



## Proposal for revision of miscellaneous charges

(A detailed analysis of BPC’s existing miscellaneous charges and proposed revision)

### 1. Introduction

BPC’s current Miscellaneous Charges is quite less as it has not been revised since 2010. In 2017, only the energy charges were revised. Hence, further revision is felt necessary.

### 2. The Need for Revision

The need to revise the existing schedule of miscellaneous charges is based on the following grounds:

- i. Increased rural electrification and number of customers has significantly increased the work load of BPC;
- ii. Introduction of 100 units free electricity and subsidy to many other categories has made electricity relatively affordable for the customers;
- iii. Change in electricity consumption patterns and increased customer expectation requires improvement in customer service;
- iv. Increase in cost of services owing to a general inflation since 2010;
- v. Bad debts due to inadequate miscellaneous charges and their application methodology;
- vi. Affordability of the existing charges; and
- vii. Issues with the existing charges.

The amount charged for services provided by BPC are currently quite low as compared to the cost of such services. Also, the penalties are not adequate enough to deter customers from carrying out illegal activities such as stealing of electricity and connecting the lines disconnected by BPC. Hence, there is a need to revise the rates in a manner that shall bring in clarity and ensure proper implementation of tariff and collection of minimum cost for the services provided.

A detailed analysis of the existing miscellaneous charges and penalties including the proposed revision is presented below.

### 3. Meter Security & Energy Security

#### 3.1 Meter Security

The existing meter security is given in Table-1 below:

**Table-1: Existing Meter Security**

Sl. No.	Particulars	Charges
1	Meter Security Deposit	Actual Cost of the Meter

Currently, BPC collects the cost of meter as meter security at the time of release of supply. Hence the meter belongs to BPC. The meter security is forfeited if the meter is damaged by the customer, and to get a new meter issued, the customer has to once again deposit the cost of new meter as meter security. The security deposit helps in adjusting any outstanding should a customer run away leaving behind the meter. The meter security is retained till the customer account is maintained and refunded only when the account is closed. The security deposits made by the customers will not bear any interest.

In the present system, difficulty in maintaining the cost of meter as meter security arises when replacing the meters costing more than the replaced ones as additional amount has to be



collected from the customers, which has practical difficulties. For example, BPC has come up with a policy of replacing meters more than 10 years old. Currently, all the analog meters more than 10 years old are being replaced by electronic meters in a phase wise manner. The License conditions clause 6.3.2 allows collection of additional security by BPC only if a meter is up-graded by a higher capacity.

BPC also explored the possibility of doing away with the meter security system. In the current arrangement where the customers have deposited the cost of meter as meter security, BPC can convert the existing meter security deposit of the customers as revenue for the sale of meters to the customers. But the meters would then belong to the customers. Under such as a scenario, following issues could arise:

1. **Reduced control over the meters** – Since BPC has to have a full control over the meters, selling the meter to the customer might lead to reduced control over it.
2. **Difficulty in replacing old meters with new/better meters as the customers may not pay for the new meters** – If BPC wants to replace any existing meter with new and better ones, it would be difficult to sell the new meter to the customer since the existing meter would be still within the useful life or in good working condition. This could hinder implementation of any new technologies in metering. Under such a scenario, the alternatives left for BPC would be: 1) either to buy back such meters at a depreciated cost and ask the customers to pay the difference of old and new; or 2) install the new meters for free.
3. **Difficulty in adjustment of outstanding in case a customer with huge unpaid bill run away** – If a customer with huge unpaid bill run away leaving behind the meter, the meter security helps in its adjustment. With no meter security, and if such customer run away with the meter, BPC will have difficulty in realizing the outstanding.

Alternatively, BPC could also continue with the current practice of cost recovery but refund the meter security available to the customers. This would mean that the new customers will also not pay for the meter nor deposit any security with BPC. This will make the replacements of meters by BPC easier but the problem with this arrangement could be reduced care of meters by the customers.

In any case, it is important to make the customer responsible for the meter whether they have paid for it or not, or whether there is security deposit or not. For this, in the current scenario, if any existing meter get damaged by the customer's negligence or because of failing to take adequate care as required, BPC forfeits the existing security deposit and make the customer deposit fresh security equivalent to the cost of the new meter. Hence, in the new scenarios also, the customer should be made to pay for getting a new meter issued for normalizing the supply if the meter is damaged by the customer.

Therefore, if the current scenario is to be continued, a directive from BPC for collecting additional meter security (the difference of costs between the old and new) whenever any meter is replaced would go a long way in helping the company maintain the required security deposit for the meters. However, if BEA opines that BPC should do away with the meter security system, a clear guidelines indicating how the cost is to be recovered and how the issues with regard to the ownership and control is to be taken care would be crucial.

