 132 kV DCDS LILO line of Banka (PG)-Sultanganj Transmission Line at the proposed GSS Amarpur will serve as the primary source.

The GoB Approval Letter No. BSPTCL-06/2025-956 dated 28/02/2025, DPR, technical sanction letter and technical report are enclosed as **Annexure-XXV (Main Petition may be referred)** for the kind reference of the Hon'ble Commission.

21. The proposed capital investment under Sl. No. 23 pertains to the Supply, Erection, Testing, and Commissioning of 05 Nos. of 80 MVA and 10 Nos. of 50 MVA Power

Transformers, along with associated works across 15 critical Grid Substations (GSSs) under BSPTCL.

To address the rapidly rising peak load and ensure stable power supply across high-demand zones in Bihar, repeated requests have been received from NBPDC, SBPDCL, and BSPTCL's internal departments (P&E and O&M wings) for transformer augmentation and replacement. The proposed intervention aims to:

- I. Replace existing 50 MVA transformers with 80 MVA transformers at highly loaded substations like Hajipur, Purnea, Dumraon, Siwan, Muzaffarpur, and Bodhgaya.
- II. Replace overloaded 20 MVA transformers with 50 MVA units at key substations such as Goh, Simri Bakhtiyarpur, Tarapur, Tehta, Shahpurpatori, Manjhaul, Ramnagar, Banka Old, and Chakiya.
- III. Replace a 20 MVA transformer with 80 MVA at Chakiya, based on anticipated peak load growth and performance limitations.

The peak demand at these GSSs has either already surpassed or is on the verge of exceeding the available capacity, leading to overloading and increased risk of transformer failure. The replacement of undersized transformers with higher capacity units is essential to:

- Prevent grid instability and forced outages.
- Reduce technical losses and maintain voltage levels.
- Ensure reliable, uninterrupted power to consumers and support future expansion.

This augmentation is a prudent investment aligned with the state's energy roadmap and will significantly improve operational flexibility and consumer satisfaction.

In view of the above, the Hon'ble Commission is kindly requested to approve the proposed capital expenditure. The DPR and Technical Sanction Letter are enclosed as part of **Annexure-XXIV (Main Petition may be referred)** for kind reference.

22. The proposed capital investment under Sl. No. 24 relates to the construction of the 220/132/33 kV Grid Sub-Station at Begusarai, with the associated transmission works. This project is critical for strengthening the intra-state transmission system, addressing the growing demand in Begusarai and adjoining districts, and ensuring reliable evacuation and distribution of power. It will also improve voltage stability, alleviate network congestion, and minimize transmission losses in the region.

It may be noted that vide GoB approval (Letter No. 70/BSPTCL-03/2018 dated 24.07.2018), construction of new 220/132/33 kV Grid Substations at Patna, Gaya,



Jehanabad, Arwal, Nalanda, Nawada, Aurangabad, Sheikhpura, Masaurhi, Areraj, Islampur and Fatwah has already been sanctioned for system strengthening. In parity with these sanctioned substations, the establishment of a new substation at Begusarai is equally critical.

Begusarai, being an important industrial hub around Barauni, requires dedicated transmission infrastructure to ensure redundancy and meet projected industrial and urban demand. The Detailed Project Report (DPR) for this scheme is under active preparation and shall be furnished as soon as finalized. It is therefore respectfully submitted that, considering the precedents and the urgent requirement for equitable infrastructure development, the new 220/132/33 kV Grid Sub-Station at Begusarai may kindly be accorded approval as part of BSPTCL's ongoing transmission system strengthening program. The Hon'ble Commission's approval will facilitate timely execution of this work, which is vital for system security and reliable consumer supply.

Accordingly, BSPTCL seeks regulatory approval for this capital investment. It may also be noted that in its reply dated 02.01.2025 to the queries raised by the Hon'ble BERC, BSPTCL had already intimated about this project, and the same is enclosed herewith as **Annexure-XXI (Main Petition may be referred)** for kind reference.



