BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
AT GANDHINAGAR

PETITION NO. 2191 OF 2023

In the matter of:

Petition under Section 45, 46, 86 and other provisions of the Electricity Act, 2003 read with GERC (Licensee's Power to Recover Expenditure incurred in providing supply and other Miscellaneous Charges) Regulations, 2005 for approval of levy of per kVA based charges from applicant toward expenditure to be incurred by Distribution Licensee for development of underground electrical network for providing power supply at 11 kV / 22 kV voltage level to new HT connection/additional demand.

Petitioner No. 1	:	Paschim Gujarat Vij Company Limited
Represented By	:	Mr. S. N. Parmar and Mr. J. R. Bavaliya
Co-Petitioner No. 1	:	Gujarat Urja Vikas Nigam Limited
Represented By	:	Mr. B. C. Rathore and Mr. D. B. Dixit
Co-Petitioner No. 2	:	Uttar Gujarat Vij Company Limited
Represented By	:	Mr. H. R. Kalasava
Co-Petitioner No. 3	:	Madhya Gujarat Vij Company Limited
Represented By	:	Mr. P. C. Patel
Co-Petitioner No. 4	:	Dakshin Gujarat Vij Company Limited
Represented By	:	Mr. S. P. Chauhan

V/s

Objector No. 1	:	Gujarat Krushi Vij Grahak Suraksha Sangh
Represented By	:	Nobody was present.
Objector No. 1	:	Sachin Industrial Co. Op. Society Ltd.
Represented By	:	Nobody was present.

CORAM:

Pankaj Joshi, Chairman
Hiren Shah, Member
Jatin N. Thakkar, Member

Date: 22/06/2026

ORDER

1. The present Petition has been filed by the Petitioner, Paschim Gujarat Vij Company Limited (PGVCL) along with the Co-Petitioners - Gujarat Urja Vikas Nigam Limited (GUVNL), Madhya Gujarat Vij Company Limited (MGVCL), Uttar Gujarat Vij Company Limited (UGVCL) and Dakshin Gujarat Vij Company Limited (DGVCL), for approval of levy of per kVA based charges from the applicant towards expenditure to be incurred by Distribution Licensee for development of underground (UG) electrical network for providing power supply at 11 kV / 22 kV voltage level to new HT connection / additional demand.

1.1. The Petitioners have submitted that Sections 45 & 46 of the Electricity Act, 2003 empower Distribution Licensees to recover expenditure from a person requiring supply of electricity pursuant to Section 43, any expenses incurred in providing any electrical line or electrical plant used for the purpose of giving power supply.

1.2. In exercise of power conferred under Section 181 read with Sections 45 & 46 of the Electricity Act, 2003, the Commission vide Notification No. 9 of 2005 notified the Gujarat Electricity Regulatory Commission (Licensee's Power to Recover Expenditure incurred in providing supply and other Miscellaneous Charges) Regulations, 2005 (hereinafter referred to as "the Regulation" or "the recovery of expenditure Regulations"). The Commission has, vide Notification no. 3 of 2020 amended the Clause 5 of Chapter V of the Regulations. Amended Provision is as under.

> *"5 (iii) The Distribution Licensee may recover the Charges for seeking new demand/ load extension at HT level on Rs. per kVA/kW basis from prospective applications and may dispense with the preparation of detailed individual estimates depending on technical and other constraints and parameters, if any."*

1.3. Subsequently, the Commission by Order dated 07.07.2020 in the matter of Petition No. 1829 of 2019 has decided per kVA based charges from the HT applicant/ consumer in case of new connection or load extension, as the case may be, for supply of power through Overhead 11/22 kV Distribution network.

1.4. The Petitioners submitted that in terms of the provisions of above regulations, State owned Distribution Licensees are recovering charges for new HT connection/load extension based on actual expenditure incurred as per the prevailing cost data in case of supplying power through Underground 11/22 kV System.

1.5. The DISCOMs are releasing connection, particularly HT connections through Overhead network, recovering the cost on per kVA basis. However, with the increasing length of network, severe RoW and related issues have come up, which ultimately results in either erection of hybrid network i.e. partly overhead and partly underground or wholly underground. It is submitted that as per the present provisions of regulations, the amount of estimate for HT New Connection/Load Extension, in case of underground, is recovered on actual basis.

1.6. This has been resulting into major variations in the estimate amount to be recovered from HT applicant for new connection/additional load. The present provisions of the Regulations providing for recovery of charges on the basis of actual expenditure incurred towards new HT line/substations/ strengthening of line etc., in case of underground network, is resulting into wide variability and non-uniformity in the estimate charges owing to the above factors leading to consumer resentment / grievances.

1.7. The Petitioners submitted that various consumer groups/applicants have been representing to various authorities including at Government of Gujarat level to rationalize and to bring uniformity in the charges to be recovered by Distribution Licensees from applicants for new HT connections / load extension, even in case when power is to be supplied either through hybrid network or wholly through underground network.

1.8. In view of above, there is need to review the present norms for recovery of charges specifically for new HT connections/ load extension when power is to be supplied either through hybrid network or wholly underground network, so as to avoid variability in the charges and to rationalize the same by adopting appropriate methodology / mechanism.

1.9. Under the circumstances, with an aim to bring standardization and simplicity in the charges and also to have uniform applicability of such charges across four DISCOMs, the present petition is preferred seeking approval of the Commission for levy of per kVA based charges from applicant toward expenditure to be incurred by Distribution Licensee for development of underground electrical network for providing power supply at 11 kV/22 kV voltage level to new HT connection/additional demand.

Approach / Methodology for approval of per kVA based charges

2. The Petitioners have submitted that as a part of 'Ease of doing business' and to ensure simplicity, uniformity and acceptability in the estimate charges, it is felt appropriate to suggest for per kVA based estimate charges for new HT connection / load extension when power is to be supplied through hybrid or wholly underground network instead of

present norms of recovery of charges on the basis of actual expenditure incurred by the Distribution Licensee in laying the underground network. The per KVA based estimate charges for HT connections, where power is intended to be supplied through Overhead network are already implemented by Discoms w.e.f. 07.07.2020.

2.1. The Petitioner submitted that the merits enumerated in case of per kVA based recovery of estimate charges for new HT connection / load extension intended to be supplied through overhead network are as under.

- There shall be uniform estimate charges to be recovered from applicants for new HT connection / load extension.
- Release of demand in a time bound manner as a part of "Ease of Doing Business", which will promote industrial development in the state.
- It will be easy for prospective consumers to work out cost towards new connection / additional load.
- Prompt issuance of estimate would be possible.
- Release of connections would be faster as hierarchy of approval will be reduced.
- It will ensure simplicity as the estimate need not to be contain the details of works to be undertaken, no adjustment (Final Bill) shall be required. Hence, work of preparing Final bill will be reduced.

2.2. Under the proposed methodology, the recovery of charges shall be on Rs. per kVA basis from prospective applicants seeking new demand / load extension at HT level and proposed to be worked out as under:

- For determination of per kVA based charges, maximum allowable feeder length considering feeder capacity and permissible HTVR is worked out. Based on permissible feeder length, normative cost of 11 kV / 22 kV feeder is worked out taking into consideration the cost of all possible components of a feeder excluding cost towards Railway Crossing and High Way Crossing for which recovery shall be based on actual expenditure incurred for crossing work. The total normative cost of feeder with allowable feeder length divided by total permissible kVA load that can be catered from such feeder shall be the basis for recovery of per kVA charges irrespective of actual expenditure involved / incurred.
- For determining permissible feeder length, maximum permissible % HTVR is considered at 9% as per the GERC (Standard of Performance) Regulations. Maximum feeder capacity to be considered is 4000 kVA in case of 11 kV feeder and 8000 kVA in case of 22 kV feeder as per Supply Code Regulations. For working of normative feeder cost, all components of feeder including Support Pole / UG cable, VCB, indoor and outdoor cable termination kit, feeder gentry with cross boundary

protection, guarding, tapping, CTPT structure with CTPT and TVM etc. are to be taken in to consideration.

- Considering % HT VR and maximum current capacity of given conductor/cable, the length of the feeder to work out the feeder cost may be taken 11.86 km with 185 sq.mm XLPE Cable.
- The normative feeder cost need has been worked out considering following technical feeder specifications:
    - In case of 11 kV underground line: 185 sq. mm XLPE Cable.
    - UG cable laying is proposed by push-pull method using horizontal drilling machine, HDPE pipe with 110 mm, Nominal Diameter of 5.3 to 6 mm thickness as per IS:4984.
- With above specifications, the Petitioners have calculated and submitted the working of average normative feeder cost for 11 kV Underground cable as per current cost data of respective Discoms as below:

Part A: Sub-station End

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	11 kV Indoor Feeder Breaker Panel (VCB) at S/S end including one Indoor Cable Box & one Outdoor Cable Box – As per latest rate provided by GETCO	562877	Nos.	1	562877
2	Labour Charges for Installation of 11 kV Indoor Feeder Breaker Panel - VCB	2894	Nos.	1	2894
3	Labour Charges for providing 11 kV Indoor Cable Box 185 Sq. mm (Termination Kit)	2833	Nos.	1	2833
4	Labour Charges for providing 11 kV Outdoor Cable Box 185 Sq. mm (Termination Kit)	2833	Nos.	1	2833
5	11 kV DP Structure with HG Fuse & AB Switch using 9 Mtr. RSJ Poles	80092	Nos.	1	80092
6	11 kV XLPE aluminium 3 core cable 185 mm2 (Open excavation)	1010	Mtr.	100	101000
7	**Sub Total - A**				752529
8	**22% charges on item at Sr. No. 6 (15% GEC, 2% Vehicle T&P, 2% Storage, 3% Contingencies)**				22220
9	**15% Supervision Charge on item at Sr. No. 2, 3 & 4**				1284

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
10	**18% GST on item at Sr. (As Materials cost and Labour cost are including Tax)**				0
11	**Labour Charges for Installation of VCB & Cable laying (separate Table as below - SS level labour charge)**				55908
12	**Total Part A with all charges**				**831941**

SS level Labour Charge (Break-up of Sr. No. 11 above)

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	Excavation of trench 0.5 mtr wide & 1 mtr deep for UG cable for Loop	106	RMtr	80	8480
2	Laying / Relaying of cable in Cable trench & from ground level to pole structure	43	Mtr	100	4300
3	Supply of half round RCC hume pipe 6" internal dia & length of 1 Mtr.	100	RMtr	160	16000
4	Supply of sand 0.300×0.750×1.00 mtr (Layer at bottom of cable trench approximately 0.225 cmt) As per Drg. No MGVCL/Tech/UG Cable/02/12-13	166	Mtr	80	13280
5	Supply of medium grade GI pipe of size 4" dia (Including clamping the cable with pole)	445	Nos.	2	890
6	Moulding of cable joint (St. joint + indoor + outdoor) for XLPE cable - labour	2833	Nos.	2	5666
7	**Sub Total – C**				48616
8	**15% Supervision Charge**				7292
9	**Total part C with all charges**				**55908**