### 3.2 Energy Security

The existing energy security for different types of customers is given in Table-2 below:

**Table-2: Existing Energy Security**

Sl. No.	Particulars	Existing Charges (Nu.)
1)	LV Single Phase (Rural)	10/A
2)	LV Single Phase (Others)	20/A
3)	LV Three Phase	60/A
4)	LV Three Phase with CT Metering	60/A
5)	MV Three Phase	120/kVA rating of the transformer
5)	HV Three Phase	120/kVA rating of the transformer

The existing ampere-based energy security charges is a straight forward and a convenient method of computing the energy security amount and hence can be retained. The energy security is found very useful as it helps in adjusting the outstanding should a customer default in payment or run away. The security deposits made by the customers will not bear any interest.

While the current rates can be retained, for clarity in application, the basis and method for computing energy security for different types of customers shall be as follows:

#### 3.2.1 Direct Meter Customers

Since 2012, BPC has been procuring only electronic meters of 10-60 Amps for single phase and 5-30 Amps, 10-60 Amps and 10-80 Amps for 3 phase.

For the single phase customers, BPC currently uses 10 Amps (lower ampere limit of the meter) for most of the domestic/residential customers for computing energy security. However, with the current approved rate of Nu. 10/A, the security amount works out to Nu. 100 only which is quite less and does not cover the energy bill amount for 3 months for many customers. The average three month's bill amount for rural domestic customers for 2018 excluding subsidy is Nu. 264. Since we believe that subsidy is a temporary measure, the security required to cover the average unsubsidized 3 month's bill amount works out to Nu. 1534.00.

In view of the above and considering that the load would increase over time to maximum of 10 kW load for the single phase, BPC henceforth, would like to use the upper ampere limit of the meter for computing the energy security for all new customers issued with the single phase direct meters. For the existing customers, BPC would like to maintain the security amount already deposited as it is difficult to collect the additional security. And for the three phase customers, the upper ampere limit of the meter is already being used in computing the energy security and shall be continued.

However, the customer shall be asked to top up additional security amount if the meter is upgraded with higher capacity.

#### 3.2.2 LV Customer with LV CT meter

These are mostly LV bulk customers and hence CT metered on the LV side of the transformer. The primary current rating of the connected CT is being used in computing the energy security which shall be continued. In case of increase in load in future requiring

replacement of the CTs with higher capacity but not the change in category, the customer shall be asked to top up additional security amount required. For the change in category, the customer shall be asked to deposit the security as required for that category.

### 3.2.3 LV Customer with HT CT meter

These are LV bulk customers but metered on HV side of the transformer due to availability of HV metering provisions. For these type of customers, LV current proportional to the HT CT primary ratio shall be used in computing the energy security. However, if the load increase in future requiring replacement of connected CTs but not the change in category, the customer shall be asked to top up additional security amount required. For the change in category, the customer shall be asked to deposit the security as required for that category.

### 3.2.4 MV and HV Customer

In line with the current approved tariff, the KVA rating of the connected transformer is used in computing the energy security and shall be continued. However, in case of enhancement of contract demand requiring up-gradation of the transformer, the customer shall be asked to top up additional security amount required.

## 4. Other Miscellaneous Charges

The other miscellaneous charges are basically the charges for the services provided and penalties applicable. The existing other miscellaneous charges approved in 2010, issues and challenges in implementing them, revision proposed and the reasonability are given below:

### 4.1 What are the other existing miscellaneous charges?

The existing other miscellaneous charges are given in Table-3 below:

**Table-3: Existing Other Miscellaneous Charges**

Sl. No.	Activities/Services	Charges Applied
1	Default Payment Penalty	2% per month of the billed amount
2	Temporary Services Electricity Tariff	Same as the revised tariff structure
3	Temporary Service Charges	Same as other normal service charges
4	Fixed Service Connection Charges	a) Nu.100 for LV single phase
		b) Nu.150 for LV three phase
		c) Nu. 500 for MV & HV customers
5	Reconnection & Disconnection Charges	a) Nu.100 for LV single phase
		b) Nu.150 for LV three phase
		c) Nu. 500 for MV & HV customers
6	Service Cable Charge	As per the rate approved by BPC
7	Meter Testing Charge	a) Nu.50 for LV single phase
		b) Nu.100 for LV three phase
		c) Nu. 500 for MV & HV customers
8	Installation, Inspection & Testing Charges	a) Nu.100 for LV single phase
		b) Nu.300 for LV three phase
		c) Nu. 500 for MV & HV customers