2.3 Details of Additional Projects Proposed for Capitalization During FY 2025-26 to FY 2027-28:

List of additional projects Proposed for Capitalization During FY 2025-26 to FY 2027-28 are as follows:



Sl. No.	NIT No.	Plan	Name of Element (Transmission line, Substation, Bay Extension, etc.)	Awarded through ICB/DCB/Department /Deposit Work	Original/ Awarded Cost of Project	Mode of Finance	Capitalization in FY 2025-26	Capitalization in FY 2026-27	Capitalization in FY 2027-28
1	42/PR/B SPTCL/2 023	State Plan	Construction of newly proposed 2x80 MVA, 132/33Kv GSS Majorganj (Block- Sitamarhi) with construction of LILO of 132 Kv Sitamarhi-Dhaka Single Circuit Transmission Line (Line length-26RKM) at proposed GSS Majorganj with ACSR Panther conductor and construction of 132kv DCDS Sheohar-Majorganj Transmission line (Line Length-28 RKM) with ACSR Panther conductor along with 02 no. line bays at GSS Sheohar.	DCB	148.95 Cr	State Plan	60 Cr	88.95 Cr	
2	23/PR/B SPTCL/2 025	State Plan	Construction of 2x20 MVA, 132/33 KV GSS Barahiya (Dist.-Lakhisarai) along with construction of DCDS LILO T/L from GSS Barahiya to existing 132 KV S/C Hathidah-Lakhisarai T/L with ACSR Panther conductor (RL 4.5 KM)	DCB	54.42Cr.	State Plan	30Cr.	24.42Cr	
3	45/PR/B SPTCL/2 025	IRF	Reconductoring of 05 Nos. 132 KV T/L with HTLS equivalent to Panther conductor 1. 132 KV S/C Chhapra-Ekma-Raghunathpur line 2. 132 KV S/C Dehri-Kochas Pusauli line 3. 132 KV S/C Bettiah-Narkatiyaganj line 4. 132 KV Purnea-Dhamdaha line 5. 132 KV D/C Darbhanga-Madhubani T/L	DCB	256.66 Cr.	IRF	190 Cr.	66.66 Cr.	



Sl. No.	NIT No.	Plan	Name of Element (Transmission line, Substation, Bay Extension, etc.)	Awarded through ICB/DCB/Deposit Work	Original/ Awarded Cost of Project	Mode of Finance	Capitalization in FY 2025-26	Capitalization in FY 2026-27	Capitalization in FY 2027-28
4	55/PR/B SPTCL/2025	State Plan	1. Construction of LILO DCDS Trans. Line of both ckt of 132 kV Banka PG – Sultanganj Trans. Line to Proposed 132/33kV GSS Amarpur (2×10 RKM) 2. Re-conductoring of 132kV Banka PG – Sultanganj (BSPTCL) DCDS trans. line with HTLS conductor equivalent of Panther (46.5 RKM) 3. Re-conductoring of S/C 132kV Kahalgaon (NTPC) – Sabour (BSPTCL) trans. line with HTLS conductor equivalent of Panther (34 CKM)	DCB	138.74Cr	State Plan	100Cr.	38.74Cr.	
5	39/PR/B SPTCL/2024	Deposit Head	Construction of 132 KV DCSS transmission line from GSS Warisaliganj to M/s Ambuja Concrete North Pvt. Ltd (ACNPL) (5 RKM), Warisaliganj and its associated one no. 132 KV line bay at 132/33 KV GSS Warisaliganj on turnkey basis under deposit head against NIT No. 39/PR/BSPTCL/2024	DCB	9.75 Cr.	Deposit Head	9.75Cr		
6	23/PR/B SPTCL/2024	Special assistance to state for capital investment	Construction of LILO of both Circuits of 132 kV D/C Haveli Kharagpur–Lakhisarai Transmission Line from location No. 207 to 185 MW Kajra Solar Plant (RL ≈ 4.5 KM) on turnkey basis under Special Assistance to States for Capital Investment for FY 2024-25 against NIT Number: 23/PR/BSPTCL/2024	DCB	10.55Cr.	Special assistance to state for capital investment	6Cr.	4.55Cr.	