Part B: Line Charge

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	11 kV DP Structure with HG Fuse & AB Switch using 9 Mtr. RSJ Poles	80092	Nos.	13	1041196
2	11 kV DP Structure with HG Fuse & AB Switch for CTPT using 9 Mtr. RSJ Poles	91595	Nos.	8	732760

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
3	11 kV XLPE aluminium 3 core cable excluding laying 185 mm2	1010	Mtr.	12060	12180600
4	Straight Joint 185 mm2	3186	Nos.	38	121068
5	11 kV Outdoor Cable Box 185 mm2	1073	Nos.	40	42920
6	**Sub Total – B**				14118544
7	**22% charges on item at Sr. No. 3, 4 & 5 (15% GEC, 2% Vehicle T&P, 2% Storage, 3% Contingencies)**				2715809
8	**15% Supervision Charge**				0
9	**18% GST (Materials cost and Labour cost are including Tax)**				0
10	**Total Part B with all charges**				**16834353**

Part C: Labour Charge

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	Laying of U/G 11 kV XLPE cable by Push & Pull method (By Horizontal Directional MACHINE thru with HDPE pipe 110 mm Diameter, 5.3 to 6 mm thickness or 4” diameter GI Pipe without damaging surface of the road by horizontal boring drilling method (Excluding cost of HDPE pipe 4"GI Pipe) as per Drawing & Specification	327	Mtr	11232	3672864
2	Supply of HDPE pipe of 6.11 kg/cm2, 110 mm DIA & 8.5 mm thickness, class-4, green colour for laying of underground cable up to 185 mm2	296	Rmtr	11232	3324672
3	Excavation of trench 0.5 mtr wide & 1 mtr deep for U/G cable for Loop	106	RMtr	545	57770
4	Laying/Relaying of cable in Cable trench & from ground level to pole structure	43	Mtr	828	35604
5	Supply of half round RCC hume pipe 6” internal dia & length of 1 Mtr.	100	RMtr	1090	109000
6	Supply of sand 0.300×0.750×1.00 mtr (Layer at bottom of cable trench approximately 0.225 cmt) As per Drg. No MGVCL/Tech/UG Cable/02/12-13	166	RMtr	545	90470
7	Supply of medium grade GI pipe of size 4” dia (Including clamping the cable with pole)	445	Mtr	140	62300

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
8	Moulding of cable joint (St. joint + indoor + outdoor) for XLPE cable labour	2833	Nos.	78	220974
9	Providing & supplying, fixing route marker of C.C.1:2:4, 150 mm x 150 mm x 750 mm concrete stone (MGVCL marked with approved yellow colour) embedded in Earth at least 300 mm below the G.L. & 450 mm above G.L. at distance approx. 100 Mtr. or as directed by engineer in charge. (This Includes material & Labour charges for excavation & refilling)	138	Nos.	113	15594
10	Preparation and submission of 6 Nos of copies of complete layout drawing with GIS mapping as per actual cable route	1047	Km	11.5	12041
11	Testing or cable at various points and commissioning of feeder	40000	Nos.	8	320000
12	Providing and fixing of pipe type earthing	935	Nos.	4	3740
13	**Sub Total – C**				7925029
14	**15% Supervision Charge in item at Sr. 13**				1188754
15	**18% GST on item at Sr. (As Materials cost and Labour cost are including Tax**				0
16	**Any other charges on item at Sr.**				0
17	**Total Part C with all charges**				**9113783**

Part D: RMU

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	Supply, Installation and commissioning of RMU on plinth Configuration - 11 kV RRL Type (3 way)	489995	Nos.	2	979990
2	Construction of plinth for RMU – 11 kV RRL Type (3 way)	52810	Nos.	2	105620
3	**Additional charges, 18% GST on item at Sr. 2**				
4	**Total Part D with all charges**				**1085610**

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
Total Part A + Part B + Part C + Part D					27865688
1	**Service Connection Charge (with 18% GST)**	10620	Nos.	8	84960
2	**Total Charge with Service Connection Charge for 4000 kVA**				27950648
Per kVA Charge (Sr. No. 2 / 4000)					**6988**

% HTVR Calculation

KM	KVA	CUMM. KVA	KVA*KM	Section Amp	Cond Type
11.860	4000	4000	47440	210.0	XLPE 185 mm2

Assumption Made in Calculation
Conductor Constant: 5275 (For 185 mm2 XLPE) @ 0.8 PF

Feeder Name	11 kV Propose
Feeder Category	Ind
Sub-Station	66 kV Existing
Connected kVA (P)	4000
Max Ampere	0
Proposed kVA	4000
Proposed Amp	210
Total Load	210

Main Length (km)	**11.86**
Diversity Factor (DF)	**1.00**
kVA x Km (XLPE 185 mm2)	**47440**
% HTVR	**9.00**

% HT VR = (KVA*KM)/(DF*Conductor constant)
9 = (4000*km)/1*5275
km = 11.86875
p = Root3*VIcosFi
4000 = 1.73*11*I*1
4000 = 19.03*I
I = 210

- Based on normative average feeder cost and load catering capacity of 4000 kVA, the per kVA cost is worked out as under:

Particulars	Fix per kVA cost
11 kV Underground network up to 4000 kVA load & 22 kV Underground network up to 8000 kVA load	6988 Rs./kVA

The Discoms have very limited 22 kV network, therefore, to avoid complications in calculations and recovery of the cost, in case of 22 kV power demand also, per kVA cost worked out for 11 kV network will be recovered.

2.3. In terms of above, the per kVA charges works out to Rs. 6988/- per kVA for providing power supply at 11 / 22 kV having underground cable network.

2.4. The Petitioners propose to approve above charges applicable from the date of the Order of the Commission and shall be remained effective up to the end of financial year. It is further submitted that as per the cost data which will be prevailing in all Discoms at the end of every financial year (i.e. March of respective year), per kVA charges shall be revised every year based on above methodology. Further, the order shall be applicable to applicants to whom estimates are not issued on the date of the Order of the Commission.

2.5. The Petitioner submitted that the per kVA based estimate charges as worked out as per above methodology shall be applicable with following terms and conditions:

(i) It will be applicable for HT load demand up to 4000 kVA at 11 kV and up to 8000 kVA at 22 kV network and not for EHT load demand.

(ii) Per kVA charge is in lieu of infrastructure to be developed by Discoms only. Since, Discoms have very minimal HT Underground network, therefore, it would be prerogative of Discoms as to whether power supply is to be given through overhead network or underground network.

(iii) In addition to above mentioned Per kVA Charges, the GETCO Pro-rata Charges and line strengthening charges of GETCO as per prevailing practice of GETCO are required to be recovered from the prospective HT Consumers.

(iv) Proposed per kVA charges shall be applicable to all applicants demanding for new or additional load in future and it shall be same for new as well as additional load demand.

(v) For erecting HT line and deciding per kVA cost for new/additional load using underground network, cable having size of 185 mm2 is suggested.

(vi) For UG cable laying by push-pull method using horizontal drilling machine, HDPE pipe with 110 mm, Nominal Diameter of 5.3 to 6 mm thickness is suggested and for laying of cable by way of manual excavation, half round RCC hume pipe with 6" internal diameter and 1 mtr. length is suggested for underground cable.

(vii) For finalizing per kVA cost, rate for cable laying is considered as per present practice prevailing in Discoms i.e. by Push through Method using Horizontal Augur Boring Machine and by manual excavation.

(viii) Cost of Railway/Road/Canal etc. crossing will be recovered additionally as per actual wherever applicable.

(ix) If erection of underground line is more than 11 km for any connection, in such case additional cost towards line in excess of 11 km shall be recovered from the applicant.

(x) In case of erection of new underground line for a proposed group of more than one connection, actual cost of line in excess of 11 km shall be recovered proportionately from all applicants over and above Per kVA based charges.

(xi) In case of requirement for erection of hybrid type network (i.e. partly overhead and partly underground) for proposed HT line, per kVA fix charges shall be taken proportionately as per proposed line length i.e. if total proposed load demand is 1500 kVA and total proposed line length is 2000 mtr. and which covers 40% overhead portion (800 mtr.) and 60% underground portion (1200 mtr.), then to find out total estimated cost, charges for 600 kVA (40% of 1500) shall be taken as per overhead fix per kVA cost and charges for remaining 900 kVA (60% of 1500) shall be taken as per underground fix per kVA cost.

(xii) Similarly, if total proposed load demand is 1500 kVA and total proposed line length is 8000 mtr. and which covers 80% overhead portion (6400 mtr.) and 20% underground portion (1600 mtr.), then to find out total estimated cost, charges for 1200 kVA (80% of 1500) shall be taken as per overhead fix per kVA cost and charges for remaining 300 kVA (20% of 1500) shall be taken as per underground fix per kVA cost. Here, as overhead line length 6.4 km is more than 5.5 km, as per prevailing practice, actual cost for overhead line more than 5.5 km i.e. 0.9 km (6.4-5.5=0.9 km) should be charged extra from applicant.

(xiii) Since the recovery of charges is on Per kVA basis irrespective of actual cost involved for release of new connection / additional demand, work under Option-II shall not be permitted.

(xiv) The respective consumer is required to pay charges separately towards way leave, deforestation, GIDC permission etc.

(xv) The Discoms have very limited 22 kV network, therefore, to avoid complications in calculations and recovery of the cost, in case of 22 kV power demand also, per kVA cost worked out for 11 kV network will be recovered.

a) It is proposed to recover actual cost from the prospective consumer in the following conditions:

b) For customized request like shifting of metering point, conversion of existing overhead network by either AB cable or Underground cable.

c) Where separate infrastructural network developed under Critical Infrastructure Project, where Government's / Developer's contribution is involved, since specialized network with RCC Trench, special equipment such as Ring Main Unit (RMU), HTMC (with VCB/LBS with CTPT in one closed unit installation on plinth level) etc.

d) Towards way leave, deforestation, GIDC permission etc.

2.6. While deciding the fixed cost on kVA basis in case of Overhead network, the Commission has allowed Discoms to recover the actual cost in case if Underground network is required to erect. In order to streamline the cost recovery in such eventuality, it is proposed to allow Discoms to recover the charges for underground network as proposed at point 2.5 (xii) above.

2.7. Under the provisions of Section 45, 46 and 86 of the Electricity Act, 2003 read with the GERC (Licensee's Power to Recover Expenditure incurred in providing supply and other Miscellaneous Charges) Regulations, 2005, the Commission has jurisdiction and authority to entertain the present petition and approve levy of per kVA based charges from applicant toward expenditure to be incurred by Distribution Licensee for development of electrical network for providing power supply at 11 kV / 22 kV voltage level to new HT connection/additional demand.

