

PETITION IN THE MATTER OF APPROVAL FOR SUPPLY, INSTALLATION, COMMISSIONING OF SERVICE CABLES IN ELECTRICAL CONNECTION ON CHARGEABLE BASIS IN ALIGNMENT WITH SMART METERING INITIATIVES UNDER SECTION (46) (50) & (57) OF ELECTRICITY ACT, 2003, SECTION (36) & (39) OF BERC (CONDUCT OF BUSINESS) REGULATIONS, 2005 AND ITS FURTHER AMENDMENTS & REGULATION 7.10 OF THE BIHAR ELECTRICITY SUPPLY CODE, 2007 AND ITS FURTHER AMENDMENTS

Submitted by:

SOUTH BIHAR POWER DISTRIBUTION COMPANY LIMITED
Vidyut Bhawan III, 3rd Floor, J.L.N. Marg, Patna-800 001, Bihar



NORTH BIHAR POWER DISTRIBUTION COMPANY LIMITED
Vidyut Bhawan III, 4th Floor, J.L.N. Marg, Patna-800 001, Bihar



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2. *ACE/Gen HB com*
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5. *ME*
6. *EE/Gen*
7. *EE/Metering*



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BEFORE THE BIHAR ELECTRICITY REGULATORY COMMISSION, PATNA

Petition No: _____

IN THE MATTER OF:

Petition in the matter of approval for supply, installation, commissioning of service cables in electrical connection on chargeable basis in alignment with Smart metering initiatives under section (46) (50) & (57) of Electricity Act, 2003, Section (36) & (39) of BERC (Conduct of Business) regulations, 2005 and its further amendments & regulation 7.10 of the Bihar Electricity Supply Code, 2007 and its further amendments.

SOUTH BIHAR POWER DISTRIBUTION COMPANY LIMITED

(Hereinafter referred to as "SBPDCL" or "DISCOM" or "Petitioner 1" which shall mean for the purpose of this Petition), having its registered office at Vidyut Bhawan III, 3rd Floor, J.L.N. Marg, Patna-800 001, Bihar.

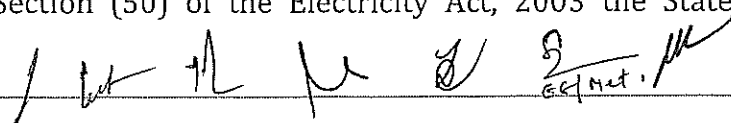
NORTH BIHAR POWER DISTRIBUTION COMPANY LIMITED

(Hereinafter referred to as "NBPDC" or "DISCOM" or "Petitioner 2" which shall mean for the purpose of this Petition), having its registered office at Vidyut Bhawan III, 4th Floor, J.L.N. Marg, Patna-800 001, Bihar.

..... PETITIONERS

The Petitioners hereby submit as under:

1. South Bihar Power Distribution Company Ltd. (SBPDCL) is a Company incorporated under the Companies Act, 1956 (now Companies Act 2013) and having its registered office at Vidyut Bhawan III, 3rd Floor, J.L.N. Marg, Patna-800 001, Bihar. The Petitioner is a deemed licensee under the Fifth Proviso to Section 14 of the Electricity Act, 2003
2. North Bihar Power Distribution Company Ltd. (NBPDC) is a Company incorporated under the Companies Act, 1956 (now Companies Act 2013) and having its registered office at Vidyut Bhawan III, 4th Floor, J.L.N. Marg, Patna-800 001, Bihar. The Petitioner is a deemed licensee under the Fifth Proviso to Section 14 of the Electricity Act, 2003.
3. As per Section (46) of the Electricity Act, 2003 the State Commission may, by regulations, authorize a distribution licensee to charge from a person requiring a supply of electricity.
4. As per Section (50) of the Electricity Act, 2003 the State Commission shall specify an

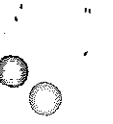




electricity supply code to provide for recovery of electricity charges, intervals for billing of electricity charges, disconnection of supply of electricity for non-payment thereof, restoration of supply of electricity; measures for preventing tampering, distress or damage to electrical plant, or electrical line or meter, entry of distribution licensee or any person acting on his behalf for disconnecting supply and removing the meter; entry for replacing, altering or maintaining electric lines or electrical plants or meter and such other matters.