Sl. No.	NIT No.	Plan	Name of Element (Transmission line, Substation, Bay Extension, etc.)	Awarded through ICB/DCB/Department /Deposit Work	Original/ Awarded Cost of Project	Mode of Finance	Capitalization in FY 2025-26	Capitalization in FY 2026-27	Capitalization in FY 2027-28
7	38/Pr/B SPTCL/2 0323	State Plan	1.Construction of LILO of both ckt. of 132 kV D/C Transmission Line from PGCL Lakhisarai – BGCL Hawali at Kharagpur 2. Construction of 02 nos of 220 KV GIS Bays at 220/132/33 kV Haveli Kharagpur (BGCL) on turnkey basis 3. Construction of 02 nos of 220 KV GIS Bays at 220/132/33 kV Goradih (BGCL) on turnkey basis	DCB	144.98Cr.	State Plan	130Cr.	14.98Cr.	
8	50/PR/B SPTCL/2 025	IRF	Dismantling, Shifting, erection, testing & commissioning of panels from old control room to new control room including supply & installation of Bus bar protection system at 220/132/33 KV GSS Bhusrah with new cable trench in switchyard area against NIT No. 50/PR/BSPTCL/2023	DCB	21.91Cr	IRF			
9	37/PR/B SPTCL/2 023	State Plan	Construction of (2x200 MVA + 2x80 MVA), 220/132/33 KV Grid Sub-Station at GSS Mairwa (Dist:-Siwan) along with construction of 02 Nos. 132 KV line bay extension work each at 132/33 KV GSS Raghunathpur & 132/33 KV GSS Bhorey	DCB	179.37 Cr	State Plan	70 Cr	109.37 Cr	
10	38/PR/B SPTCL/2 023	State Plan	Construction of 132/33 KV (2x80 MVA) , Grid Sub-Station Chausa (District-Madhepura) along with Construction of 132 KV D/C Chausa-Udakishunganj Transmission Line with ACSR Panther Conductor (Line Length - 20 RKM) , Construction of 132 KV D/C Chausa- Bhawanipur Transmission Line with ACSR Panther Conductor (Line Length - 20 RKM), Construction of 02 nos.	DCB	125.22 Cr	State Plan	50 Cr	75.22 Cr	



Sl. No.	NIT No.	Plan	Name of Element (Transmission line, Substation, Bay Extension, etc.)	Awarded through ICB/DCB/Department /Deposit Work	Original/ Awarded Cost of Project	Mode of Finance	Capitalization in FY 2025-26	Capitalization in FY 2026-27	Capitalization in FY 2027-28
			of 132 KV Line bay at Upcoming 132/33 KV GSS Bhawanipur (District- Purnea) & Construction of 02 nos. of 132 KV Line bay at 132/33 KV GSS Udakishunganj (District-Madhepura)						
11	03/PR/B SPTCL/2 024	IRF	Construction of IB Guest House at 132/33 KV GSS, Forbesganj	Department	0.45 Cr	IRF	0.45 Cr		
12	04/PR/B SPTCL/2 023	IRF	Construction of Control Room Building at 220/132/33 KV GSS Biharsharif.	Department	4.47 Cr	IRF	4.47 Cr		
13	02/PR/B SPTCL/2 023/01	IRF	Construction of Transmission Office (G+2) Building at GSS, Chhapra.	Department	5.45 Cr	IRF	5.45 Cr		
14	02/PR/B SPTCL/2 023/02	IRF	Construction of Transmission office (G+2) building at GSS Madhepura.	Department	5.54 Cr	IRF	5.54 Cr		
15	34/PR/B SPTCL/2 024/02	State Plan	Construction of boundary wall, earth filling and road with culvert in acquired land (for bay extension) at 132/33 KV GSS Phulparas.	Department	1.13 Cr	State Plan	0.25 Cr	0.88 Cr	
16	05/PR/B SPTCL/2 024	IRF	Construction of IB building (G+1) at Purnea	Department	1.88 Cr	IRF	1.88 Cr		
17	36/PR/B SPTCL/2 022	State Plan	Construction of Back-up SLDC building (G+2) at Gaya.	Department	4.86 Cr	State Plan	4.86 Cr		
18	39/PR/B SPTCL/2 025	IRF	Supply, Erection, Testing & Commissioning of 24-Core Armoured Underground Optical Fiber for Main SLDC, BREDA Bhawan, Patna & Back-up	Department (NOA to be issued)	3.50 Cr	IRF	2.75 Cr	0.75 Cr	



Sl. No.	NIT No.	Plan	Name of Element (Transmission line, Substation, Bay Extension, etc.)	Awarded through ICB/DCB/Department /Deposit Work	Original/ Awarded Cost of Project	Mode of Finance	Capitalization in FY 2025-26	Capitalization in FY 2026-27	Capitalization in FY 2027-28
			SLDC, Gaya along-with Associated Communication Equipment for ULDC PhaseIII SCADA/EMS Up-gradation Project						
19	25/PR/B SPTCL/2 025	SDMF	Design, manufacture, assembly, testing, supply & delivery of 318 sets of combo unit of 9 litre of water mist and compressed air foam fire extinguisher with self-contained breathing apparatus under SDMF scheme	Department	23.80 Cr	SDMF/IRF	23.80 Cr		
20	24/PR/B SPTCL/2 025	SDMF	Design, manufacture, testing, supply & delivery of 01 complete set of Aluminium based re-usable ERS under SDMF scheme	Department	14.83 Cr	SDMF/IRF	14.83 Cr		
21	27/PR/B SPTCL/2 025	SDMF	Supply, Erection, Testing & Commissioning of Modern fire detection system: 134 sets [01 set per 132KV GSS (134 nos.)] of Smoke and heat detection system with all accessories and fittings along with installation of 795 nos. [05 nos. per GSS (159 nos.)] of Fire Extinguisher Ball under SDMF scheme	Department	3.73 Cr	SDMF/IRF	2.96 Cr	0.77 Cr	
22		State Plan	Construction of associated transmission line for GSS Mairwa: (i) Construction of LILO of 220 KV D/C Chapra (New) -Gopalganj Tr. Line at GSS Mairwa Transmission line with ACSR Zebra Conductor. (Line Length-50x2=100 RKM) (ii) Construction of 132 KV DCDS Transmission line from 132/33 KV GSS Raghunathpur to 220/132/33 KV AIS Substation at GSS Mairwa with ACSR Panther Conductor (Line Length-50RKM)	Department	268.27 Cr	State Plan		160 Cr	108 Cr