2.8. The Petitioners have prayed as under:

i. To take on record the present petition.

ii. To allow recovery of Per kVA based estimate charges for release of new HT connection / load extension through underground system.

iii. To approve the methodology for determination of Per kVA based estimate charges for new HT connection / load extension as mentioned in the Petition.

iv. To decide recovery of Per kVA rate of Rs. 6,988 per kVA for release of new HT connection / load extension with 11 / 22 kV up to 11 km underground network.

v. To continue recovery of actual expenditure in case of Underground network above 11 km, or as specifically mentioned in the Petition.

vi. To allow recovery of fixed cost on per kVA basis as proposed in case if the Underground network is required to be erected along with the Overhead network.

vii. To allow for revision in Per kVA based estimate charges every year based on current year standard cost data of DISCOMs prevailing in the month of March for its applicability for ensuing year.

3. The Commission, vide Daily Order dated 18.03.2023, for the hearing held on 15.03.2023, admitted the present petition in view of Clause 5 (iii) and (iv) of GERC (Licensee's Power to Recover Expenditure incurred in providing Supply and other Miscellaneous Charges) (Second Amendment) Regulations, 2020.

3.1. In compliance to the Commission's directives vide Daily Order dated 18.03.2023, the Petitioners have uploaded the petition on their website and invited comments and suggestions from stakeholders and also issued public notice dated 25.03.2023 in Indian Express (English newspaper) and Gujarat Samachar and Sandesh (Gujarati Newspapers).

3.2. Gujarat Krushi Vij Grahak Suraksha Sangh (GKVGSS) and Sachin Industrial Co. Op. Society Ltd. have filed their objections / suggestions / comments in the present Petition.

4. The Commission, vide Daily Orders dated 18.03.2023 and 16.02.2024, had directed the Petitioners to submit justification with regard to uniform cost proposed for 11 kV and 22 kV voltage class, i.e. Per kVA charges of Rs. 6,988/- per kVA for providing power supply at 11/22 kV having underground cable network with all relevant details. Moreover, the Petitioners were directed to submit justification for working out the length of feeder i.e. 11.86 Km for both types of 11 kV / 22 kV underground network. The Petitioners were also directed to provide the justification with calculation to arrive at uniform per kVA charges of Rs. 6,988/- for supplying power to HT applicants with feeder length of 11.86 Km on 185 sq.mm. XLPE cable with allowable % HTVR for both 11 kV and 22 kV underground cable networks.

4.1. In this regard, the Petitioner, vide affidavit dated 01.06.2023, has submitted that Discoms are releasing connection, particularly HT connections through 11 kV / 22 kV network. Discoms have very limited 22 kV network compared to 11 kV network. Due to limited 22 kV network, number of HT connections released on 22 kV network are very less compared to HT connections released on 11 kV network, i.e. out of total 312 nos. of new HT connection / load extension released through underground network during last 3 years, only 11% connections are released on 22 kV network. Further, nowadays Discoms approach is for conversion of existing 22 kV network to 11 kV network. New substations proposed are with 11 kV network system only. Hence, within time span, 22 kV network are in reducing trend and may diminish in future. Therefore, to avoid complications in calculations and recovery of the cost, in case of 22 kV power demand also, per kVA cost worked out for 11 kV network will be recovered.

4.2. Moreover, the Petitioner vide affidavit dated 16.03.2024, submitted that the Commission has approved similar approach and allowed Discoms to recover same rate for supply at 22 kV Overhead systems while approving per kVA cost to be recovered from 11 kV HT consumers to be supplied though overhead system vide Order dated 07.07.2020 in Petition No. 1829 of 2019.

4.3. However, following the same approach as proposed in petition for 11 kV Underground cable network, calculation of per kVA charges for the HT consumers to be supplied through 22 kV Underground cable network is submitted by the Petitioners as below.

Part A: Sub-station End

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
1	22 kV Indoor Feeder Breaker Panel (VCB) at S/S end including one Indoor Cable Box & one Outdoor Cable Box – As per latest rate provided by GETCO	1343630.6	Nos.	1	1343630.6	GETCO End Cost	
2	Labour Charges for Installation of 11 kV Indoor Feeder Breaker Panel - VCB	2309.2	Nos.	1	2309.2	Cost as per GETCO with GST	
3	Labour Charges for providing 22 kV Indoor Cable Box 185 Sq. mm (Termination Kit)	4565	Nos.	1	4565	DGVCL Cost data - Labour rate UG Cable - 2019-20	Including supply and labour
4	Labour Charges for providing 22 kV Outdoor Cable Box 185 Sq. mm (Termination Kit)	4565	Nos.	1	4565	DGVCL Cost data - Labour rate UG Cable - 2019-20	Including supply and labour
5	22 kV DP Structure with HG Fuse & AB Switch using 9 Mtr. RSJ Poles	123409	Nos.	1	123409.3827	DGVCL Cost data – HT 2023-24	Including material charges with 22% charges + labour charges with 15% supervision charges and GST
6	22 kV XLPE aluminium 3 core	1323	Mtr.	100	132300	DGVCL Cost data	

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
	cable 185 mm2 (Open excavation)					- UG Cost data 2023-24	
7	**Sub Total - A**				1610779.183		
8	**22% charges on item at Sr. No. 6**				29106		
9	**15% Supervision Charge on item at Sr. No. 3 & 4**				1370		
10	**18% GST on item at Sr. (As Materials cost and Labour cost are including Tax)**				1643		
11	**Labour Charges for Installation of VCB & Cable laying (separate table as below - SS level labour charge)**				69044		
12	**Total Part A with all charges**				**1711942**		

Discoms DGVCL - Labour Charges for Installation of VCB &Cable laying (Break up of Sr. No. 11 above)

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	Excavation of trench 0.5 mtr wide & 1 mtr deep for UG cable for Loop	106	RMtr	80	8480
2	Laying / Relaying of cable in Cable trench & from ground level to pole structure	193	Mtr	100	19300
3	Supply of half round RCC hume pipe 6” internal dia & length of 1 Mtr.	100	RMtr	160	16000
4	Supply of sand 0.300×0.750×1.00 mtr (Layer at bottom of cable trench approximately 0.225 cmt) As per Drg. No MGVCL/Tech/UG Cable/02/12-13	166	Mtr	80	13280
5	Supply of medium grade GI pipe of size 4” dia (Including clamping the cable with pole)	445	Nos.	2	890
6	Moulding of cable joint (St. joint + indoor + outdoor) for XLPE cable - labour	1044	Nos.	2	2088
7	**Sub Total – C**				60038
8	**15% Supervision Charge**				9006
9	**Total part C with all charges**				**69044**

Part B: Line Charge

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
1	22 kV DP Structure with HG Fuse & AB Switch using 9 Mtr. RSJ Poles	123409	Nos.	23	2838415.801	DGVCL Cost data - HT (Inclusive material charges with 22% charges + labour charges with 15% supervision charges and GST)	8*2 = 16 consumers end +1 S/S end + 2 (Line isolation) + 4 for RMU End = 16+1+2+4 = 23
2	22 kV DP Structure with HG Fuse & AB Switch for CTPT using 9 Mtr. RSJ Poles	123409	Nos.	16	1974550.123		8*2 = 16 consumers end
3	22 kV XLPE aluminium 3 core cable excluding laying 185 mm2	1323	Mtr.	25932	34308036	DGVCL Cost data - UG Cost Data 2023-24 - material charge + GST	Max Allowable Length as per HTVR = 23996 mtr + @ 400 mtr for 4 RMU connection = 24396 mtr + 1536 loop and on DP = 25932
4	Supply and fixing of 22 kV Straight Joint 186 mm2	8491	Nos.	78	662298		23996 / 300 Less 2 (Line end) SS: 80 - 2 = 78
5	Supply and fixing of 22 kV Out door Cable box 185 mm2 - END TERMIATION	4565	Nos.	74	337810		46 for 23 DP 2 way + 16 consumer DP one way + 12 RMU end one way = 74
6	**Sub Total – B**				40121109.92		
7	**22% charges on item at Sr. No. 3, 4 & 5**				7547768		
8	**15% Supervision Charge**				150016		
9	**18% GST (Materials cost and Labour cost are including Tax)**				180019		
10	**Total Part B with all charges**				**47998913**		

Part C: Labour Charge

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
1	Laying of U/G 11 kV XLPE cable by Push & Pull method (By Horizontal Directional MACHINE) thru with HDPE pipe 110 mm Diameter, 5.3 to 6 mm thickness or 4" diameter GI Pipe without damaging surface of the road by horizontal boring drilling method (Excluding cost of HDPE pipe 4"GI Pipe) as per Drawing & Specification	311	Mtr	22860	7109460	DGVCL Cost data - Labour rate UG Cable - 2019-20	Total Length - (St Joint Loop (78 × 10 mtr = 780 mtr) - For 23 DP vertical dist. ((23 × 2) X 7 mtr = 322 mtr) - For 16 DP consumer end vertical dist. (16 × 7 mtr = 12 mtr) - For SS DP vertical dist. (1 x 7 = 7 mtr) - For loop near DP ((23 × 2 × 5mtr = 230 mtr) - For loop near TPT structure pole (16 × 5 mtr = 80 mtr) - For loop near SS DP (1 x 5 mtr) = 5 mtr 24396 - 1536 (780 + + 322 + 112 + 7 + 230 + 80 + 5) = 22860
2	Supply of HDPE pipe of 6.11 kg/cm2, 110 mm DIA & 8.5 mm thickness, class-4, green colour for laying of underground cable up to 185 mm2	290	Rmtr	22860	6629400	DGVCL Cost data - Labour rate UG Cable - 2019-20	As above
3	Excavation of trench 0.5 mtr wide & 1 mtr deep for U/G cable for Loop	53	RMtr	1095	58035	DGVCL Cost data - Labour rate UG Cable - 2019-20	(St Joint Loop (78 × 10 mtr = 780 mtr) + For loop near DP ((23 x 2 x 5 mtr = 230 mtr) + For loop near CTPT structure pole (16 × 5 mtr = 80 mtr) + For loop near SS DP (1 x 5 mtr = 5 mtr) 780 + 230 + 80 + 5 = 1095
4	Labour charge for laying of 11 kV / 22 kV XLPE Cable of size up to 240 mm2 & preparation of	125	RMtr	1095	136875	DGVCL Cost data - Labour rate UG	(St Joint Loop (78 × 10 mtr = 780 mtr) + For loop near DP