9	Electricity Theft	Shall be considered as an offense as per Section 69(i) of Electricity Act of Bhutan 2001. The customer shall be liable to pay the assessed loss, failing which the case would be forwarded to the Court.
10	Meter Shifting Charge	a) Nu.100 for LV single phase
		b) Nu.150 for LV three phase
		c) Nu. 500 for MV & HV customers
11	Electricity Installation Shifting Charges	Actual cost worked out as per existing BPC guidelines. In the event of dispute between the licensee and the customer, the case would be forwarded to BEA.
12	Costing, Estimation, Execution and Supervision Charges	As per existing BPC guidelines. The cost and revenues of such services shall be maintained separately by BPC as per the BEA Accounting and Reporting Regulation.
13	Dishonoured Cheque Penalty	As per the relevant law or legal instruments
14	Capacity Reserve Charge	Equal to the demand charge for three months calculated on the conditionally sanctioned load for the voltage category.
15	Meter Damage Charges	Actual cost of the damage
16	Drawing Power more than the Contracted Demand	Twice the demand charge for the excess demand drawn by the customer

#### 4.2 Issues with the existing miscellaneous charges

Some of the issues with the existing miscellaneous charges are highlighted below:

- a) Some of the services, for example connection of service cable and testing of service cable are not captured in the current miscellaneous charges. Hence, there is a possibility that different field offices providing the services (ESDs/ESSDs) would either charge or not charge for such services which could lead to non-uniformity in application of charges within the same company.
- b) There are some services which are distinctly different, but have been clubbed together. Hence, these services need to be segregated for ease of implementation. For example, Sl. No. 4 (fixed service connection charges) includes charges for connection of service cable to the service pole and fixing the meter including making connections in the meter and releasing the supply are three different activities.
- c) Sl. No. 5 (reconnection & disconnection charges) is confusing to implement. It is not clear whether the approved charges is to be applied while disconnecting and reconnecting the supply for default in payment or it can also be applied for other types of supply disconnection and reconnection. It is also not clear whether it is to be applied only once for carrying out the disconnection and reconnection or applied separately for the disconnection and the reconnection activities.
- d) There is also confusion in implementing the miscellaneous charges for the activity under Sl. No. 8 (installation, inspection & testing charges). BPC carries out installation of only the meter(s). The inspection and testing is carried out for the wiring, earthing etc. These are distinctly different activities and needs to be segregated.
- e) There is also a need to strengthen and bring clarity to Sl. No. 9 (electricity theft). BPC currently recovers loss from the customer at double the normal tariff based on the assessed load for minimum of 3 (three) months. However, at times assessment of load is not possible such as when customers directly tap the supply for temporary GI fencing. The

penalty amount of Nu. 500 per instance is also felt not adequate to discourage the theft of electricity. It is therefore felt necessary to have an increasing type of penalty for repeating the theft and a special penalty provision for connecting supply to exposed metallic parts. This will go a long way in deterring the customers from stealing electricity and putting the public/animals at risk.

### 4.3 Proposed revision of other miscellaneous charges

In view of issues highlighted above, BPC proposes revision of other miscellaneous charges as given in Table-4 below in order to bring in clarity, uniformity and also collect minimum amount for the services provided;

**Table -4: Proposed Revision of Other Miscellaneous Charges**

Sl. No	Services/ Penalties	Supply System	Applicable to	New Charges Proposed	Rationale/ Justification
1	Service Cable Connection	1 Phase	All sizes of cables (LV customers)	Nu. 100 per cable	Ref Table-9
		3 Phase	Upto 35 sq mm (LV customers)	Nu. 150 per cable	Ref Table-9
			35 sq mm upto 70 sq mm (LV customers)	Nu. 200 per cable	Ref Table-9
			Above 70 sq mm (LV customers)	Nu. 300 per cable	Ref Table-9
			HT Cable (All MV/HV Customers)	Nu. 400 per cable	Ref Table-9
2	Installation and Connection of Meter	1 Phase	All Categories of Customer	Nu. 100 per meter	Ref Table-9
		3 Phase	Direct Meter Customer	Nu. 100 per meter	Ref Table-9
			LV Customer with LV CT Meter	Nu. 150 per meter	Ref Table-9
			LV Customer with HT CT Meter	Nu. 400 per meter	Ref Table-9
			MV Customer	Nu. 400 per meter	Ref Table-9
			HV Customer	Nu. 400 per meter	Ref Table-9
3	Testing of Earthing Installation	1 Phase/ 3 Phase	All Categories of Customer	Nu. 100 per earthing installation	Ref Table-9
4	Testing of Internal Wiring	1 Phase	All Categories of Customer	Nu. 150 per flat*	Ref Table-9
		3 Phase	All Categories of Customer	Nu. 200 per flat*	Ref Table-9
5	Testing of Service Cable	1 Phase/ 3 Phase	All Categories of Customer	Nu. 100 per cable	Ref Table-9



