

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)



POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)

केन्द्रीय कार्यालय: "सौदामिनी" प्लॉट सं. 2, सेक्टर-29, गुडगाँव-122 001, (हरियाणा) दूरभाष: 0124-2571700-719, फ़ैक्स : 0124-2571762,
"Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001, (Haryana) Tel. : 0124-2571700-719, Fax : 0124-2571762, Web.: www.powergridindia.com

CIN : L40101DL1989GOI038121

Ref No: CC/RC/Revenue Sharing

Date: 31/10/2019

The Secretary,
Central Electricity Regulatory Commission,
3rd & 4th Floor, Chandralok Building,
36 Janpath, New Delhi-110001

Sub: Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

- Submission of comments/suggestions thereof.

Dear Sir,

This has reference to public notice ref. L-1 /246/2019/CERC dated 25th September, 2019 vide which comments/ suggestions were sought on the subject draft Regulation.

In this regard, please find enclosed three copies (03) of comments/suggestions of POWERGRID.

Thanking you,

Yours faithfully,

(Abhay Choudhary)

ED (Commercial & Reg. Cell)

Encl: As above

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

1) General

At the outset, POWERGRID would like to give a brief background about POWERGRID Telecom and its set up. Further, it is essential to look into the dynamics of telecom industry, infrastructure involved and extent of use of transmission assets by POWERGRID telecom for Telecommunication business.

Considering the above, POWERGRID's comment has been divided in two parts where in first part all these points mentioned before are discussed in brief and part two contains specific comments on draft regulation and its provisions.

A. Background

ISTS transmission lines criss-crosses the entire length and breadth of the country connecting all the major metropolitan cities/towns. In 2001, POWERGRID explored the opportunity to utilize the spare Optical fibres available in the Optical Ground Wire (OPGW) laid on the transmission network, to provide an infrastructure which can be used to set up a high grade long distance telecommunication network of high capacity across India.

This endeavour was in line with POWERGRID's continuous efforts to explore opportunities towards optimal utilization of transmission assets through all means including introduction of new businesses without affecting grid security.

Over the years, after multiple ups and downs POWERGRID successfully converged power sector with telecom sector by creating high quality telecom infrastructure on its existing and planned transmission infrastructure. POWERGRID with its brand name 'POWERTEL' is utilising overhead optic fibre network using Optical Ground Wire on power transmission lines for Telecom business.

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B. Telecom Infrastructure of POWERGRID Telecom

Details of infrastructure utilized by POWERGRID Telecom for the Telecom Network are as below:

- a) **Backbone connectivity:** POWERGRID Telecom is using ~33,400 Kms OPGW fiber laid on POWERGRID transmission Lines for backbone connectivity up to Sub-Stations nearby cities. OPGW on Central Sector Transmission Lines are being utilized in the following manners-
 - i. OPGW laid by POWERGRID Telecom and used solely for Telecom business ~4,600 Kms
 - ii. OPGW laid by Telecom and shared by ULDC and Telecom business ~ 7,600 Kms
 - iii. OPGW laid by ULDC and shared by ULDC and Telecom business ~ 21,200 Kms

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

b) Access connectivity: OPGW terminates in Substations and which are generally far away from the cities. To connect to the end users located mostly in cities, these OPGW Termination points located at POWERGRID Substations are needed to be connected to POWERGRID Telecom's Point of Presence (POPs) in cities. For this purpose, POWERGRID Telecom has been laying Underground Fibers or arranging the fibers from other sources through multiple paths up to POWERGRID Telecom PoP's.

c) Last Mile connectivity: Further to provide the connectivity to end customers, it is required to lay the Underground Fiber/arrange the fiber in city from POP's to customer locations.

Thus, apart from OPGW fiber utilized under Central Sector transmission, POWERGRID Telecom has laid/arranged ~ 19,800 Kms Overhead/Underground fibers to connect the customers with OPGW back-bone links. Accordingly the total length of fiber as on 31.03.2018 utilised for Telecom business is ~ 53,200 Kms.

d) Repeaters: Optical signals in fibers is required to be regenerated within 80-100Kms. Therefore, Repeaters along with Telecom Equipment (DWDM, SDH, MPLS type etc.), DCPS, Battery, Air conditioners DG Sets etc. are required to be installed and maintained by POWERGRID Telecom. Presently about 300 Nos. of Repeaters locations are spread across the country.

e) Point of Presence (POP): Multiple POPs are required to be maintained in the city to feed the customers connectivity. Further, various Telecom equipment, DCPS, Battery, DG Sets, Air-conditions etc. has to be maintained on those POPs.

f) Customer Locations: To provide the end user connectivity, various type of Telecom equipment like DWDM, SDH, MPLS etc. also have to be installed at the customer locations.