Sl. No.	NIT No.	Plan	Name of Element (Transmission line, Substation, Bay Extension, etc.)	Awarded through ICB/DCB/Department /Deposit Work	Original/ Awarded Cost of Project	Mode of Finance	Capitalization in FY 2025-26	Capitalization in FY 2026-27	Capitalization in FY 2027-28
			(iii) Construction of 132 KV DCDS Transmission line from 132/33 KV GSS Bhorey to 220/132/33 KV AIS Sub-station at GSS Mairwa with ACSR Panther conductor (Line Length-55 RKM)						

1. The proposed capital investment under Sl. No. 1 pertains to the construction of a newly proposed 2×80 MVA, 132/33 kV Grid Sub-Station (GSS) at Majorganj (Block-Majorganj, District-Sitamarhi), together with:
 - Construction of LILO of the 132 kV Sitamarhi–Dhaka Single-Circuit Transmission Line (line length ≈ 26 RKM) at the proposed GSS Majorganj with ACSR Panther conductor.
 - Construction of a 132 kV DCDS Sheohar–Majorganj Transmission Line (line length ≈ 28 RKM) with ACSR Panther conductor, including two line bays at GSS Sheohar.

The Sitamarhi region is witnessing sustained growth in electricity demand. The proposed substation will improve the quality and reliability of supply, reduce technical losses, and shorten the length of the existing 33 kV feeders—enhancing overall system efficiency. It will also help maintain stable voltage levels during peak demand and reduce the frequency of outages, thereby supporting the expected growth in the area.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-08/2025-955 dated 28.02.2025, DPR and the technical sanction letter, as submitted to BERC along with the NIT, are attached as part of **Annexure-XXVI (Main Petition may be referred)** for reference.

2. The proposed capital investment under Sl. No. 2 pertains to the construction of a 2×20 MVA, 132/33 kV GSS at Barahiya (District – Lakhisarai) along with construction of a DCDS LILO transmission line from GSS Barahiya to the existing 132 kV S/C Hathidah–Lakhisarai transmission line with ACSR Panther conductor (route length – 4.5 KM).

The new substation will shorten the length of existing 33 kV feeders supplying Barahiya, Pratapur, Birpur, Khutha, and the upcoming Ashok Dham PSS, thereby reducing technical losses and improving overall system efficiency. It will also ensure reliable power supply to these load centres, which together account for a maximum demand of around 25 MW. By providing an additional injection point and primary source through the LILO arrangement on the 132 kV S/C Lakhisarai–Hathidah line, the project will strengthen the network and maintain stable voltage levels as regional demand grows.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-08/2025-957 dated 28.02.2025, DPR as submitted to BERC along with the NIT, are attached as part of **Annexure- XXVII (Main Petition may be referred)** for reference.

3. The proposed capital investment under Sl. No. 3 pertains to the reconductoring of the following five 132 kV transmission lines with HTLS conductors equivalent to ACSR Panther:

- 132 kV S/C Chhapra–Ekma–Raghunathpur line
- 132 kV S/C Dehri–Kochas Pusauli line
- 132 kV S/C Bettiah–Narkatiyaganj line
- 132 kV Purnea–Dhamdaha line
- 132 kV D/C Darbhanga–Madhubani line

Bihar State Power Transmission Company Limited (BSPTCL) intends to implement 100% load availability across its entire transmission and sub-transmission system to meet the exponentially growing peak demand and ensure smooth distribution of electricity to various PSSs connected to these corridors. The existing conductors on these lines have reached their thermal limits. Reconductoring with high-temperature low-sag (HTLS) conductors of equivalent capacity to ACSR Panther will augment the capacity of these critical links, reduce technical losses, and provide the reliability needed for present and future load requirements.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-02/2024-2992 dated 16.08.2024, along with the DPR as submitted to BERC and the NIT, are attached as part of **Annexure-XXVIII (Main Petition may be referred)** for reference.