6	Replacement of Meter	1 Phase	All Categories of Customer	Nu. 200 per meter	Ref Table-9
		3 Phase	Direct Meter Customer	Nu. 200 per meter	Ref Table-9
			LV Customer with LV CT Meter	Nu. 300 per meter	Ref Table-9
			LV Customer with HT CT Meter	Nu. 400 per meter	Ref Table-9
			MV Customer	Nu. 800 per meter	Ref Table-9
			HV Customer	Nu. 800 per meter	Ref Table-9
7	Testing of Meters	1 Phase	All Categories of Customer	Nu. 200 per meter	Ref Table-9
		3 Phase	Direct Meter Customer	Nu. 200 per meter	Ref Table-9
			LV Customer with LV CT Meter	Nu. 200 per meter	Ref Table-9
			LV Customer with HT CT Meter	Nu. 400 per meter	Ref Table-9
			MV Customer	Nu. 800 per meter	Ref Table-9
			HV Customer	Nu. 800 per meter	Ref Table-9
8	Disconnection of Supply due to Default in Payment	1 Phase	All Categories of Customer	Nu. 250 per meter	Ref Table-9
		3 Phase	Direct Meter Customer	Nu. 250 per meter	Ref Table-9
			LV Customer with LV CT Meter	Nu. 500 per meter	Ref Table-9
			LV Customer with HT CT Meter	Nu. 500 per meter	Ref Table-9
			MV Customer	Nu. 1000 per meter	Ref Table-9
			HV Customer	Nu. 1000 per meter	Ref Table-9
9	Reconnection of Supply that was Disconnected due to Default in Payment	1 Phase	All Categories of Customer	Nu. 250 per meter	Ref Table-9
		3 Phase	Direct Meter Customer	Nu. 250 per meter	Ref Table-9
			LV Customer with LV CT Meter	Nu. 500 per meter	Ref Table-9
			LV Customer with HT CT Meter	Nu. 500 per meter	Ref Table-9
			MV Customer	Nu. 1000 per meter	Ref Table-9
			HV Customer	Nu. 1000 per meter	Ref Table-9



10	Shifting of Meter	1 Phase	All Categories of Customer	Nu. 200 per meter	Ref Table-9
		3 Phase	Direct Meter Customer	Nu. 200 per meter	Ref Table-9
			LV Customer with LV CT Meter	Nu. 300 per meter	Ref Table-9
			LV Customer with HT CT Meter	Nu. 400 per meter	Ref Table-9
			MV Customer	Nu. 800 per meter	Ref Table-9
			HV Customer	Nu. 800 per meter	Ref Table-9
11	Penalty for Theft of Electricity	1 Phase/ 3 Phase	All Categories of Customer	Recovery of loss at double the normal tariff (both energy and demand wherever applicable) for 3 months or minimum amount of Nu. 1000 where assessment is not possible or the assessed amount comes less than Nu. 1000 and a penalty of Nu. 500 per instance. However, if it is repeated, the penalty amount for the 2nd and 3rd instances shall be Nu. 1000 and Nu. 2000 respectively. For repeating more than three times, the supply shall be permanently disconnected and the matter shall be referred to BEA for further course of action.	Ref Table-9
12	Penalty for Illegal Re-connection of Supply Disconnected by BPC	1 Phase/ 3 Phase	All Categories of Customer	Penalty of Nu. 500 per instance. Recovery of assessed loss at double the normal rate shall be made only if the meter is by-passed. For repeating, the penalty amount shall be Nu. 1000 and Nu. 2000 respectively for 2nd and 3rd instances. For repeating more than three times, the supply shall be permanently disconnected and the matter shall be referred to BEA for further course of action.	Ref Table-9
13	Shifting of Electrical Installation	1 Phase/ 3 Phase	All Categories of Customer/ Applicant	Actual cost of the work plus 10% as departmental charges	Ref Table-9