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
	sand layer 100 mm thick, in the cable trench & covering the cable with 150 mm dia (Outer), thickness 25 mm, 1.0 meter long RC half round muffs and providing and fixing of 4 inch width yellow colour tape with printing "CAUTION ELECTRIC CABLE BELOW" at 0.75 m depth from ground surface after laying cable in trench. This will provide indication that electric cable is passing underground so as to protect cable from mechanical injuries, refilling the same, as per Instruction of Engineer in Charge (EIC)					Cable - 2019-20	((23 x 2 x 5 mtr = 230 mtr) + For loop near CTPT structure pole (16 × 5 mtr = 80 mtr) + For loop near SS DP (1 x 5 mtr = 5. Mtr) 780 + 230 + 80 + 5 = 1095
5	Labour charge for erecting of 11 kV / 22 kV XLPE cable of size un to 240 mm2 on DP Structure with fixing of 02 Nos polymer cleats on top and middle part. Polymer cleats, nut bolts etc. fixing material to be provided by contractor	433	Per job	62	26846	DGVCL Cost data - Labour rate UG Cable - 2019-20	
6	Providing & fixing of 6.11 kg/cm2 class-4 Green color, 110 mm O.D., 8.5 mm thickness HDPE pipe confirms to SI 4984 and BIS certification the erected DP structure for the mechanical protection of cable by inserting the cable inside HDPE pipe.	1070	Per job	62	66340	DGVCL Cost data - Labour rate UG Cable - 2019-20	

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
	The HDPE pipe shall be erected in such a way that 300 mm shall be below the ground level and the rest 2700 mm shall be supported on the Structure with 01 No Polymer cleat. All materials including polymer cleat and Nut bolt to be provided by contractor.						
7	Providing & fixing concrete stone route marker of 300 mm width x 150 mm thick ×650 mm height embedded in earth at least 300 mm below & 350 mm above ground level respectively at distance approx. 50 meters along the length of cable. The RC concreting (1:2:4) (all necessary materials will be in bidder's scope) of route marker is to be carried out 300 mm width × 150 mm thick × 300 mm below ground level as per instruction of EIC. The route marker should be with name of company with approved yellow colour - DGVCL. The distance from marker to cable and cable depth with feeder name etc., marked with arrow sign is to be painted on it. The route marker is to be fixed at location near to any fixed permanent location (not necessary to fix	327	Nos.	240	78480	DGVCL Cost data - Labour rate UG Cable - 2019-20	1 Nos per 100 mtr = 23996 / 100 = 240

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
	exact on top of cable) as per instruction of EIC.						
8	Preparation and submission of 6 (six) copies of complete layout drawings with GIS mapping as per actual cable routing showing road crossing, HDPE pipe sleeving, jointing locations, markers etc	1713	Nos.	1.0	1713	DGVCL Cost data - Labour rate UG Cable - 2019-20	
9	Testing of cable at various points and commissioning the feeder as per instruction of engineer-in-charge. Test result shall be submitted by contractor with bill.	1557	Nos.	39	60723	DGVCL Cost data - Labour rate UG Cable - 2019-20	
10	Providing and fixing of pipe type earthing from 80 mm dia class-B GI pipe with pit to be filled with salt & coke and construction of chamber as per DGVCL Drg. No. dg /100 for DP and cable. The earthing pit should be joined with cable by G.I. strip of size "1 width & 2 mm thick. All material GI pipe, Coke, Salt etc will be supplied by bidder.	2663	Nos.	39	103857	DGVCL Cost data - Labour rate UG Cable - 2019-20	
11	**Sub Total – C**				14271729		
12	**15% Supervision Charge in item at Sr. 13**				1146092		
13	**18% GST on item at Sr. (As Materials cost and Labour cost are including Tax**				1375311		
14	**Any other charges on item at Sr.**				0		
15	**Total Part C with all charges**				**16793132**		

Part D: RMU

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
1	Supply, Installation and commissioning of RMU on plinth Configuration - 22 kV RRL Type (3 way)	731218.86	Nos.	4	2924875.44	DGVCL Cost data - HT	
2	Labour for Installation, testing and commissioning of RMU on plinth	53000	Nos.	4	212000	DGVCL Cost data – HT	
3	Labour for Construction of plinth for RMU - 11 KV RRL Type (3 way)	23296.61	Nos.	4	93186.44	DGVCL Cost data – HT	
4	**22% charges on item at Sr. no. 1**				643472.5968	DGVCL Cost data	
5	**15% Supervision Charge on Sr. no. 2 & 3**				45778		
6	**18% GST on labour portion Sr. 2, 3**				54934		
7	**Total Part D with all charges**				3974246.002		

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
Total Part A + Part B + Part C + Part D					70478234		
1	**Service Connection Charge (with 18% GST)**	10620	Nos.	16	169920		
2	**Total Charge with Service Connection Charge for 8000 kVA**				70648154		
Per kVA Charge (Sr. No. 2 / 8000)					**8831**	**Rate is derived considering single circuit cable for HT line**	

% HTVR Calculation

KM	KVA	CUMM. KVA	KVA*KM	Section Amp	Cond Type
23.996	8000	8000	191968	210.0	XLPE 185 mm2

Assumption Made in Calculation
Conductor Constant: 21330 (For 185 mm2 XLPE) @ 0.8 PF

Feeder Name	22 kV Propose
Feeder Category	Ind
Sub-Station	66 kV Existing
Connected kVA (P)	8000
Max Ampere	0
Proposed kVA	8000
Proposed Amp	210
Total Load	210

Main Length (km)	**24.00**
Diversity Factor (DF)	**1.00**
kVA x Km (XLPE 185 mm2)	**191968**
% HTVR	**9.00**

% HT VR = (KVA*KM)/(DF*Conductor constant)
9 = (8000*km)/1*21330
km = 23.99625
p = Root3*VIcosFi
8000 = 1.73*22*I*1
8000 = 38.06*I
I = 210

4.4. The Petitioner submitted that the rates as derived may be approved for the HT consumers for supply at 22 kV level.

5. The Commission, in its Daily Order dated 31.08.2024, observed that the Petitioners have considered 185 sq. mm. cable to be laid at sub-station end, whereas cable considered at sub-station end is of 240 sq. mm. size in Petition No. 1829 of 2019, filed for determination of per kVA charges for 11 kV overhead network. It is also mentioned in the present Petition that in case of hybrid network, proportionate cost corresponding to overhead and underground length of line will be recovered from the prospective applicants. In such a situation, there will be a different kind of recovery in respect to cable to be utilised at sub-station end. The Commission directed the Petitioners to give detailed justification in this regard.

5.1. Further, the Commission observed that the per kVA charges proposed for underground network in the present Petition includes the cost at sub-station end. Similarly, the same cost i.e. cost at sub-station end also included in the per kVA charges for overhead network determined by the Commission vide order dated 07.07.2020 in Petition No. 1829 of 2019. Under these circumstances, it would be a duplicate recovery against the costs at

sub-station end in case of hybrid network erection. The Commission directed the Petitioners to also clarify on this aspect.

5.2. In this regard, the Petitioner, vide affidavit dated 13.09.2024 has submitted as under:

5.2.1. Consideration of Length for determining the charge of Rs. 6988/kVA for underground network.

- The Petitioner has submitted that the methodology adopted for the recovery of charges on per kVA basis from prospective applicants seeking new demand / load extension at the HT level aligns with the methodology approved by the Commission for the recovery of charges on per kVA basis for the overhead network in Petition No. 1829 of 2019.

- If methodology once approved for recovery of per kVA charges for overhead network is deviated, there will be discrimination in recovery of per kVA charges in case of erection of Hybrid network.

- Therefore, to avoid discrimination in recovery of per kVA charges from prospective applicants seeking new demand/load extension at HT level involving Hybrid network, the methodology already approved by the Commission for the overhead network in Petition No. 1829 of 2019 is adopted. Accordingly, a length of 11.86 km underground line with 185 sq. m cable is considered.

5.2.2. Consideration of different Cable size at Sub Station end in Overhead Network and Underground Network.

- The Petitioner submitted that the Petition No. 1829 of 2019 was filed for determination of per kVA charges for the 11 kV overhead network with a cable size of 240 sq.mm at the sub-station end. The overhead network conductor can be easily upgraded with a conductor of higher current-carrying capacity whereas it is not possible to replace sub-station end cable with a larger size to maintain the % VR as per GERC norms.

- In the present Petition, 185 sq. mm cable at the sub-station end is considered for the determination of per kVA charges for the underground network from prospective applicants seeking new demand / load extension at the HT level, as it is not feasible to replace the underground cable of 11 kV feeder with a higher-rated cable. Additionally, there is a minor cost difference between the 185 sq.mm cable and the 240 sq. mm cable at the sub-station end. If a 240 sq. mm cable is proposed at the sub-station end, per kVA charge is calculated as Rs. 6,993 compared to Rs. 6,988 for the 185 sq. mm cable.

- As the cost difference per kVA is very marginal, 185 sq. mm cable at the sub-station end is considered. However, the Commission may consider per kVA charges using 240 sq. mm cable at the sub-station end to avoid any variation in recovery at the sub-station end.

- The calculations for per kVA cost using the 240 sq. mm cable is submitted by the Petitioner as below:

Part A: Sub-station End

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	11 kV Indoor Feeder Breaker Panel (VCB) at S/S end including one Indoor Cable Box & one Outdoor Cable Box – As per latest rate provided by GETCO	562877	Nos.	1	562877
2	Labour Charges for Installation of 11 kV Indoor Feeder Breaker Panel - VCB	2894	Nos.	1	2894
3	Labour Charges for providing 11 kV Indoor Cable Box 240 Sq. mm (Termination Kit)	2833	Nos.	1	2833
4	Labour Charges for providing 11 kV Outdoor Cable Box 240 Sq. mm (Termination Kit)	2833	Nos.	1	2833
5	11 kV DP Structure with HG Fuse & AB Switch using 9 Mtr. RSJ Poles	80092	Nos.	1	80092
6	11 kV XLPE aluminium 3 core cable 240 mm2 (Open excavation)	1184	Mtr.	100	118400
7	**Sub Total - A**				769929
8	**22% charges on item at Sr. No. 6 (15% GEC, 2% Vehicle T&P, 2% Storage, 3% Contingencies)**				26024
9	**15% Supervision Charge on item at Sr. No. 2, 3 & 4**				1284
10	**18% GST on item at Sr. (As Materials cost and Labour cost are including Tax)**				0
11	**Labour Charges for Installation of VCB & Cable laying**				55908
12	**Total Part A with all charges**				**853169**

Part B: Line Charge

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	11 kV DP Structure with HG Fuse & AB Switch using 9 Mtr. RSJ Poles	80092	Nos.	13	1041196
2	11 kV DP Structure with HG Fuse & AB Switch for CTPT using 9 Mtr. RSJ Poles	91595	Nos.	8	732760