4. The proposed capital investment under Sl. No. 4 pertains to the following works:

- Construction of LILO DCDS transmission line of both circuits of the 132 kV Banka PG–Sultanganj transmission line to the proposed 132/33 kV GSS Amarpur (approximately 2×10 RKM).
- Reconductoring of the 132 kV Banka PG–Sultanganj (BSPTCL) DCDS transmission line with HTLS conductor equivalent to ACSR Panther (about 46.5 RKM).

- Reconductoring of the S/C 132 kV Kahalgaon (NTPC)–Sabour (BSPTCL) transmission line with HTLS conductor equivalent to ACSR Panther (about 34 CKM).

The new Amarpur GSS will shorten the length of existing 33 kV feeders serving Amarpur, Phullidumar, Laxmipur Chiraiya, Shahkund, Shambhuganj, Rajoun, Englishmore, and the upcoming Bhitia PSS. This will reduce technical losses, enhance supply reliability, and meet the growing regional demand of more than 70 MW across these load centres. The LILO arrangement on the Banka(PG)–Sultanganj line will serve as the primary source for the substation, while the reconductoring works will increase the thermal capacity of critical corridors without requiring new rights-of-way.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB Approval Letter No. BSPTCL-06/2025-956 dated 28/02/2025, DPR, as submitted to BERC along with the NIT, is attached as part of **Annexure-XXIX (Main Petition may be referred)** for reference.

5. The proposed capital investment under Sl. No. 5 pertains to the construction of a 132 kV DCSS transmission line from GSS Warisaliganj to M/s Ambuja Concrete North Pvt. Ltd. (ACNPL) (approximately 5 RKM) at Warisaliganj, along with the associated construction of one 132 kV line bay at the 132/33 kV GSS Warisaliganj, on a turnkey basis under the deposit head.

This dedicated line will provide a reliable high-voltage supply to the industrial consumer, facilitating stable operations and meeting the contracted demand without burdening the existing network.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB Approval Letter No. BSPTCL-04/2025-638 dated 07/02/2025, NIT is attached as part of **Annexure-XXX (Main Petition may be referred)** for reference.

6. The proposed capital investment under Sl. No. 6 pertains to the construction of a LILO of both circuits of the 132 kV D/C Haveli Kharagpur–Lakhisarai transmission line from location No. 207 to the 185 MW Kajra Solar Plant (route length $\approx$ 4.5 KM) on a turnkey basis under the “Special Assistance to States for Capital Investment” scheme for FY 2024-25.

This LILO connection is necessary to evacuate power from the upcoming 185 MW Kajra Solar Plant and integrate renewable generation into the state transmission

network, ensuring reliable injection of solar power and compliance with renewable purchase obligations.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-03/2024-2565 dated 24.07.2024, along with the NIT, is attached as part of **Annexure-XXXI (Main Petition may be referred)** for reference.

7. The proposed capital investment under Sl. No. 7 pertains to the following works:
- Construction of LILO of both circuits of the 132 kV D/C transmission line from PGCL Lakhisarai to BGCL Haveli Kharagpur.
 - Construction of two 220 kV GIS bays at the 220/132/33 kV Haveli Kharagpur (BGCL) substation on a turnkey basis.
 - Construction of two 220 kV GIS bays at the 220/132/33 kV Goradih (BGCL) substation on a turnkey basis.

These works are required to strengthen the regional transmission network, provide additional injection and evacuation points for power flow, and ensure reliable interconnection between PGCL and BGCL facilities while accommodating present and future load growth.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-12/2023-4730 dated 14.12.2023, along with the NIT, is attached as part of **Annexure-XXXII (Main Petition may be referred)** for reference.

8. The proposed capital investment under Sl. No. 8 pertains to dismantling, shifting, erection, testing, and commissioning of panels from the old control room to the new control room, including the supply and installation of a bus-bar protection system at the 220/132/33 kV GSS Bhusrah, together with the construction of a new cable trench in the switchyard area.

This work is necessary to modernize the substation's protection and control infrastructure, improve operational safety, and ensure reliable system performance in line with current standards.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The BoD letter dated 18.07.2025, along with the NIT, is attached as part of **Annexure-XXXIII (Main Petition may be referred)** for

reference.

9. The proposed capital investment under Sl. No. 9 and Sl. No. 22 pertains to the construction of a (2×200 MVA + 2×80 MVA), 220/132/33 kV Grid Sub-Station at GSS Mairwa (District – Siwan), with a transformation capacity of 2×200 MVA + 2×80 MVA, along with the construction of two 132 kV line-bay extensions, one each at the 132/33 kV GSS Raghunathpur and 132/33 kV GSS Bhorey.