14	Technical Estimation and Costing	1 Phase/ 3 Phase	All Categories of Customer/ Applicant	10% of the cost estimate or Nu. 1000, whichever is higher for works worth ≤ Nu. 30,000 5% of the cost estimate for works worth > Nu. 30,000 but ≤ Nu. 1 million 3% of the cost estimate for works worth > Nu. 1 million but ≤ 10 million 2% of the cost estimate for works worth > Nu. 10 million	Ref Table-9
15	Extension of Power Lines including associated works	1 Phase/ 3 Phase	All Categories of Customer/ Applicant	Actual cost of the work plus 10% as departmental charges	Ref Table-9
16	Penalty for Default in Payment	1 Phase/ 3 Phase	All Categories of Customer	2% per month on the defaulted amount	Ref Table-9
17	Penalty for Dishonoured Cheque	1 Phase/ 3 Phase	All Categories of Customer	Nu. 1000 per cheque bounce	Ref Table-9
18	Capacity Reserve Charge	3 Phase	MV and HV Customer	Equal to the demand charge for three months calculated on the conditionally sanctioned load for the customer category	Ref Table-9
19	Penalty for Meter Tampered/ Damaged or Burnt by the Customer due to overloading	1 Phase/ 3 Phase	All Categories of Customer	Actual cost of the Meter	Ref Table-9
20	Penalty for Drawing Power more than the Contracted Demand	3 Phase	MV and HV Customer	Twice the demand charge for the excess power drawn	Ref Table-9
21	Disconnection of Supply requested by the Customer other than Emergency and surrendering of supply	1 Phase	All Categories of Customer	Nu. 100 per meter	Ref Table-9
		3 Phase	Direct Meter Customer	Nu. 100 per meter	Ref Table-9
			LV Customer with LV CT Meter	Nu. 200 per meter	Ref Table-9
			LV Customer with HT CT Meter	Nu. 200 per meter	Ref Table-9
			MV Customer	Nu. 200 per meter	Ref Table-9
			HV Customer	Nu. 200 per meter	Ref Table-9

22	Re-Connection of Supply which was disconnected on Customer's request other than Emergency and surrendering of supply	1 Phase	All Categories of Customer	Nu. 100 per meter	Ref Table-9
		3 Phase	Direct Meter Customer	Nu. 100 per meter	Ref Table-9
			LV Customer with LV CT Meter	Nu. 200 per meter	Ref Table-9
			LV Customer with HT CT Meter	Nu. 200 per meter	Ref Table-9
			MV Customer	Nu. 200 per meter	Ref Table-9
			HV Customer	Nu. 200 per meter	Ref Table-9
23	Penalty for illegally charging of exposed metal parts such as temporary GI fencing and exposing general public, animals and environment to risk of accident and fire by direct tapping of supply or through the meter	1 Phase/ 3 Phase	All Categories of Customer	Nu. 50,000 per instance. For repeating, the supply to the customer shall be permanently disconnected and matter forwarded to BEA for further course of action.	Ref Table-9
24	Sale of service cable	1 Phase/ 3 Phase	All Categories of customer	Cost of cable plus 10% handling charges	Ref Table-9

\* Flat is a self-contained unit/accommodation in one of the storey of a building.

#### 4.4 Reasonability of the Proposed Revision of Miscellaneous Charges

The average rate per hour has been used in deriving the new miscellaneous charges especially for the services under Sl. No. 1 through Sl. No. 10 and Sl. No. 21 through Sl. No. 22. The average rate (Table – 5) is computed by applying the BPC's existing salary structure for employees in grade B1 (Engineer) and below engaged to provide the services. Also in Table-5, employees within certain grade and qualification capable of carrying out specific type of jobs are clubbed together into working groups such as Engineers, Technicians and Linemen/Drivers for averaging their hourly rate.

For others, either BPC's current rates or such charges that is felt reasonable/necessary to cover the cost to improve the system, curb theft and deter illegal activities have been proposed for approval.



**Table -5: Work out of the Mid-Point Average Hourly Rate**

Technical Cadre Designation	Grade	Salary (Structure)	Starting Basic Salary	Final Basic Salary	Monthly Gross Starting Salary (including 23% corporate allowance, 15% PBVA, 1.5 times of basic salary as TAS)	Monthly Gross Final Salary (including 23% corporate allowance, 15% PBVA, 1.5 times of basic salary as TAS)	Mid-Point Average Hourly Rate (considering 8 hrs. daily for 22 working days in a month)	Average for the group	Overall Average
Engineer	B1	21370-535-34745	21370	34,745.0	32161.85	52,291.2	239.92	196.54	145
Associate Engineer	B2	17495-435-28370	17495	28,370.0	26329.975	42,696.9	196.10		
Junior Engineer	B3	16365-410-26615	16365	26,615.0	24629.325	40,055.6	183.76		
Section Officer	B4	14830-370-24080	14830	24,080.0	22319.15	36,240.4	166.36		
Technician - I	C1	13550-340-22050	13550	22,050.0	20392.75	33,185.3	152.21	137.39	
Technician -II	C2	12025-300-19525	12025	19,525.0	18097.625	29,385.1	134.89		
Technician - III	C3	11125-280-18125	11125	18,125.0	16743.125	27,278.1	125.06		
Lineman - III/Tech-III/Drivers	D1	10725-270-17475	10725	17,475.0	16141.125	26,299.9	120.57	101.08	
Lineman - III/Tech-IV/Drivers	D2	10075-250-16325	10075	16,325.0	15162.875	24,569.1	112.88		
Lineman-IV/Tech-IV/Drivers	D3	9155-230-14905	9155	14,905.0	13778.275	22,432.0	102.87		
Asst Lineman/ Asst Technician/ Drivers	D4	8505-215-13380	8505	13,380.0	12800.025	20,136.9	93.57		
Asst Lineman/ Asst Technician/ Drivers	D5	8080-200-13080	8080	13,080.0	12160.4	19,685.4	90.47		
Asst Lineman	G C	7695-190-12445	7695	12,445.0	11580.975	18,729.7	86.11		

The average rates as computed above is minimum and considered reasonable since:

- a) About 50% of the BPC’s employees are aged 36 years (reason for using the mid-point average).
- b) The charges proposed are minimum rounded figures for the group taking up the work including the travel time.