About 700 POPs and customers locations are maintained by POWERGRID Telecom across various cities.

g) Apart from OPGW Fibers and above said activities, the following various major activities are also involved in smooth running of Telecom business:

- i. Maintaining four Regional Network Operating Centres (NOC) and one National Network Operating Centres in Metros.
- ii. Deploying O&M telecom teams at all the major cities for maintenance of underground Fiber, Repeaters, POPs and Customer premises equipment.
- iii. Deploying dedicated telecom teams for maintenance of OPGW network.
- iv. Deploying Marketing Teams along with other associated support Team at various strategic locations to capture/maintain the Telecom business.
- v. Dedicated Telecom Commercial team to handle realization of revenue and Telecom Billing requirement from the customers.

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

C. Utilisation of Transmission Assets by POWERGRID Telecom

Telecom Network comprises of active and passive components. The active components include Telecom equipment like Dense Wavelength Division Multiplexing (DWDM), Synchronous Digital Hierarchy (SDH), Multi-Protocol Label Switching (MPLS) Routers, Network management systems (NMS) etc. and other Electrical equipment. The revenue from Telecom business depends on capacity of active equipment and marketing skills of organisation. The active equipment is required to be upgraded on regular basis based on market requirements. On the other hand, Passive components include OPGW Fiber and underground Fiber. These passive components i.e. Fiber are fixed in nature and involve one-time investment.

POWERGRID Telecom is installing all the active components at its own cost. Among passive components, POWERGRID Telecom utilizes Optical fibres available in the OPGW on select routes which is the only transmission asset presently being utilised for Telecom business. Further, POWERGRID Telecom is using length of Right of Way of transmission lines. Accordingly, Capital cost sharing for OPGW and Revenue sharing for RoW are done as per the regulatory provisions detailed at para D below. If POWERGRID utilises any other assets of Transmission line for other business, then additional revenue generated from that business has to be shared on case to case basis as decided by Hon'ble Commission, as it has recently approved methodology of "Revenue sharing for utilising Transmission Line Tower for Mobile Tower application".

D. Regulatory provisions

In 2001, when POWERGRID was diversifying in Telecom business, GOI decided to share the cost of Optical Fibre between ULDC scheme and Telecom projects as the same was not covered in Electricity Act at that time. However, later-on in 2003, the revenue sharing from other business of transmission licensee was included in Electricity Act-2003. Subsequently in line with the provisions of Electricity Act, 2003 CERC came up with Sharing of revenue derived from utilisation of transmission assets for other business Regulations, 2007.

a) Sharing of Capital cost for Optical Fibre between ULDC scheme and Telecom projects: POWERGRID Telecom has been bearing the capital cost towards portion of OPGW Fiber utilized by it as per the decision taken in PIB meeting held on 12.10. 2001. The relevant portion of para 11 of the Minutes of PIB Meeting is quoted as under:

"...Six (6) out of 12/24 fibres installed under this project shall be utilized for ULDC project only. The balance fibres shall be utilized by POWERGRID for telecom purpose. Accordingly, it is proposed to apportion (i) 50% of the optical fibre cost for 24 fibre cable and (ii) 25% of optical fibre cost for 12 fibre cable to

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

the telecom venture. Apportionment as per the above methodology shall be made at the time of submission of tariff proposal to GOI/CERC.”

- b) **Electricity Act.2003:** GOI order passed in 2001, was superseded by Electricity Act-2003. Section -41 of Electricity Act.2003 allows a transmission licensee to engage in any business with prior intimation to appropriate commission as quoted below:

“A transmission licensee may, with prior intimation to the Appropriate Commission, engage in any business for optimum utilisation of its assets:

Provided that a proportion of the revenues derived from such business shall, as may be specified by the Appropriate Commission, be utilised for reducing its charges for transmission and wheeling.....”

Electricity Act, 2003 does not provide for capital cost sharing.

- c) **ROW charges/ Revenue sharing as per CERC Regulation -2007:** In line with Section 41 of the Electricity Act, 2003, Revenue sharing is presently done as per the Central Electricity Regulatory Commission (Sharing of revenue derived from utilisation of transmission assets for other business) Regulations, 2007. Relevant clause is quoted as under

“Telecommunication business (4.a):

- i. In case the other business is the telecommunication business the criterion for sharing of revenue shall be the length of the right-of-way used for laying optical fibre cable or optical fibre composite overhead ground wire over the transmission towers owned by the transmission owner for telecommunication business.*
- ii. The transmission owner shall share revenue @Rs.3000/per year per km of the right-of-way utilised for laying one optical fiber cable or optical fiber composite overhead ground wire over the transmission tower and the revenue shared may be apportioned between the users of the optic fiber cable or optical fiber composite overhead ground wire in proportion to the number of fibers identified for utilisation.”*

As POWERGRID Telecom was already bearing the capital cost of Transmission Asset (OPGW) utilised by it and considering the industry practice, Hon'ble Commission decided revenue sharing on the basis of a fixed rate /year/km paid as “Length of Right-of-Way charge”.