Further, the project includes the construction of the associated transmission network for GSS Mairwa, comprising the following works:

- LILO of the 220 kV D/C Chapra (New)–Gopalganj Transmission Line at GSS Mairwa, using ACSR Zebra conductor (Line length: $50 \times 2 = 100$ RKM).
- Construction of a 132 kV DCDS Transmission Line from 132/33 kV GSS Raghunathpur to the 220/132/33 kV AIS Sub-Station at GSS Mairwa, using ACSR Panther conductor (Line length: 50 RKM).
- Construction of a 132 kV DCDS Transmission Line from 132/33 kV GSS Bhorey to the 220/132/33 kV AIS Sub-Station at GSS Mairwa, using ACSR Panther conductor (Line length: 55 RKM).

This new high-capacity substation and associated bay extensions are essential to meet the growing power demand in the Siwan region, enhance voltage stability, and provide adequate transmission capacity for reliable supply to surrounding districts.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-03/2025-637 dated 07.02.2025, together with the DPR and technical sanction letter as submitted to BERC and the NIT, is attached as part of **Annexure-XXXIV** for reference.

10. The proposed capital investment under Sl. No. 10 pertains to the:
- Construction of a 132/33 kV (2×80 MVA) Grid Sub-Station at Chausa (District – Madhepura), along with the following associated works:
 - Construction of a 132 kV D/C Chausa–Udakishunganj transmission line with ACSR Panther conductor (line length ≈ 20 RKM).
 - Construction of a 132 kV D/C Chausa–Bhawanipur transmission line with ACSR Panther conductor (line length ≈ 20 RKM).
 - Construction of two 132 kV line bays at the upcoming 132/33 kV GSS

Bhawanipur (District – Purnea).

- Construction of two 132 kV line bays at the 132/33 kV GSS Udakishunganj (District – Madhepura).

This project will create a new injection point in the Madhepura region, strengthen the local transmission network, reduce technical losses, and enhance reliability of supply to surrounding districts by providing alternate power-evacuation paths.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-05/2025-639 dated 07.02.2025, technical sanction letter and DPR, along with the NIT, is attached as part of **Annexure-XXXV (Main Petition may be referred)** for reference

11. The proposed capital investment under Sl. No. 11 pertains to the Construction of IB Guest House at 132/33 KV GSS, Forbesganj.

The 132/33 kV GSS, Forbesganj is located in a remote area along NH-57 and also functions as a neighboring OSS to GSS Araria, GSS Palasi, and GSS Raghopur. The facility will provide essential accommodation for visiting officials, who currently face significant hardship due to the lack of proper lodging in the region, thereby facilitating smoother inspection, monitoring and operational oversight of multiple substations.

The project is proposed to be funded with internal resources and administrative approval for floating the tender has been obtained.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The technical sanction letter, NIT and Work Order is attached as part of **Annexure-XXXVI (Main Petition may be referred)** for reference.

12. The proposed capital investment under Sl. No. 12 pertains to the Construction of Control Room Building (CRB) at 220/132/33 KV GSS Biharsharif under the PSDF scheme for renovation and upgradation of the protection and control system.

The existing CRB at Biharsharif is cramped and unable to accommodate the new panels being installed by GE T&D India Ltd. under the PSDF scheme. Further, new 220 kV transmission lines have been proposed with 220/132 kV GSS Biharsharif as one of the remote ends, thereby necessitating enhanced control and protection

facilities. Accordingly, a new CRB has been proposed.

The project is proposed to be funded with internal resources and administrative approval for floating the tender has been obtained.

It is further submitted that, based on the actual site requirements and detailed engineering carried out post award of work, there has been a quantum variation leading to a revision in the project cost. The supporting document in this regard is enclosed for the kind consideration of the Hon'ble Commission.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The technical sanction letter, NIT, work order and other supporting documents is attached as part of **Annexure-XXXVII (Main Petition may be referred)** for reference.

13. The proposed capital investment under Sl. No. 13 & 14 pertains to the Construction of Transmission Office (G+2) Building at GSS, Chhapra and Construction of Transmission office (G+2) building at GSS Madhepura, respectively.

Following the establishment of new offices for the Transmission Circle, Transmission Civil Circle, Transmission Division and Transmission Civil Division, the officers and staff have been deputed accordingly. At present, these offices are being operated out of residential quarters, which are constrained in space and not suitable for housing multiple offices. This lack of proper infrastructure hampers smooth functioning and efficient execution of day-to-day official work.