- c) The calculation includes the main expenses on the employees only excluding the expenses on vehicle.
- d) The overall average rate per hour of Nu. 145 is less than the average rate per hour for the service center staff of Electricity Services Division (ESD) office in Thimphu which is Nu. 149 as shown in Table-6 below:

**Table-6: Hourly rate for the service center in Thimphu**

Year	2015	2016	2017
Number of Employees	28	29	29
Employees expenses for the year	9,271,641.45	9,468,471.19	8,378,747
Expenditure/employees	331,130.05	326,499.01	288,922.31
Expenditure/employees/month	27,594.17	27,208.25	24,076.86
Expenditure/employees/day working (considering 22 working days in a month)	1,254.28	1,236.74	1,094.40
Expenditure/employees/hour (assuming 8 hours a day)	156.79	154.59	136.80
<b>Average cost/hour</b>	<b>149</b>		

ESD Thimphu is taken as benchmark as it is one of the most efficient ESD in terms of the customers served per employee. ESD Thimphu's customers served per employee is 222 followed by ESD Paro with 213 while the overall average is 168.5 only as shown in Table-7 below.

**Table-7: Customers Served/Employee of the different ESDs**

Sl. No.	ESD	Customer/Employee	Sl. No.	ESD	Customer/Employee	Sl. No.	ESD	Customer/Employee
1	Bumthang	112.8	8	Pemagatsel	151.3	15	Zhemgang	125.2
2	Dagana	162.1	9	Pling	154.2	16	Trashiyangtse	131.2
3	Gelephu	188.8	10	Punakha	162.7	17	Trongsa	124.6
4	Haa	112.6	11	S'Jongkhar	144.8	18	Tsirang	157.6
5	Lhuntse	118.9	12	Samtse	190.5	19	Wangdue	191.3
6	Mongar	140.7	13	Thimphu	222.1		<b>Average</b>	<b>168.5</b>
7	Paro	213.1	14	Trashigang	181.3			

- e) The time assumed to complete the work (i.e. minimum of 0.5 hr to maximum of 2 hour for the services under Sl. No. 1 through Sl. No. 10 and Sl. No. 21 through Sl. No. 22) is minimal. Some activities especially in the rural areas might take a day or two.

The work involved for each service and rationale behind are given in Table-9. Depending upon the amount of work and complexity involved (especially for the services under Sl. No. 1 through 10 and Sl. No. 20 through 22), a team of lineman, technician or an engineer along with a driver or a suitable combination of lineman, technician, engineer and a driver are proposed. The new charges proposed for the above services are based on the rounded figures for the team engaged to take up the work as shown under in Table-8.

**Table – 8 : Basis for the rounded hourly charges**

Hourly Rate:		Lineman	Driver	Total	Rounded figure proposed	
		101.08	101.08	202.16	200	
		Technician	Driver	Total	Rounded figure proposed	
		137.39	101.08	238.47	200	
Employee	Hour Rate	Technician	Lineman	Driver	Total	Rounded figure proposed
Engineer	196.54	137.39	101.08	101.08	339.55	300
Technician	137.39	Engineer	Lineman	Driver	Total	Rounded figure proposed
Lineman	101.08	196.54	101.08	101.08	398.7	350
Driver	101.08	Engineer	Technician	Driver	Total	Rounded figure proposed
		196.54	137.39	101.08	435.01	400

**Table-9: Work Involved in Each Services and Rationale Behind**

Sl. No	Service	Supply System	Applicable to	Work Involved	Rationale/Justification
1	Charges for Service Cable Connection	1 Phase	All sizes of cables	Connecting the cable at the BPC pole/mini pillar and to the meter	1 Technician & 1 Driver for 0.5 hr including travel time
		3 Phase	16 sq mm upto 35 sq mm (LV)		1 Technician & 1 Driver for 0.75 hr including travel time
			35 sq mm upto 70 sq mm (LV)		1 Technician & 1 Driver for 1 hr including travel time
			Above 70 sq mm (LV)		1 Technician, 1 Lineman & 1 Driver for 1 hr including travel time
			MV/HV Customers (Above 95 sq mm)		1 Engineer, 1 Technician & 1 Driver for 1 hr including travel time
2	Charges for Installation and Connection of Meter	1 Phase	All Categories of Customer	Fixing the meters at appropriate locations and making the necessary connections	1 Technician & 1 Driver for 0.5 hr including travel time
		3 Phase	Direct Meter Customer		1 Technician & 1 Driver for 0.5 hr including travel time
			LV Customer with LV CT Meter		1 Technician & 1 Driver for 0.75 hr including travel time
			LV Customer with HT CT Meter		1 Engineer, 1 Technician & 1 Driver for 1 hr including travel time
			MV Customer		1 Engineer, 1 Technician & 1 Driver for 1 hr including travel time
			HV Customer		1 Engineer, 1 Technician & 1 Driver for 1 hr including travel time