5. As per Section (57) of the Electricity Act, 2003, the appropriate Commission may, after consultation with the licensees and persons likely to be affected, specify the standards of performance of a licensee or a class of licensees.
6. Section (36) BEREC (Conduct of Business) Regulation, 2005 specifies that the commission may, from time to time, issue orders and directions in regard to the implementation of the Regulations and procedure on various matters.
7. Section (39) BEREC (Conduct of Business) Regulation, 2005 states that the Commission may, by general or special order, do anything not being inconsistent with the provisions of the Act, which appears to it to be necessary or expedient for the purpose of removing the difficulties.
8. Regulation 7.10 of Bihar Electricity Supply Code, 2007 stipulates the procedure "In case of Change in Wiring and / or Apparatus or Shifting of Service Line in the Premises of the Consumer".
9. As part of the national initiative to modernize the power sector, smart meters are being implemented to enhance energy management, minimize losses, and provide consumers with precise, real-time billing. The deployment of service cables that meet specific standards is essential for the optimal functioning of smart meters. Utilizing substandard cables may result in communication breakdowns, data loss, and operational inefficiencies.
10. Many existing service cables have aged, dilapidated over time, or are not adequately rated to meet current load demands. These issues compromise the effectiveness of smart metering systems, which rely on seamless connectivity and data integrity. During the replacement of existing meters with smart prepaid meters, it has been frequently noted that service cables are often damaged or defective, or lack a neutral wire. In such cases, replacing these service cables is crucial to prevent potential damage to the meter caused by improper wiring. However, many consumers have been reluctant to supply the necessary service cables, leading to delays in the installation process. This reluctance results in scattered installations over time, as affected consumers are unable to transit to smart meters due to the unavailability of proper service cables. Consequently, these delays impede the efficient

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rollout of smart meters.

11. Therefore, we respectfully submit this petition to request the Honorable Commission's approval for supply, installation, commissioning of service cables in electrical connection based on consumer demand & also based on recommendations received from field officers for the concerned or required consumers. This initiative is vital to ensure that these systems function effectively with smart metering technology. Many of the current service cables have aged, dilapidated, or are not adequately rated to handle present load demands, thereby compromising the seamless connectivity and data integrity essential for smart metering systems. Upgrading to cables that meet modern standards will enhance energy management, minimize losses, and facilitate precise, real-time billing for consumers.

12. Accordingly, the Petitioner's request and prays the Hon'ble Commission to:

- a. Admit this Petition on record and treat it as complete.
- b. Approve the proposal for supply, installation, commissioning of service cables in electrical connection based on the consumer demand & also based on recommendations received from field officers for the concerned or required consumers on chargeable basis in alignment with smart metering initiatives.
- c. Allow Petitioner to recover the costs through a transparent mechanism through 10 equal installments along with monthly energy bill .
- d. Condone any inadvertent omissions/errors/shortcomings and permit the Petitioner to add/change/modify/alter this filing and make further submissions as may be required at a future date.
- e. Pass such order, as the Hon'ble Commission may deem fit and appropriate, keeping in view the facts and circumstances of the case.

South Bihar Power Distribution Company Limited

Petitioner 1

North Bihar Power Distribution Company Limited

Petitioner 2

Location: Patna

Date: 06/08/2025

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1. As per Section (46) of the Electricity Act, 2003 the State Commission may, by regulations, authorize a distribution licensee to charge from a person requiring a supply of electricity in pursuance of Section 43 any expenses reasonably incurred in providing any electric line or electrical plant used for the purpose of giving that supply.
2. As per Section (50) of Electricity Act, 2003 the State Commission shall specify an electricity supply code to provide for recovery of electricity charges, intervals for billing of electricity charges, disconnection of supply of electricity for non-payment thereof, restoration of supply of electricity; measures for preventing tampering, distress or damage to electrical plant, or electrical line or meter, entry of distribution licensee or any person acting on his behalf for disconnecting supply and removing the meter; entry for replacing, altering or maintaining electric lines or electrical plants or meter and such other matters.
3. As per Section (57) of the Electricity Act, 2003, the State Commission, following consultation with licensees and affected parties, may establish performance standards for a licensee or a group of licensees.
4. Section (36) BERC (Conduct of Business) Regulation, 2005 states that the commission may, from time to time, issue orders and directions in regard to the implementation of the Regulations and procedure to be followed and various matters which the Commission has been empowered by these Regulations to specify or direct.
5. Section (39) BERC (Conduct of Business) Regulation, 2005 specifies that the Commission may, by general or special order, do anything not being inconsistent with the provisions of the Act, which appears to it to be necessary or expedient for the purpose of removing the difficulties.
6. Regulation 7.10 Bihar Electricity Supply Code, 2007 stipulates that the procedure of in Case of Change in Wiring and / or Apparatus or Shifting of Service Line in the Premises of the Consumer