Accordingly, the construction of a dedicated Transmission Office (G+2) building is essential to provide adequate and consolidated office space for the newly created transmission establishments.

The project is proposed to be funded with internal resources and administrative approval for floating the tender has been obtained.

It is further submitted that, based on the actual site requirements and detailed engineering carried out post award of work, there has been a quantum variation leading to a revision in the project cost. The supporting document in this regard is enclosed for the kind consideration of the Hon'ble Commission.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The technical sanction letter, NIT, work order and other supporting documents, is attached as part of **Annexure-XXXVIII (Main**

Petition may be referred) for reference.

14. The proposed capital investment under Sl. No. 15 pertains to the Construction of boundary wall, earth filling and road with culvert in acquired land (for bay extension) at 132/33 KV GSS Phulparas.

The aforesaid investment is required for the recently acquired 1.23 acres of land identified for two nos. 132 kV line bay extensions. Since the existing entrance road will be obstructed by the upcoming bay works, construction of a new approach road with culvert, along with earth filling and boundary wall, has become essential to ensure safe access, protection of the substation premises and to facilitate future expansion of the GSS.

Further, it is submitted that the work of boundary walls and road with culvert in acquired land for bay extension at 132/33 KV GSS Phulparas has been undertaken under leftover fund in State Plan scheme of Rs.1097.21 Cr. vide Letter No.3489 dated-20.11.2017 originally meant for construction of 02 nos.132 KV Line bays at 132/33 KV GSS Phulparas.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-07/2017-3489 dated 20.11.2017, technical sanction letter, NIT and work order, is attached as part of **Annexure-XXXIX (Main Petition may be referred)** for reference.

15. The proposed capital investment under Sl. No. 16 pertains to the Construction of IB building (G+1) at Purnea.

The aforesaid investment is necessitated since Purnea district, being more than 300 km away from the state capital Patna and located in a border region adjoining West Bengal and requires frequent visits by senior officials for inspection, monitoring and coordination. The existing IB at the GSS premises is inadequate to meet the accommodation needs during such visits. Construction of a new IB (G+1) will provide sufficient lodging facilities, ease logistical challenges and support effective operational oversight.

The project is proposed to be funded with internal resources and administrative approval for floating the tender has been obtained.

It is further submitted that, based on the actual site requirements and detailed engineering carried out post award of work, there has been a quantum variation

leading to a revision in the project cost. The supporting document in this regard is enclosed for the kind consideration of the Hon'ble Commission.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The technical sanction report, NIT and Work Order, is attached as part of **Annexure-XL (Main Petition may be referred)** for reference.

16. The proposed capital investment under Sl. No. 17 pertains to the Construction of Back-up SLDC building (G+2) at Gaya.

The aforesaid investment is essential as it will provide a dedicated back-up facility for the State Load Dispatch Centre, thereby ensuring uninterrupted real-time monitoring of power flow across the state. In the event of a disaster or operational failure at the main SLDC, the proposed G+2 Back-up SLDC at Gaya will serve as a fully functional alternative, enabling quick restoration of electricity and minimizing risks of grid instability. Establishing this back-up system, along with reliable communication infrastructure, will significantly enhance resilience, disaster preparedness, and overall reliability of grid operations in Bihar.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The GoB letter BSPTCL-01/2018-2059 dated 26.07.2018, technical sanction letter, NIT, work order and other supporting documents, is attached as part of **Annexure-XLI (Main Petition may be referred)** for reference.

17. The proposed capital investment under Sl. No. 18 pertains to the Supply, Erection, Testing & Commissioning of 24-Core Armoured Underground Optical Fiber for Main SLDC, BREDA Bhawan, Patna & Back-up SLDC, Gaya along-with Associated Communication Equipment for ULDC PhaseIII SCADA/EMS Up-gradation Project.

The aforesaid investment is necessitated to establish redundant and secure communication links between the Main SLDC at Patna (BREDA Bhawan) and the Backup SLDC at Gaya, as well as connectivity with key GSS locations. Since the scope of communication infrastructure is excluded from PGCIL's responsibility under the ULDC Phase-III SCADA/EMS Upgradation Project, it is imperative for BSPTCL to undertake the laying of 24-core armoured underground optical fiber along with associated communication equipment. This will ensure uninterrupted and reliable data transmission, support real-time SCADA operations, and provide resilience against network failures or third-party disruptions, thereby strengthening the

state's load dispatch and grid management system.

The project is proposed to be funded with internal resources and administrative approval for floating the tender has been obtained.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The technical sanction letter and NIT, is attached as part of **Annexure-XLII (Main Petition may be referred)** for reference.