3	Charges for Testing of Earthing Installation	1 Phase/ 3 Phase	All Categories of Customer	Testing of the earthing using a suitable testing equipment	1 Technician & 1 Driver for 0.5 hr including travel time
4	Charges for Testing of Internal Wiring	1 Phase	All Categories of Customer	Testing of the wiring/installation using a suitable testing equipment	1 Technician, 1 Lineman & 1 Driver for 0.5 hr including travel time
		3 Phase	LV/MV/HV		1 Engineer, 1 Technician & 1 Driver for 0.5 hr including travel time
5	Charges for Testing of Service Cable	1 Phase/ 3 Phase	All Categories of Customer	Testing of the wiring/installation using a suitable testing equipment	1 Technician & 1 Driver for 0.5 hr including travel time
6	Charges for Replacement of Meter	1 Phase	All Customer	Disconnecting the supply, removing old meter and fix a new one	1 Technician & 1 Driver for 1 hr including travel time
		3 Phase	Direct Meter Customer		1 Technician & 1 Driver for 1 hr including travel time
			LV Customer with LV CT Meter		1 Technician, 1 Lineman & 1 Driver for 1 hr including travel time
			LV Customer with HT CT Meter		1 Engineer, 1 Technician & 1 Driver for 1 hr including travel time
			MV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time
			HV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time
7	Charges for Testing of Meters	1 Phase	All Categories of Customer	Disconnecting the supply, testing the meter with a suitable testing equipment	1 Technician & 1 Driver for 1 hr including travel time
		3 Phase	Direct Meter Customer		1 Technician & 1 Driver for 1 hr including travel time
			LV Customer with LV CT Meter		1 Technician & 1 Driver for 1 hr including travel time
			LV Customer with HT CT Meter		1 Engineer, 1 Technician & 1 Driver for 1 hr including travel time
			MV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time
			HV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time



8	Charges for Disconnection of Supply due to Default in Payment	1 Phase	All Categories of Customer	Monitoring & disconnect the supply at appropriate location	1 Lineman & 1 Driver for 1 hr including travel time and penalty of Nu. 50
		3 Phase	Direct Meter Customer		1 Lineman & 1 Driver for 1 hr including travel time and penalty of Nu. 50
			LV Customer with LV CT Meter		1 Technician & 1 Driver for 2 hr including travel time and penalty of Nu. 100
			LV Customer with HT CT Meter		1 Technician & 1 Driver for 2 hr including travel time and penalty of Nu. 100
			MV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time and penalty of Nu. 200
			HV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time and penalty of Nu. 200
9	Charges for Reconnection of Supply that was Disconnected due to Default in Payment	1 Phase	All Categories of Customer	Reconnect the supply disconnected	1 Lineman & 1 Driver for 1 hr including travel time and penalty of Nu. 50
		3 Phase	Direct Meter Customer		1 Lineman & 1 Driver for 1 hr including travel time and penalty of Nu. 50
			LV Customer with LV CT Meter		1 Technician & 1 Driver for 2 hr including travel time and penalty of Nu. 100
			LV Customer with HT CT Meter		1 Technician & 1 Driver for 2 hr including travel time and penalty of Nu. 100
			MV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time and penalty of Nu. 200
			HV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time and penalty of Nu. 200