2. Background

1. The service cable is a vital component of the electricity distribution system, acting as the final connection between the utility's distribution network and the consumer's premises. It is responsible for delivering electrical power to homes and businesses. Ensuring the reliability and capacity of these cables is essential for the efficient operation of the entire system. Here are some key aspects to consider which are materials, insulation, capacity,



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installation, maintenance, safety & regulations and standards. Overall, the reliability and capacity of service cables are essential for the efficient and safe delivery of electricity to consumers, impacting both operational performance and user safety.

2. As part of the national initiative to modernize the power sector, smart metering is being introduced to improve energy management, reduce losses, and offer consumers accurate, real-time billing. The use of service cables with appropriate specifications is crucial for the effective operation of smart meters, as substandard cables can lead to communication failures, data loss, and operational inefficiencies.
3. Smart metering programs are being implemented under the guidance of the Ministry of Power and the Central Electricity Authority (CEA), requiring supporting infrastructure, including high-quality service cables, for optimal performance.
4. Since, many existing service cables are ageing, have degraded over time, or are inadequately rated for current load requirements. These factors compromise the effectiveness of smart metering systems, which rely on seamless connectivity and data integrity.
5. On January 11, 2023, SBPDCL issued a Request for Proposal under NIT No. 04/PR/NBPDCL/2023, along with subsequent amendments, to select Advanced Metering Infrastructure Service Providers (AMISPs). M/s Intellismart Infrastructure Pvt. Ltd emerged as the L1 bidder for this project, which is being executed under the DBFOOT model—a hybrid approach combining capital expenditure (CAPEX) and operational expenditure (OPEX). According to the AMISP contract agreement, M/s IntelliSmart is responsible for a comprehensive scope of work. This includes laying service cables from the Low Tension (LT) line to the meter and from the meter to the consumer's premises. The work involves removing existing cables if required, making necessary connections, and applying tape, among other tasks. Furthermore, M/s IntelliSmart is tasked with providing all materials, tools, and accessories needed for dismantling, civil works, and installing new meters. These activities, which are not covered in the Bill of Quantities, fall within the purview of the AMISP's responsibilities. It is also to mention that as per LOA no. 03 dated 30.08.2023, supply, installation, commissioning of service cables in electrical connection is only considered for around 20% of the total scope. SBPDCL LOA no. 03 dated 30.08.2023 is enclosed as **Annexure-I**.

3. Proposal for supply, installation, commissioning of service cables in electrical connection

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1. Approval for supply, installation, commissioning of service cables in electrical connection to ensure compatibility with smart metering systems involves several considerations and steps & deployment of cables should ensure they have the appropriate capacity and insulation, fully complying with national safety standards and specifications.
2. Since DISCOMs are obligated to enhance the electrical infrastructure in accordance with the agreements outlined above. Specifically, the Bihar DISCOMs have entered into a contract with M/s IntelliSmart, which stipulates supply, installation, commissioning of service cables in electrical connection. The rate chart for for supply, installation, commissioning of service cables in electrical connection and other related services provided by IntelliSmart for 30 meters, is detailed below for both single-phase and three-phase consumers. The rate chart is enclosed as **Annexure-II**.