18. The proposed capital investment under Sl. No. 19 pertains to the Design, manufacture, assembly, testing, supply & delivery of 318 sets of combo unit of 9 litre of water mist and compressed air foam fire extinguisher with self-contained breathing apparatus under SDMF scheme.

There is a critical requirement of modern and efficient fire-fighting systems in Sub-Stations and other vital offices/ premises of BSPTCL to ensure operational safety and quick response in case of fire hazards. Conventional fire extinguishers are not sufficient for handling electrical and oil-based fires which are common in high-voltage substations. The proposed combo fire extinguisher system with breathing apparatus will enable effective fire suppression while ensuring safety of operational staff, thereby minimizing risks to critical transmission infrastructure.

This investment is therefore essential to strengthen safety standards, protect high-value assets and enhance disaster resilience of the transmission network.

Further, it is submitted that, although the asset is covered under the SDMF scheme, at the current stage, it is proposed to be funded through IRF in order to ensure timely procurement and availability of fire extinguishing systems without waiting for disbursement of SDMF funds. Once the SDMF funds are received, the same will be adjusted against this expenditure and the Hon'ble Commission will be duly apprised of the adjustment during the truing-up exercise.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The Bihar State Disaster Management Authority memorandum No. 1/8-Ratha0/Miscellaneous/Pra.-12/2023-Part(1) dated 26.11.2024, technical sanction letter and NIT, is attached as part of **Annexure-XLIII (Main Petition may be referred)** for reference.

19. The proposed capital investment under Sl. No. 20 pertains to the Design, manufacture, testing, supply & delivery of 01 complete set of Aluminium based re-usable ERS under SDMF scheme.

An ERS is a critical requirement for transmission utilities to ensure rapid restoration of power supply in case of tower failure or collapse due to natural calamities, extreme weather events or other unforeseen incidents. The use of aluminium-based re-usable ERS provides a lightweight, modular and durable solution that enables quick assembly, dismantling and re-deployment in emergency situations. Its re-usability significantly reduces long-term costs while ensuring readiness for multiple restoration events over the years. The deployment of such a system will greatly enhance BSPTCL's disaster preparedness and resilience by minimizing downtime of transmission lines, thereby maintaining uninterrupted power supply and grid stability across the state.

Furthermore, it is submitted that, although the asset is covered under the SDMF scheme, at the current stage, it is proposed to be funded through IRF in order to ensure timely procurement and availability of fire extinguishing systems without waiting for disbursement of SDMF funds. Once the SDMF funds are received, the same will be adjusted against this expenditure and the Hon'ble Commission will be duly apprised of the adjustment during the truing-up exercise.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure. The Bihar State Disaster Management Authority memorandum No. 1/8-Ratha0/Miscellaneous/Pra.-12/2023-Part(1) dated 26.11.2024, technical sanction report, NIT and Word Order is attached as part of **Annexure-XLIV (Main Petition may be referred)** for reference.

20. The proposed capital investment under Sl. No. 21 pertains to the Supply, Erection, Testing & Commissioning of Modern fire detection system: 134 sets [01 set per 132KV GSS (134 nos.)] of Smoke and heat detection system with all accessories and fittings along with installation of 795 nos. [05 nos. per GSS (159 nos.)] of Fire Extinguisher Ball under SDMF scheme.

Fire safety is a critical aspect of grid substations, as even a minor fire incident can cause widespread damage to costly equipment, disrupt power supply and pose safety hazards for operational staff. The installation of modern smoke and heat detection systems will ensure early detection and alert, enabling timely intervention and significantly reducing the risk of catastrophic failure. Complementing this, fire extinguisher balls provide an immediate, user-friendly and highly effective mechanism for rapid fire suppression, even in unattended or remote areas of the substation. Together, these measures will enhance the operational safety, reliability and resilience of the grid infrastructure.

Further, it is submitted that, although the asset is covered under the SDMF scheme,

at the current stage, it is proposed to be funded through IRF in order to ensure timely procurement and availability of fire extinguishing systems without waiting for disbursement of SDMF funds. Once the SDMF funds are received, the same will be adjusted against this expenditure and the Hon'ble Commission will be duly apprised of the adjustment during the truing-up exercise.

In view of the above, the Hon'ble Commission is requested to kindly approve the proposed capital expenditure.

The Bihar State Disaster Management Authority memorandum No. 1/8-Ratha0/Miscellaneous/Pra.-12/2023-Part(1) dated 26.11.2024, technical sanction letter and NIT, is attached as part of **Annexure-XLV (Main Petition may be referred)** for reference.