10	Charges for Shifting of Meter	1 Phase	All Categories of Customer	Disconnect the supply, remove the meter and fix it at the new location, make all necessary connections in the meter and reconnect the supply	1 Technician & 1 Driver for 1 hr including travel time
		3 Phase	Direct Meter Customer		1 Technician & 1 Driver for 1 hr including travel time
			LV Customer with LV CT Meter		1 Technician, 1 Lineman & 1 Driver for 1 hr including travel time
			LV Customer with HT CT Meter		1 Engineer, 1 Technician & 1 Driver for 1 hr including travel time
			MV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time
			HV Customer		1 Engineer, 1 Technician & 1 Driver for 2 hr including travel time
11	Charges and Penalty for Theft of Electricity	1 Phase/ 3 Phase	All Categories of Customer	Inspection, detection of fault & levying of penalty	For recovery of loss and as a deterrent
12	Charges for Illegal Re-connection of Supply Disconnected by BPC	1 Phase/ 3 Phase	All Categories of Customer	Monitoring, detection of re-connection & levying of penalty	For loss recovery and as a deterrent
13	Charges for Shifting of Electrical Installation	1 Phase/ 3 Phase	All Categories of Customer/ Applicant	Site survey, estimation & shifting	Customer service and cost recovery
14	Charges for Technical Estimation and Costing	1 Phase/ 3 Phase	All Categories of Customer/ Applicant	Site survey & technical estimation	Customer service and cost recovery
15	Charges for Extension of Power Lines including associated works	1 Phase/ 3 Phase	All Categories of Customer/ Applicant	Site survey, estimation & execution of work	Customer service and cost recovery
16	Penalty Charges for Default in Payment	1 Phase/ 3 Phase	All Categories of Customer	Monitoring & levy of penalty	Timely bill collection and improving cash flow





17	Penalty for Dishonoured Cheque	1 Phase/ 3 Phase	All Categories of Customer	Coordination with the bank and levy of penalty	Penalty for carelessness and as a deterrent
18	Capacity Reserve Charge (CRC)	3 Phase	MV and HV Customer	System study, load sanction & signing of CRC	Optimal utilization of network and for seriousness in drawing power by the agreed deadline
19	Penalty for Meter Damaged/ Burnt by the Customer	1 Phase/ 3 Phase	All Categories of Customer	Inspection, testing, ascertaining the damage & levying of penalty	Cost recovery and to ensure that the meters are taken care by the customers
20	Charges for Drawing Power more than the Contracted Demand	3 Phase	MV and HV Customer	Monitoring & levying of penalty	For improving load factor and making customers draw only the contracted power
21	Charges for Disconnection of Supply Requested by the Customer other than Emergency & surrendering of supply	1 Phase	All Categories of Customer	Disconnect the supply at appropriate location	1 Lineman & 1 Driver for 0.5 hr including travel time
		3 Phase	Direct Meter Customer		1 Lineman & 1 Driver for 0.5 hr including travel time
			LV Customer with LV CT Meter		1 Technician & 1 Driver for 1 hr including travel time
			LV Customer with HT CT Meter		1 Technician & 1 Driver for 1 hr including travel time
			MV Customer		1 Technician & 1 Driver for 1 hr including travel time
			HV Customer		1 Technician & 1 Driver for 1 hr including travel time
22	Charges for Re-Connection of Supply which was disconnected on Customer's Request other than Emergency and surrendering of supply	1 Phase	All Categories of Customer	Reconnect the supply disconnected	1 Lineman & 1 Driver for 0.5 hr including travel time
		3 Phase	Direct Meter Customer		1 Lineman & 1 Driver for 0.5 hr including travel time
			LV Customer with LV CT Meter		1 Technician & 1 Driver for 1 hr including travel time
			LV Customer with HT CT Meter		1 Technician & 1 Driver for 1 hr including travel time
			MV Customer		1 Technician & 1 Driver for 1 hr including travel time
			HV Customer		1 Technician & 1 Driver for 1 hr including travel time



23	Penalty for illegally charging of exposed metal parts such as temporary GI fencing and exposing general public, animals and environment to risk of accident and fire	1 Phase/ 3 Phase	All Categories of Customer	Monitoring, detection & levy of penalty	For safety of general public, animals & environment and strong deterrent to illegal activities. The penalty amount is half the minimum punitive amount imposed to the licensee by BEA for non-compliance
24	Sale of Service cable	1 Phase/ 3 Phase	All Categories of Customer	Purchase, stocking and issue	For maintaining quality and reduce losses

## 5. Submission

Since the last revision of miscellaneous charges in 2010, nine (9) years have passed by the end of 2018. Over the period of more than 9 years now, BPC has witnessed an increase of 91% in the number of customers (BPC had only 101,153 customers in 2010 which has increased to 192,852 as of October 2018). On the infrastructure front, distribution lines increased by 135% (7678.24 km in 2010 has become 18,066.88 in October 2018). Similarly, the distribution transformers increased by 133% (2135 numbers in 2010 has become 4985 in October 2018).

While BPC's customers and asset increased as above, the number of employees increased by only 28% (The total employees in 2010 was 1937 which increased to 2482 by the end of 2017) indicating improvement in efficiency but not without increasing the O&M expenses.

While the increase in O&M expenses are being taken care in the tariff, the revision of miscellaneous charges is proposed mainly for the improvement of services, reduction of bad debt and discouraging the illegal activities, more so as the revision in miscellaneous charges would lead to only minimum increase in revenue. Therefore, BPC would like to submit the same for further review and necessary approval.