S. No	Item Description (for 30 Meter) (H)	No. of Consumers (I)	Rate per Unit excluding GST (in Rs) (J)	GST % (K)	Per connection rate (with GST)	Total (L=I*J * (1+K))
1	2C*6 sq. mm	663683	824.12	18%	972.46	645409942.49
2	2C*10 sq. mm	3318	1236.19	18%	1458.70	4839969.21
3	4C* 10 sq. mm	3770	2060.31	18%	2431.16	9165503.27
Total Cost of Service Cable						659415414.97

3. However, it is to mention that average requirement of service cable is 25 meter/consumer against awarded LoA for "Turnkey contract for Providing New Service Connection with LT Line Extension (if required)". It is worthwhile to mention that earlier at the time of new service connection, the installation of energy meter was carried out inside the consumer's premises. Presently, the installation of energy meter is being carried out at the door-bell location which is outside (at boundary wall) of the consumer's premises. Due to this, the length of required service cable is approximately 25 meter in place of 30 meter. Reduction in length of service cable directly reduce the recoverable cost on each consumer and also allow for the coverage of a larger number of consumers as needed. Therefore, the average service cable length of 25 meters per consumer have been considered. This approach aligns with the reduced length of service wire needed when installing the smart meter at the doorbell, rather than inside the consumer's house. Accordingly, the re-casted price chart considering service cable length to be 25 meters/consumer is as follows:

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1	2C*6 sq. mm	686.77	18%	810.38
2	2C*10 sq. mm	1030.16	18%	1215.58
3	4C* 10 sq. mm	1716.92	18%	2025.97

4. For supply, installation, commissioning of service cables in electrical connection, the charges outlined below will be applied, which will also include costs for supervision, labor, and establishment as per the recent tariff order.

S.No	Capacity (Item Description Al Service wire with GI wire no. 8 with cost for 25 Meter)	Per connection rate	Supervision, labour and establishment charges (21 %)	Total recoverable amount per connection
1	2C*6 sq. mm	810.38	170.18	980.56
2	2C*10 sq. mm	1215.58	255.27	1470.85
3	4C* 10 sq. mm	2025.97	425.45	2451.42

5. Supply, installation, commissioning of service cables in electrical connection will be carried out according to specific requirements and recommendations provided by field officers. Their insights will guide the identification of cables needing upgrades, ensuring that the installation process addresses the most critical areas and enhances the overall efficacy of the smart metering systems.
6. It is further proposed that in order to avoid the burden on consumer the charges may be divided in Ten (10) Equal installments in monthly invoices of smart prepaid metered consumers.
7. The installation will be in a such a way that it will be aligned with the ongoing deployment of smart prepaid meters, ensuring a coordinated and efficient approach.
8. The Smart prepaid meters rely on stable and reliable electrical connections for data communication and functionality. Upgraded service cables will ensure the seamless operation of these advanced metering systems which will also eliminate the aged or substandard cables pose significant safety risks, including fire hazards and electrical shocks. Replacing these cables enhances consumer and system safety.
9. The upgraded cables will reduce the power losses, voltage fluctuations, and the likelihood of outages, contributing to a more reliable distribution system.

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10. It is pertinent to note that while the supply, installation, commissioning of service cables in electrical connection involves an upfront cost, it delivers long-term benefits through improved energy efficiency, reduced maintenance, and enhanced consumer satisfaction. Some of the key consumer benefits are as follows:

- **Better Service Quality:** Improved cables ensure stable power delivery, reducing interruptions and enhancing consumer experience.
- **Accurate Billing and Transparency:** Smart meters, supported by reliable cables, provide real-time consumption data, minimizing billing discrepancies and disputes.
- **Safety Assurance:** Consumers benefit from reduced risks of electrical accidents associated with old or degraded cables installed by consumer.
- **Future-Ready Infrastructure:** Upgraded service cables support current and future load demands, making the system resilient to growth in consumer energy needs.

Accordingly, the Petitioner's request and prays the Hon'ble Commission to:

- a. Admit this Petition on record and treat it as complete.
- b. Approve the Proposal for supply, installation, commissioning of service cables in electrical connection on consumer demand & also based on recommendations received from field officers for the concerned or required consumers on chargeable basis in alignment with Smart metering initiatives.
- c. Allow Petitioner to recover the costs through a transparent mechanism through 10 equal installments along with monthly energy bill .
- d. Condone any inadvertent omissions/errors/shortcomings and permit the Petitioner to add/change/modify/alter this filing and make further submissions as may be required at a future date.
- e. Pass such order, as the Hon'ble Commission may deem fit and appropriate, keeping in view the facts and circumstances of the case.