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
3	11 kV XLPE aluminium 3 core cable excluding laying 185 mm2	1010	Mtr.	12060	12180600
4	Straight Joint 185 mm2	3186	Nos.	38	121068
5	11 kV Outdoor Cable Box 185 mm2	1073	Nos.	40	42920
6	**Sub Total – B**				14118544
7	**22% charges on item at Sr. No. 3, 4 & 5 (15% GEC, 2% Vehicle T&P, 2% Storage, 3% Contingencies)**				2715809
8	**15% Supervision Charge**				0
9	**18% GST (Materials cost and Labour cost are including Tax)**				0
10	**Total Part B with all charges**				**16834353**

Part C: Labour Charge

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	Laying of U/G 11 kV XLPE cable by Push & Pull method (By Horizontal Directional MACHINE thru with HDPE pipe 110 mm Diameter, 5.3 to 6 mm thickness or 4" diameter GI Pipe without damaging surface of the road by horizontal boring drilling method (Excluding cost of HDPE pipe 4"GI Pipe) as per Drawing & Specification	327	Mtr	11232	3672864
2	Supply of HDPE pipe of 6.11 kg/cm2, 110 mm DIA & 8.5 mm thickness, class-4, green colour for laying of underground cable up to 185 mm2	296	Rmtr	11232	3324672
3	Excavation of trench 0.5 mtr wide & 1 mtr deep for U/G cable for Loop	106	RMtr	545	57770
4	Laying/Relaying of cable in Cable trench & from ground level to pole structure	43	Mtr	828	35604
5	Supply of half round RCC hume pipe 6" internal dia & length of 1 Mtr.	100	RMtr	1090	109000
6	Supply of sand 0.300×0.750×1.00 mtr (Layer at bottom of cable trench approximately 0.225 cmt) As per Drg. No MGVCL/Tech/UG Cable/02/12-13	166	RMtr	545	90470
7	Supply of medium grade GI pipe of size 4" dia (Including clamping the cable with pole)	445	Mtr	140	62300

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
8	Moulding of cable joint (St. joint + indoor + outdoor) for XLPE cable labour	2833	Nos.	78	220974
9	Providing & supplying, fixing route marker of C.C.1:2:4, 150 mm x 150 mm x 750 mm concrete stone (MGVCL marked with approved yellow colour) embedded in Earth at least 300 mm below the G.L. & 450 mm above G.L. at distance approx. 100 Mtr. or as directed by engineer in charge. (This Includes material & Labour charges for excavation & refilling)	138	Nos.	113	15594
10	Preparation and submission of 6 Nos of copies of complete layout drawing with GIS mapping as per actual cable route	1047	Km	11.5	12041
11	Testing or cable at various points and commissioning of feeder	40000	Nos.	8	320000
12	Providing and fixing of pipe type earthing	935	Nos.	4	3740
13	**Sub Total – C**				7925029
14	**15% Supervision Charge in item at Sr. 13**				1188754
15	**18% GST on item at Sr. (As Materials cost and Labour cost are including Tax**				0
16	**Any other charges on item at Sr.**				0
17	**Total Part C with all charges**				**9113783**

Part D: RMU

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	Supply, Installation and commissioning of RMU on plinth Configuration - 11 kV RRL Type (3 way)	489995	Nos.	2	979990
2	Construction of plinth for RMU – 11 kV RRL Type (3 way)	52810	Nos.	2	105620
3	**Additional charges, 18% GST on item at Sr. 2**				
4	**Total Part D with all charges**				**1085610**

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
Total Part A + Part B + Part C + Part D					27886916

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)
1	**Service Connection Charge (with 18% GST)**	10620	Nos.	8	84960
2	**Total Charge with Service Connection Charge for 4000 kVA**				27971876
Per kVA Charge					**6993**

5.2.3. Duplication in Charges for recovery against the Cost at Sub-station end in case of Hybrid Network erection.

- The Petitioner submitted that in the case of erection of a hybrid network, per kVA charges from prospective applicants seeking new demand / load extension at the HT level shall be calculated proportionately based on the proposed line length. Therefore, charges for the sub-station end are also considered proportionately, and there will be no duplication of charges in case of a Hybrid network which is illustrated as below:

    - If proposed load demand is 1500 kVA with 2000-meter Hybrid network, out of which 800 meters (40%) is overhead and 1200 meters (60%) is underground, then as per the proposed methodology, the total estimated cost will be calculated by considering 600 kVA (40% of 1500) as overhead fixed cost and 900 kVA (60% of 1500) as underground fixed cost. The total per kVA cost consists of both the cost of the line and the cost of sub-station end work for providing the connection. As the recovery methodology is proportionate, the cost of the sub-station end is also considered proportionately, with no duplication in the recovery of charges for the sub-station end.

6. Subsequently, in continuation to written submissions dated 13.09.2024, the Petitioner, vide affidavit dated 07.08.2025, has submitted as under:

6.1. Regarding the query of the Commission about the length of feeder considered for determining the per kVA based charges charge of Rs. 6988/kVA for underground network and suggestion of Objector Sachin Industrial Co-Operative Society Limited regarding consideration of 5.5 km cable length for determining per kVA based charges, the Petitioners submitted that due to development of new transmission sub-stations, the average length required to be developed for catering power supply to prospective consumers is reduced and majority of new demand can be catered through new network up to length of 5.5 km. The DISCOMs have reviewed the query and suggestion for length of cable considered for deriving per kVA charge for development of underground network as mentioned above and find it feasible to consider cable length of 5.5 km for determining Per kVA based fixed cost for development of underground network.

6.2. Regarding the query about size of cable utilised for development of underground network, the Petitioners submitted that on consideration of focus of the Government on "Ease of Doing Business" initiative, cable size of 300 Sq. mm is considered for development of Underground network along with utilization of the latest equipment for reliability and redundancy in the electric network which directly supports a stable and predictable business environment. By utilization of modern equipment for reliability and redundancy, DISCOMs not only enhance grid performance but also create a favourable climate for business growth, helping economies move toward smart, resilient, and investor-friendly infrastructure.

6.3. Accordingly, looking to the present circumstances and to encourage ease of doing business, the revised per kVA cost considering latest equipment, 300 sq. mm cable size for cable length up to 5.5 km in line with feeder length to maintain uniformity with Overhead network utilising latest available cost data for Underground network is calculated as below:

Simplified Calculation of per kVA charges of UG Cable Network
(with Cable Size 300 sq.mm)

Part A: Sub-station End

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
1	11 kV Indoor Feeder Breaker Panel (VCB) at S/S end - As per latest rate provided by GETCO	626095	Nos.	1	626095	GETCO End Cost as per email dated 02.07.25	
2	Labour Charges for Installation of 11 kV Indoor Feeder Breaker Panel - VCB	2076	Nos.	1	2076		
3	Supply, Installation and commissioning of RMU on plinth Configuration - 11 kV - 3 isolator Ring Main Unit (3 way)	563809	Nos.	1	563809	UGVCL Cost data - HT	
4	11 kV Indoor Cable Box	5549	Nos.	3	16647		
5	Construction of plinth for RMU - 11 kV - 3 Isolator Ring Main Unit (3 way)	31508	Nos.	1	31508	UGVCL Cost data - HT	
6	Carbon Earthing for RMU	7500	Nos.	2	15000	UGVCL Cost data - HT	
7	11 kV XLPE aluminium 3 core cable (Open excavation)	2582	Mtr.	100	258200	UGVCL Cost data	

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
	Sub Total - A (without GST)				**1513335**		

Part B: Line Charge & RMU

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
1	11 kV XLPE aluminium 3 core cable including laying by push through method	3853	Mtr.	5500	21191500	UGVCL Cost data	Length considered as 5500 mtr
2	Straight Joint	8040	Nos.	26	209040		5500/200 Less 2 (Line end) SS: 28 - 2 = 26 (Considering 200 mtr drum length)
3	Supply, Installation and commissioning of RMU on plinth Configuration - 11 kV - 2 VCB + 2 Isolator Ring Main Unit (4 way)	787021	Nos.	4	3148084	UGVCL Cost data	4 RMU per feeder
4	11 kV Indoor Cable Box	5549	Nos.	24	133176		8 consumers + 16 RMU (4-way) = 24
5	Construction of plinth for RMU - 11 kV - 2 VCB + 2 Isolator Ring Main Unit (4 way)	34590	Nos.	4	138360	UGVCL AT 790/ 01.05.24	
6	Carbon Earthing for RMU	7500	Nos.	8	60000		
7	Route Marker at every 100 mtr length	400	Nos.	53	21200		5500/100 Less 2 (Line end) : 55 - 2 = 53
	Total Part B (without GST)				**24901360**		

Part C: DP Structure / HTMC at Consumer End

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
1	Average Cost of HTMC with necessary	210140	Nos.	8	1681120	DP Cost = Rs. 197173	UGVCL Cost data

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
	isolation device OR Required 11 kV DP structure at Consumer end for mounting CTPT set using 9 mtr. RSJ Poles					HTMC with LBS cost = 223106 Average cost = 210140	
2	Outdoor cable box	6676	Nos.	8	53408		UGVCL underground Cost data
	Total Part C (without GST)				**1734528**		

Sr. No.	Particulars	Rate	Unit	QTY	Amount (Rs.)	Remarks	Description
	Total Part A + Part B + Part C for 4000 kVA				**28149223**		
1	**Service Connection Charge (with 18% GST)**	9000	Nos.	8	72000		
2	**Total Charge with Service Connection Charge for 4000 kVA**				**28221223**		
	Per kVA Cost (Sr. No. 2 / 4000)				**7055**		

6.4. The Petitioner has requested the Commission to accept the clarification / justification as above.

7. The Commission, in its Daily Order dated 30.05.2026 for the hearing held on 29.05.2026, inquired as to whether requisite clarification / details sought by the Commission in its Daily Order dated 31.08.2024 has been complied with by the Petitioner / Co-Petitioners. During the hearing, the representative on behalf of the Petitioner submitted that the Petitioner / Co-Petitioners have already filed affidavit to place on record requisite clarification and details in compliance to the Daily Order dated 31.08.2024.

8. The submissions made by the Objectors and reply of the Petitioner are as below:

8.1. <u>Submissions made by Gujarat Krushi Vij Grahak Suraksha Sangh (GKVGSS)</u>

- GKVGSS has objected to the use of word "LEVY" by the Petitioner. It is submitted that only the Government or Organizations can impose the "LEVY" by the virtue of their legal powers. The Discoms are distribution licensees, and their functions are as a service provider for the distribution of electricity within their allocated area. Hence, they have no powers to impose any kind of charges as a LEVY from the consumers.

- GKVGSS has requested to clarify whether the proposed charges will be applicable to all kind of new HT connections including HT Lift irrigation (HTP-V) consumer categories and whether it is related only to the HT industrial consumers or including railways tractions EV charging stations etc.

- GKVGSS has submitted that HT Lift Irrigation category should be excluded.

- The Discoms can only recover their expenses incurred to provide the new connection from the consumer on the actual basis i.e. no profit no loss basis.