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(i) **The Electricity Act, 2003**

Section 46 (Power to recover expenditure):

The State Commission may, by regulations, authorize a distribution licensee to charge from a person requiring a supply of electricity in pursuance of section 43 any expenses reasonably incurred in providing any electric line or electrical plant used for the purpose of giving that supply.

Section 50 (The Electricity Supply Code):

The State Commission shall specify an electricity supply code to provide for recovery of electricity charges, intervals for billing of electricity charges, disconnection of supply of electricity for non-payment thereof, restoration of supply of electricity; measures for preventing tampering, distress or damage to electrical plant, or electrical line or meter, entry of distribution licensee or any person acting on his behalf for disconnecting supply and removing the meter; entry for replacing, altering or maintaining electric lines or electrical plants or meter and such other matters.

Section 57 (Consumer Protection: Standards of performance of licensee):

(1) The Appropriate Commission may, after consultation with the licensees and persons likely to be affected, specify standards of performance of a licensee or a class of licensees.

(2) If a licensee fails to meet the standards specified under sub-section (1), without prejudice to any penalty which may be imposed or prosecution be initiated, he shall be liable to pay such compensation to the person affected as may be determined by the Appropriate Commission:

Provided that before determination of compensation, the concerned licensee shall be given a reasonable opportunity of being heard.

(3) The compensation determined under sub-section (2) shall be paid by the concerned licensee within ninety days of such determination.

(ii) **The BERC (Conduct of Business Regulations), 2005 and amendments issued therein.**

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36 Issue of orders and directions

Subject to the provisions of the Act and these Regulations, the Commission may, from time to time, issue orders and directions in regard to the implementation of the Regulations and procedure to be followed and various matters which the Commission has been empowered by these Regulations to specify or direct.

39 Power to remove difficulties.

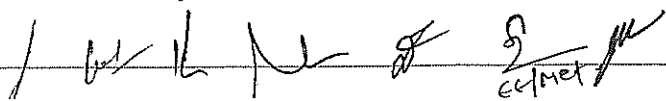
If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by general or special order, do anything not being inconsistent with the provisions of the Act, which appears to it to be necessary or expedient for the purpose of removing the difficulties.

(iii) The BEREC (Electricity Supply Code), 2007 issued therein.

Section 7.10

Procedure in Case of Change in Wiring and / or Apparatus or Shifting of Service Line in the Premises of the Consumer:

- a) The consumer may apply to the licensee for any changes in their premises related to wiring / apparatus / service line, after clearing all dues pending if any provided the same are not stayed by any court, subject to the following:
- b) The consumer shall get all work relating to wiring on his premises only by or under the supervision of a Licensed Electrical Contractor and obtain a Work Completion certificate and Test report., as prescribed by Indian Electricity Rules, 1956 until Regulations are issued under the Electricity Act, 2003.
- c) No reference shall be made to the Licensee if the change in wiring of LT loads does not result in dislocation of the meter or other related apparatus and there is no change in the load. However, the consumer shall produce the test report if required by the Licensee in future.
- d) In other cases, if the consumer desires to alter the wiring on his premises, or change

 cc/met



the location of meter or other related apparatus or shift the service line on his premises notice thereof shall be sent in writing with the modified wiring diagram and other necessary details to the Licensee. The Licensee shall after due enquiry grant approval, intimating the estimated charges to be deposited by the consumer with or without modification to the proposal, or reject the request stating reasons thereof, in writing, within the time limit specified in the Standards of Performance of Distribution Licensee Regulations.

- e) The work relating to change in wiring shall be done by the consumer through a licensed electrical contractor and the work completion certificate along with test results shall be provided to the Licensee. The Licensee shall inspect the premises to confirm that the alteration(s) is in accordance with the approval given by him and the Indian Electricity Rules, 1956 until Regulations are issued under the Electricity Act, 2003.

- f) The work of change in position of point of supply, meter or related apparatus and shifting of service line shall be done by the Licensee at the cost of the consumer. The estimate for this work shall be sent to the consumer along with the approval and work shall be completed within the time specified in the Standards of Performance of Distribution Licensee Regulations from the date of the money deposited.

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