- Option shall be given to the consumer to select overhead or underground network as per their requirement and ground situations so that dispute may not arise.

- Ease of doing the business is not the subject of service provider companies but relates and rests with the Central / State Governments. It is to simplify the process and procedures to sanction the various permissions and curtail the time limits so that commencement of the unit may start as early as possible. It does not relate with the charges.

- For infrastructure additional work like feeder bifurcation, establishment of new sub-station, feeder, etc., there is a provision to charge and recover development charges. It has nothing to do with the per kVA load demand.

- At present there is no standardization of cable and conductor sizes for work execution and availability. It should be reconsidered properly before any kind of final decision by the way of regulations/orders.

- GKVGSS has suggested to device a separate cost data booklet for HT and EHT connections with chapters regarding (a) For entire overhead line connections, (b) For entire underground line connections and (c) For hybrid i.e. partially overhead and partially underground line connections. Revision in existing charges cost of material charges to be taken into consideration rationally.

- It is also suggested that fixed charges recovered from the prospective consumer before providing connection should be as far as possible on incurring method. Extra amount if any recovered must be refunded to the consumer with final bill and within a stipulated time period.

- GKVGSS has submitted that in past Discoms had recovered huge amount in the name of Breakeven charges, Augmentation charges, Development charges etc. Moreover, in the petition filed by GKVGSS in the GERC, the Commission has favoured Discoms in the name of authorized charges on the strength of circular.

- It is requested that the Commission should be specific in their order about authorized charges to avoid any kind of imaginary charges that may be added then after simply by the way of circulars.

- GKVGSS has sought reliefs as under:
    - The word "LEVY" to be removed from the petition, to be replaced by any other proper meaningful word to satisfy the purpose.
    - The right to get refund to be protected specifically in the order for extra amount of payment if any paid at the initial stage by the consumer.
    - Maximum period to get refund is also to be stipulated specifically in order and it should be refunded without any kind of formality of application.
    - In case of delay in refunding of such amount, interest as per prevailing bank's FDR rate but not less than 9% p.a. to be provided to the consumer.

➢ **Petitioner's Reply to Submission made by GKVGSS**

(a) Use of word Levy:

- The Petitioners have submitted that the word "Levy" is used in lieu of "Recovery" of charges from the consumer in a proposed manner.

(b) Clarification regarding HTP-V:

- The Petitioners submitted that the Discoms have proposed fixed cost method for all types of HT Category Consumers.
- However, at present State Discoms have very minimal Underground network, therefore, it is proposed that it will be prerogative of concerned Discom as to whether particular connection(s) is(are) to be released though underground network or through overhead network. While deciding, Discom will consider all relevant technical and physical parameters, safety, security of the network etc.

(c) Recovery of cost on actual basis:

- In this regard, the Petitioner submitted that while deriving the per kVA charges, Discoms have considered general parameters for releasing the connections. However, there will be certain case specific parameters like charges payable towards way leave, deforestation etc. and customized request etc., in such cases the actual payable for such parameters will be recovered in addition to fixed cost as proposed.
- No actual cost will be recovered where feeder bifurcation or new feeder erection is involved.

(d) Consideration of Ease of Doing Business:

- The Petitioners submitted that "Ease of Doing Business" has so many attributes. Providing power supply is also one of the attributes. With the adoption of Fixed Cost

method, a consumer can very well calculate the charges payable for getting electricity connection.

(e) Standardisation of Cable Size:

- Per kVA charges are derived considering 185 Sq. mm size of cable.

(f) Separate Cost Data for HT/ EHT

- Cost data for HT and EHT networks are separate. HT network cost data includes all types of configurations like Overhead, Underground, network on PSC Pole, network on RSJ etc.

(g) Refund of excess charge:

- Since proposed methodology is for recovery of underground network development charges on per kVA basis, therefore, for the same kVA connection for which applied for, there will not be case for any excess amount towards and refund thereof.

8.2. <u>Submissions made by Sachin Industrial Co. Op. Society Ltd.</u>

(a) Development of Underground Electric Network not at the sole expense of the DGVCL:

- The Objector, Sachin Industrial Co. Op. Society Ltd., has submitted that during FY 2021-22, DGVCL had converted the entire electric network in the Objector's area from an Overhead Network to Underground Network through an agency at the expense of approximately Rs. 45 Crore under the scheme of the State Government namely "Assistance to Industrial Infrastructure". Out of Rs. 45 Crore, 60% of the amount was provided by the State Government, 20% was borne by DGVCL and 20% was borne by the Objector. Hence, as of today, the entire electric network in the area of the Objector is underground and it is understood that DGVCL has made an entire recovery of the expenditure that is made in conversion of the network.

- In Petition No. 1829 of 2019, vide its final Order dated 07.07.2020, the Commission had determined per kVA charges to be levied by the Distribution Licensees from the applicant towards expenditure to be incurred by the Distribution Licensees for development of "Overhead" electrical network for providing power supply at 11 kV / 22 kV voltage level to new HT connection / additional demand and it was explicitly held by the Commission at Paragraph 11.11 inter alia that, *"This will not be applicable to underground cable network, for that the present practice of issuing the estimate shall continue till the methodology for this is further approved by the Commission."*

- In complete disregard of the same, DGVCL continues to levy "Fixed per kVA Charges" from the consumers seeking new underground HT connections / load extension at the rate determined for overhead new HT connections / load extension.

- The Objector had written a letter dated 15.10.2022 in this regard to the DGVCL, but DGVCL has not discontinued its practice.

- Moreover, a case of M/s Dodhia Synthetic Limited v. Executive Engineer, DGVCL (Case no. 15 of 2022) regarding the levy of "Fixed per kVA Charges" for applicants of the underground network had come before the Consumer Grievance Redressal Forum, Surat. CGRF, vide its Order dated 01.06.2022, had observed that when for extension of load, no new network is developed and the existing 11 kV underground feeder is developed by the consumer under Option-II at its own expense, recovery of per kVA charges will not be in accordance with the directions of the Commission. CGRF had directed DGVCL to refund the per kVA based charges collected.

- When the entire electric network exists in the form of an underground network in the area of the Objector, i.e. Sachin GIDC, there is no new expenditure to be incurred by the Distribution Licensees for development of underground electrical network. Currently, feeders and substations which exist in Sachin GIDC have substantial spare capacity through which DGVCL can provide new HT connections / additional demand to new and existing consumers without availing any expenditure.

- As per Section 46 of the Electricity Act, 2003, Discoms can recover expenses reasonably incurred in providing any electric line or electrical plant used for the purpose of giving that supply. In the case of the Objector's / Sachin GIDC, no further expense is going to be incurred by the DGVCL for providing a new connection or load extension from existing feeders having spare capacity. For such feeders, whatsoever expenditure was incurred in past, is already fully recovered by the DGVCL.

Suggestion:

- In this regard, the Objector has submitted that the new per kVA charges for the underground network that the Commission will decide to be made applicable only to the new underground electric network that DGVCL / Distribution Licensee will develop and any application for availing new HT connection / additional demand from existing underground electric network, like that of the Objector, be exempted from levy of per kVA based charged and current practice of levying actual expenditure incurred be continued for such existing networks.

- In the alternative, those consumers who have developed separate feeders for their industry under Option-II at entirely their expense be exempted. If even such consumers, for every new additional demand, are exposed to levy of per kVA charges, they will be put into a situation akin to double jeopardy. It is a cardinal principle that once the cost is recovered, it cannot be re-recovered from the consumer.

(b) Per kVA Charges: Not to be calculated based on Maximum Allowable Feeder Length:

- The Objector has submitted that as per the Petitioners, *"For determination of per kVA based charges, maximum allowable feeder length considering feeder capacity and permissible HTVR is worked out."* Considering the maximum permissible % HT VR at -9% and the maximum current capacity of the given conductor, the length of the feeder to work out the feeder cost is proposed to be 11.86 km with 185 sq. mm XLPE Cable in the Petition. Hence, in the present Petition, considering that Discoms will lay underground cable of 11.86 km, per kVA cost of Rs. 6,988/- is proposed.

- In Objector's area, which is an industrial area, where the entire electric network is underground, no feeder is having a cable length of more than 5 km. Hence, if the per kVA cost is calculated based on a cable length of 5 km, then the per kVA based cost will reduce drastically as compared to what is proposed by the Petitioners.

- Moreover, hardly any Discom will lay underground cable for the maximum allowable length. If that is not the case, then the calculation of per kVA cost based on the maximum allowable length of cable is a faulty method.

Suggestions:

- Per kVA charges for the underground network be also calculated based on the same length as the overhead network where per kVA charges are calculated based on 5.5 km cable length. This is more so as in almost all cases, the actual underground cable length is never going to exceed 5 km.

- In the alternative, a table should be proposed for per kVA charges corresponding to various lengths of underground cable. Based on the actual underground cable, which is going to be erected by the Discoms, the corresponding per kVA based cost should be recovered from the consumers by DISCOMs.

(c) HT Underground Network Caters both HT and LT Connections - Consideration for Rationalization:

- The Objector has submitted that in an industrial area, though the entire network is an "Underground HT Electric Network", the same HT Network caters to several consumers demanding LT connection.

- In a practical situation, in existing feeders of 11 kVA power supply, the connected load is always more than 4000 kVA which includes several LT connections. Hence, though the cost is rationalized for a 4000 kVA feeder, by giving several LT connections even beyond the feeder capacity of 4000 kVA, Discoms make much more profit above the cost incurred by them in the development of the network.

Suggestions:

- While rationalizing per kVA based estimates for new HT connection / load extension, consideration should also be given to the LT connections taken out from the HT Network. Hence, per kVA charges need to be calculated considering both HT connections and LT connections that may be given from the same underground feeder.

(d) A Case for Hybrid Networks:

- The Objector has submitted that due to technical feasibility, sometimes. networks are developed in a Hybrid mode where electricity is provided partially through overhead networks and partially through underground networks.

- For such a hybrid network. Petitioners in Petition No. 1829 of 2019 submitted a formula for the calculation of per kVA charges, but the same was not approved by the Commission.

- In absence of the said formula, there is every possibility that Discoms will consider the hybrid network as an underground network or overhead network, based on wherever they can maximize profit.

- In M/s. Technovaa Plastic Industries Pvt. Ltd v. Executive Engineer, UGVCL, (Case No. 39 of 2021, decided on 04.12.2021 by the Electricity Ombudsman), Appellant had sought 1500 kVA new HT Connection. The estimate was issued by UGVCL for supply through an existing 11 kVA Technovaa feeder which was a hybrid network having a majority of a network in the underground. While issuing the estimate, UGVCL had sought to levy fixed per kVA charges @ Rs. 1,800/- (as determined by the Commission in Petition No. 1829 of 2019 for overhead network) for the entire load of 1500 kVA, without taking into account that only minority portion of the network was overhead, and the majority portion of the network was underground (that also pre-existing).

Suggestions:

- To remedy above-mentioned instances, it has become imperative for the Commission to provide guidance regarding the levy of charges in case of hybrid networks by providing and approving the formula.

- There are several existing overhead networks, where some portion of the network is made underground as per the request of the consumer / applicant and for which the entire cost of making such underground network is borne by the consumer / applicant when such consumer / applicant demands new connection / load extension through this hybrid network, new network development charge i.e. per kVA cost should be recovered for such consumer / applicant as the Discom has already made recovery of the cost and it cannot be allowed to further indulge in profiteering at the expense of consumer / applicant.

(e) Consumers wish for Overhead / Underground Network be Respected - Subject to Technical Feasibility:

- The Objector has submitted that after the Commission's Order dated 07.07.2020 in Petition No. 1829 of 2019, two possibilities emerged:
    - For the overhead network, per kVA charges came to be determined.
    - For the underground network, the prevailing practice of issuing estimates of actual expenditure to be incurred by Discom is to be continued.

- There are many instances where even if the feasibility of an underground network is possible, but just because by providing an overhead network, more charges can be recovered from the consumers, Discoms compel consumers to take an overhead network instead of an underground network. Due to the urgent need of availing electricity either in form of a new connection or in form of a load extension, industries sometimes are left with no option but to take overhead the network by paying exorbitant charges.

- Few of the instances demonstrating such hardships of the consumers are as below:
    a. M/s Steel Biz Industries v. Executive Engineer, PGVCL, Case No. 67 of 2020 dated 05.05.2021 by Electricity Ombudsman, Ahmedabad
    b. M/s Nyalkaran Steel Industries v. Executive Engineer, PGVCL, Case No. 08 of 2022 dated 24.08.2022 by Electricity Ombudsman, Rajkot
    c. M/s S.S. Industries v. PGVCL, Case No. 44 of 2020-21, Order dated 19.01.2021, by CGRF, Bhavnagar

- After the determination of the per kVA charge for the underground network by the Commission, there is every possibility that the Discoms will resort to the arbitrary practice of issuing estimates for either overhead network or underground network based on wherever they can maximize their profit and revenue, in complete disregard of technical feasibility, logic and practicality and further shutting eyes to the consumer convenience.

- Hence, there is a compelling need for the Commission to lay down exhaustive guidelines in this regard.

(f) Option-II be kept open after disposal of the present Petition:

- Even after the determination of the per kVA charges, if any consumer still wishes to avail underground new connection or load extension under Option-II i.e. at the self-expense, then such option should be made available to him. This will further the cause of ease of doing business.

(g) Common Charges for both Underground and Overhead Network:

- Difference between per kVA charges of underground and overhead network:

Petition No. 1829 of 2019	Present Petition No. 2191 of 2023
The Commission vide its order dated 07.07.2020, determined per kVA charges for the overhead network (**of length up to 5.5 km**) to be **Rs. 1500/kVA** for new HT connections / load extension up to or less than 500 kVA and **Rs. 1800/kVA** for above 500 kVA.	The Commission is called upon by Petitioners to determine per kVA charges underground network (**of length up to 14.5 km**) to be **Rs. 6988/kVA**.

- Consumer, be it in an industrial area or residential area, is concerned with only the supply of electricity, irrespective of (i) the nature of the network (underground network or overhead network) and (ii) the length of the network (5.5 km or 14.5 km).

Suggestions:

- When the task of rationalizing per kVA charges is being undertaken by the Commission, then it is the right occasion to rationalize common per kVA charges for any type of network without differentiating between the nature of the network or the length of the network. The Commission can consider a common length of 5 km.

- Nearly 90% network is still an overhead network and hence, the Commission may fix common per kVA charges to be Rs. 2,500/- for all consumers availing electricity either through an overhead network or underground network of length 5 km or less.

➢ **Petitioner's Reply to Submission made by Sachin Industrial Co. Op. Society Ltd.**

(a) Recovery of Cost where network is erected through Cost Contribution:

- The Petitioners have submitted that the present Petition is filed to recover the Underground network cost from the applicant applying for new connection or load extension on the basis of the load demanded, therefore, there can't be any

discrimination as to whether connection is to be released from the already developed under different schemes or by Discoms on its own. This is to avoid discrepancies in network cost recovery from applicant.

(b) Proposed recovery of cost on per KVA basis considering 11.86 Kms feeder length

- The Petitioners submitted that as per GERC Regulations, maximum permissible Voltage Regulation at 11/22 kV HT Level is 9%. The voltage regulation is function of feeder length and kVA Demand besides other technical parameters. Therefore, for determining the maximum permissible feeder length, maximum permissible demand as per provision of Electricity Supply Code i.e. 4000 kVA at 11 kV level and 8000 kVA at 22 kV level is considered.

- Accordingly, the permissible line length is worked out to 11.86 km for with 185 sq. mm XLPE Cable underground network.

(c) Recovery of Cost for Hybrid network:

- It is proposed to recover the network cost in case of hybrid network on proportionate basis in proportion to network length involved and at the fixed cost decided by the Commission from time to time.

(d) Provision of Option-II be kept open:

- The Petitioners submitted that proposed fixed cost method is based on per kVA basis and not actual network length is involved in providing connection. In some of the cases, the actual network length involved in providing a connection would be less and thus the cost of connection would be less compared to the per kVA cost. Such consumers may opt for Option-II, which ultimately kills the objective of "Fixed Cost" method of recovery.

- Therefore, it is not desirable to keep open provision for Option-II.

(e) Proposal for Underground network even where overhead network exists:

- Discoms have proposed fixed cost method for all types of HT Category Consumers. However, it is submitted that at present State Discoms have very minimal underground network, therefore, it is proposed that it will be prerogative of concerned Discom as to whether particular connection(s) is(are) to be released through underground network or through overhead network. While deciding, Discom will consider all relevant technical and physical parameters, safety, security of the network etc.

(f) Suggestion for feeder length up to 5 km:

- The Petitioners submitted that as per GERC Regulations, maximum permissible Voltage Regulation at 11/22 kV HT Level is 9%. Therefore, for releasing a demand, the length of network as required to release the connection(s) is proposed till the permissible Voltage Regulation is within limit.

9. We have gone through the submissions of the Petitioners and the objections / suggestions made by the stakeholders.

10. We note that the Commission has notified amendment to GERC (Licensee's Power to Recover Expenditure incurred in providing Supply and other Miscellaneous Charges) Regulations, 2005 on 26.06.2020 for recovery of per kW/kVA charges for new connection/load extension for HT consumers. It provides that the methodology to be adopted by the distribution licensee shall require approval of the Commission. The Petitioners have approached the Commission for approval of levy of per kVA based charges from applicant toward expenditure to be incurred by Distribution Licensee for development of underground electrical network for providing power supply at 11 kV / 22 kV voltage level to new HT connection/additional demand.

11. We note that the methodology for recovery of expenditure proposed by the Petitioners is in compliance with the amended clause 5 (iii) and (iv) of the GERC (Licensee's Power to Recover Expenditure incurred in providing Supply and other Miscellaneous Charges) (Second Amendment) Regulations, 2020 notified on 26.06.2020, which read as under:

> ***"Amendment in Chapter-V of the principal Regulations***
>
> *Clause 5 (iii) and (iv) shall be added in the principal Regulations:*
> *5 …….*
> *…….*
>
> *(iii) The Distribution Licensee may recover the charges for seeking new demand/load extension at HT level on Rs. per kVA/kW basis from prospective applicants and may dispense with the preparation of detailed individual estimates depending on technical and other constraints and parameters, if any.*
>
> *Necessary details shall be submitted to the Commission, as may be required. The Commission may accept the same after detailed scrutiny or ask the Distribution Licensee to file necessary details, as may be required or issue suo moto directions.*

(iv) The methodology to be adopted by the Distribution Licensees shall require Commission's approval."

As per the aforesaid provisions, the Distribution Licensee may recover the charges for seeking new demand/load extension at HT level on Rs. per kVA/kW basis from prospective applicants and may dispense with the preparation of detailed individual estimates depending on technical and other constraints and parameters, if any.

Further, as per the above provisions, the methodology to be adopted by the Distribution Licensees shall require Commission's approval.

12. As the subject matter is approval of per kVA charges towards expenditure to be incurred by the Distribution Licensees for development of underground electrical network for providing new connection / load extension to HT Consumers of Gujarat, the Commission decided that the comments / suggestions of consumers / stakeholders need to be considered prior to deciding the charges. The Commission directed the Petitioners to issue public notice in newspapers in this regard.

12.1. We note that in compliance to the directives given by the Commission vide Daily Order dated 18.03.2023, the Petitioners have given public notice on 25.03.2023 and uploaded the petition on its website. The said petition was also uploaded on the Commission's website inviting objections / suggestions from the stakeholders.

12.2. In reply, objections / suggestions / comments were filed by Gujarat Krushi Vij Grahak Suraksha Sangh (GKVGSS) and Sachin Industrial Co. Op. Society Ltd. in the present Petition and the reply also submitted by the Petitioner.

13. We note the submissions made by the objectors and the reply submitted by the Petitioner. The Commission observes as under:

13.1. On the issue of option to be given to the consumers to select overhead or underground network as per their requirement, the Commission observes that the Distribution Licensee are required to develop and maintain its network in an efficient, coordinated and economical manner in terms of Section 42 of Electricity Act, 2003. Accordingly, it is the sole prerogative of the Distribution Licensee to create underground / overhead network to fulfil the requirement of the stipulations of the Electricity Act, 2003.

13.2. Regarding separate cost data for HT and EHT network, we observe that since the per kVA charges proposed by the Petitioner in the present matter is applicable to new HT connection / additional demand, the issue related to separate cost data for HT and EHT does not fall within the purview of this petition. Further, the applicant of new connection as well as additional demand for HT category shall be required to pay only per kVA charges irrespective of network modification carried out by the distribution licensees.

The per kVA charges proposed by the Petitioner in the present matter for new connection / additional demand is applicable based on the demanded load only. Thus, the issue of actual cost recovery where feeder bifurcation or new feeder erection is required, does not arise.

13.3. Regarding recovery of cost where network is erected through cost contribution, we note that the Petitioners have submitted that the present Petition is filed to recover the Underground network cost from the applicant applying for new connection or load extension on the basis of the load demanded, therefore, there can't be any discrimination as to whether connection is to be released from the already developed under different schemes or by Discoms on its own. This is to avoid discrepancies in network cost recovery from applicant.

Further, the Petitioner has also proposed the methodology for calculation of per kVA charges in case of hybrid network.

13.4. On the issue of determination of per kVA charges based on maximum feeder length, the Commission is of the view that in order to arrive at a figure of cost that reflect in terms of per unit, it is appropriate to consider maximum length of feeder (in broader term and electrical element) that caters maximum load (thereby ensuring utilization of full capacity of the said electrical equipment) up to permissible electrical parameters (in present case voltage regulation) as per the GERC (Standards of Performance of Distribution Licensees) Regulations, 2023. It is not advisable as well as practical to determine per unit cost of an electrical element for different configurations (length in the present case) to avoid any discrimination and confusion amongst licensees as well as applicants.

13.5. In regard to suggestion about considering uniform feeder length of 5 km for working out per kVA charges in case of overhead as well as underground feeder, the Commission observes that in the present matter the methodology for calculation of per kVA charges for feeder length of 11.86 km with 185 sq.mm XLPE cable, which is worked out by the Petitioner considering permissible maximum % HT VR and maximum feeder capacity as 4000 kVA at 11 kV level, in line with methodology approved for overhead network i.e. feeder length of 5.5 km (with 100 sq.mm Dog conductor) which is worked out considering permissible maximum % HT VR and maximum feeder capacity as 4000 kVA at 11 kV level.

In view of this, keeping the length of feeder fixed (5 km) to work out a per unit cost of the feeder is unscientific.

13.6. The suggestion about allowing Option-II to the applicant cannot be accepted since the Petitioners have filed the present Petition for determination of per kVA charges in accordance with Regulation 5 (iii) and (iv) of the GERC (Licensee's Power to Recover Expenditure incurred in providing Supply and other Miscellaneous Charges) (Second Amendment) Regulations, 2020 notified on 26.06.2020. The per kVA charges proposed

by the Petitioner in the present matter provides ease of doing while maintaining balance between applicant and the licensees irrespective of the amount of work that the licensee may be required to undertake. In view of this, the applicant cannot be given option either to go for per kVA charges or Option-II because this will create cross-subsidization of cost amongst applicants.

Further, as per Section 42 of the Electricity Act, 2003, Distribution Licensee are required to develop and maintain its network in an efficient, coordinated and economical manner. Accordingly, it is the sole prerogative of the Discoms to create underground / overhead network to fulfil the requirement of the stipulations of the Electricity Act, 2003, considering the technical requirements, safety aspects, etc.

13.7. As regards the Objector's suggestion for common per kVA charges for both overhead and underground networks, we are of the view that the per kVA charge is derived from the normative feeder cost divided by the maximum permissible load that the feeder can cater, and the cost of an underground feeder differs materially from that of an overhead feeder. The cost components and the resultant per unit cost being distinct, a common rate would result in consumers of one network cross-subsidising those of the other, which is inequitable and contrary to the cost-reflective principle underlying per kVA based recovery.

14. We note that the Petitioners have worked out the Per kVA charges for providing power supply at 11 kV / 22 kV voltage level to new HT connection / additional demand through underground network as Rs. 6,988 / kVA. Based on the consideration of maximum permissible % HT VR at tail end +/- 9% on the feeder and maximum current capacity of given conductor / cable; the length of feeder to work out the feeder cost is taken as 11.86 km with 185 sq.mm XLPE cable.

14.1. We note that the Petitioners have proposed a methodology for recovery of charges in case of erection of hybrid network, i.e. partly overhead and partly underground, wherein per kVA fixed charges are to be recovered proportionately in proportion to the overhead and underground length of the proposed line, by applying the overhead per kVA rate to the load proportionate to the overhead length and the underground per kVA rate to the load proportionate to the underground length. In addition, where the length of either portion exceeds the maximum feeder length on which the respective per kVA rate has been derived, the actual expenditure for such excess length shall be charged from the applicant.

14.2. The Petitioner, vide affidavit dated 16.03.2024, has also worked out the Per kVA charges for providing power supply at 22 kV voltage level to new HT connection / additional demand through underground network as Rs. 8,831 / kVA.

14.3. We also note that the Petitioner, vide affidavit dated 13.09.2024, has submitted the Per kVA charges for providing power supply at 11 kV / 22 kV voltage level to new HT

connection / additional demand through underground network as Rs. 6,993 / kVA (Considering % HT VR and maximum current capacity of cable, the length of the feeder to work out the feeder cost is 11.86 km with 240 sq.mm XLPE Cable at sub-station and 185 sq.mm XLPE Cable at distribution network).

14.4. Further, we also note that the Petitioner, vide affidavit dated 07.08.2025, has submitted the Per kVA charges for providing power supply at 11 kV / 22 kV voltage level to new HT connection / additional demand through underground network as Rs. 7,055 / kVA (Considering latest equipment, 300 sq.mm cable size for cable length up to 5.5 km in line with the feeder length to maintain uniformity with overhead network).

15. We observe that, in its petition, the Petitioner has inadvertently mentioned "overhead network" in the para for merits enumerated in case of per kVA based recovery of estimate charges for new HT connection / load extension intended to be supplied. The present petition is filed for approval of methodology and determination of per kVA charges for underground network. Hence, merits enumerated in the said para shall be considered for "underground network" instead of overhead network.

16. We also note that in its prayer, the Petitioner has requested to decide recovery of per kVA rate of Rs. 6,988 per kVA for release of new HT connection / load extension with 11 / 22 kV up to 11 km underground network and to continue recovery of actual expenditure in case of Underground network above 11 km. While, under proposed methodology, it is mentioned that considering % HT VR and maximum current capacity of given conductor/cable, the length of the feeder to work out the feeder cost may be taken 11.86 km with 185 sq.mm XLPE Cable. Hence, feeder length 11.86 km needs to be considered.

17. Further, we note that the Petitioner has also submitted the per kVA charges of Rs. 7,055 / kVA considering 300 sq.mm cable size for cable length up to 5.5 km, in line with the feeder length to maintain uniformity with overhead network. In the present matter, the methodology for calculation of per kVA charges for feeder length of 11.86 km with 185 sq.mm XLPE cable is worked out by the Petitioner considering permissible maximum % HT VR and maximum feeder capacity as 4000 kVA at 11 kV level, in line with methodology approved for overhead network i.e. feeder length of 5.5 km (with 100 sq.mm Dog conductor) which is worked out considering permissible maximum % HT VR and maximum feeder capacity as 4000 kVA at 11 kV level. In view of this, the per kVA charges determined considering 300 sq.mm cable size for cable length up to 5.5 km is not appropriate.

18. We also note that in Order dated 07.07.2020 in Petition No. 1829 of 2019, the Commission approved the methodology for determination of per kVA charges for providing power supply at 11 / 22 kV voltage level to new HT connection / additional demand though overhead network. In that methodology, the per kVA charges worked out for a feeder length of 5.5 km for a given conductor, i.e. 100 sq.mm Dog conductor,

based on the maximum permissible % HT VR and maximum feeder capacity of 4000 kVA at 11 kV level.

The Commission is of the view that similar modality needs to be adopted in the present matter. Accordingly, considering the same criteria, i.e. maximum permissible % HT VR and maximum feeder capacity of 4000 kVA at 11 kV level, feeder length for the given cable, i.e. 185 sq.mm XLPE cable, arrives as 11.86 km.

19. We further note that the Petitioner has submitted that the Discoms have very limited 22 kV network compared to 11 kV network. Due to limited 22 kV network, number of HT connections released on 22 kV network are very less compared to HT connections released on 11 kV network. Further, Discoms' approach is for conversion of existing 22 kV network to 11 kV network and new substations are proposed with 11 kV network system only. Thus, the 22 kV network are in reducing trend and may diminish in future. Therefore, to avoid complications in calculations and recovery of the cost, the Petitioners have proposed that in case of 22 kV power demand also, per kVA cost worked out for 11 kV network will be recovered. The Commission considers the submission of the Petitioner.

20. We note that, in case of overhead network, as per Order dated 07.07.2020 in Petition No. 1829 of 2019, slab-wise (i.e. up to and less than 500 kVA and above 500 kVA) charges are applicable, which was introduced to support MSMEs and small entrepreneurs, thereby fostering the ease of doing business.

    Accordingly, to maintain consistency with the approach adopted for the overhead network, the Commission finds it appropriate to consider separate per kVA rates for the underground network for the load up to or less than 500 kVA and for the load above 500 kVA.

21. After going through the submissions of the Petitioners and the objectors, consideration of approved methodology for overhead network, and after detailed analysis, looking to the present circumstances and to encourage ease of doing business, the Commission decides to consider the Petitioner's request to recover expenditure for providing HT connections / load extension through underground network as under:

    a) We approve the methodology for determination of Per kVA based estimate charges for providing new HT connection / load extension at 11 kV / 22 kV voltage level up to 11.86 km through underground network.

    b) We approve the methodology for recovery of charges in case of hybrid network, i.e. partly overhead and partly underground, on pro-rata basis in proportion to the overhead and underground length of the proposed line, by applying the overhead per kVA rate (as determined by the Commission vide Order dated 07.07.2020 in Petition No. 1829 of 2019 and as modified from time to time based on the

methodology approved by the Commission vide Order dated 07.07.2020 in Petition No. 1829 of 2019) to the load proportionate to the overhead length and the underground per kVA rate (as determined by the Commission vide present Order and as modified from time to time based on the methodology approved by the Commission vide present Order) to the load proportionate to the underground length.

In addition, where the length of either portion exceeds the maximum feeder length on which the respective per kVA charge has been derived, the actual expenditure for such excess length, i.e. more than 5.5 km for overhead line and more than 11.86 km for underground line, shall be charged from the applicant.

c) Continue recovery of actual expenditure over and above the per kVA charge in case of:

(i) Underground HT network of 11 kV / 22 kV above 11.86 km for additional network greater than 11.86 km;

(ii) Railway crossing;

(iii) Road crossing;

(iv) Canal crossing

22. The Commission hereby decides to charge per kVA rate for releasing new HT connections / load extension at 11 kV / 22 kV voltage level up to 11.86 km through underground electrical network as mentioned below:

(i) The rate for the new HT connection / load extension up to or less than 500 kVA shall be Rs. 5,200 / kVA.

(ii) The rate for the new HT connection / load extension above 500 kVA shall be Rs. 6,300 / kVA.

23. This is as per the GERC (Licensee's Power to Recover Expenditure incurred in providing Supply and other Miscellaneous Charges) (Second Amendment) Regulations, 2020, which was published in Government Gazette on 26.06.2020.

24. This shall be applicable for all the HT applicants (for new connection / load extension) for which the estimates have not been issued as on the date of issue of this Order.

25. Above charges for HT consumers shall be uniformly applicable for all the State Owned DISCOMs.

26. Any revision in the charges as per Para 22 above shall be worked out as per approved methodology and shall be submitted to the Commission for approval.

27. Order accordingly.

28. With this order, the present Petition stands disposed of.

Sd/-	Sd/-	Sd/-
[Jatin N. Thakkar]	**[Hiren Shah]**	**[Pankaj Joshi]**
MEMBER	**MEMBER**	**CHAIRMAN**

Place: Gandhinagar

Date: 22/06/2026