E. Market dynamics of Telecom sector:

Telecom Industry in the country have been characterised by the following trends:

- **Market Consolidation:** The number of Telecom Service Providers (TSPs) have been decreased in the past few years and resulted in consolidation of the Indian mobile telecommunications market into three large private players — Reliance Jio,

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

Bharti Airtel and Vodafone Idea — accounting for more than 90% of revenue. POWERGRID Telecom is a wholesale network provider for such TSPs. The consolidated entities have rationalized their procurement, thereby in future POWERGRID Telecom's business growth from such accounts may reduce.

- **Reduction in per Unit Bandwidth Prices:** The per unit bandwidth price has continued to be reduce at an average rate of 7%-10% on yearly basis. It may be noted that Telecom Regulatory Authority of India (TRAI) has reduced the Ceiling Tariff of Domestic Leased Circuits by approx. 60% from 2005 regulation to 2014 regulation.
- **Financials of Telecom Sector:** The revenue of the Telecom Sector is showing an overall declining trend in the past few years (Source: TRAI Annual reports). From 2017 to 2018 the decline in Adjusted Gross Revenue (AGR) which is broadly the Total Revenue adjusted by expenses incurred towards procuring Telecom Services from Other licensed TSPs and Taxes has been more than 10%. This trend has resulted in increased efforts to create & sell higher network capacity / bandwidth so that revenue is at least maintained at the past level. This trend shows that if the investment requirement of Telecom sector may not be met and future growth may not be sustainable.
- The impact of current market conditions can be seen on POWERGRID Telecom business. **In last few years, it is observed that YoY growth has declined from 43% in 2015-16 to 9% in 2018-19**

Fig in Rs. Crore

FY	2014-15	2015-16	2016-17	2017-18	2018-19
Operating Revenue	274.89	392.25	503.83	606.59	663.25
% Growth of Revenue		43%	28%	20%	9%

Telecom is part of technology sector where technologies changes very fast. Unlike transmission which is a core sector, here equipment are quickly out dated and need to be replaced with higher capacity equipment on regular basis. Accordingly due to high obsolescence, periodic investment is required for upgradation of equipment, training and increased efforts in sales and marketing.

Further, in consolidating market with decreasing margins, keeping same pace of growth is difficult as shown at table above. To achieve financial growth and to maintain the same revenue level, POWERGRID in past has worked very hard to create new revenue streams and services apart from its core business. Further POWERGRID telecom is focusing extensively in its marketing efforts to capture every business opportunity available. Therefore, POWERGRID Telecom in spite of adverse market conditions is showing the growth due to its intensive marketing efforts and regular investment towards up gradation of Equipment and increasing Marketing

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

presence. Therefore, to survive in present market condition, investments are required periodically to maintain the revenue.

F. Benefits passed on to the Beneficiaries by POWERGRID Telecom as per present mechanism

a) Monetary benefits: POWERGRID's diversification into Telecom business has led to optimization of returns and value creation on fixed transmission assets. POWERGRID Telecom is passing the following monetary benefits to its beneficiaries irrespective of whether the Telecom business is running in profit or loss:

i. Benefit in terms of Capital cost shared by POWERGRID Telecom:

As per decision taken in GOI PIB meeting, POWERGRID Telecom is sharing Capital cost against OPGW with ULDC. For ~ 7,600 kms of OPGW laid by POWERTEL and shared with ULDC and 21,200 Kms of OPGW laid by ULDC and shared by POWERTEL, tentative capex avoided by ULDC is in the tune of Rs 200-300 Crs . This would have led to additional tariff in tune of Rs 40-50 Crs/ Yr on ISTS beneficiaries corresponding to this capital expenditure.

ii. ROW Charges paid by POWERTEL:

As per CERC Regulation 2007, POWERGRID Telecom has paid ~ Rs.8.6 Cr RoW charges in 2019 for utilisation of 33,400 Kms OPGW (Average approx. Rs. 2,575/Km/Year).

b) Non –Monetary benefits: Besides above monetary benefits, POWERGRID telecom has passed various other socio-economic benefits which are difficult to quantify. Some of them are

- Additional Socio-economic value by stimulating the development of Indian Telecom Sector especially in the difficult terrain of North East Region and Jammu & Kashmir, where GOI has priority to established reliable Telecom network.
- Providing reliable communications during natural disaster like situations.
- Becoming a partner in various highly reputed Govt. project like Digital India Program (NOFN/Bharatnet/NKN etc).
- Providing secure communications to various Govt. agencies.
- Generation of direct and indirect employment.

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

2) POWERGRID's comments on draft sharing methodology

A. Proposed Methodology Vs Prevailing Methodology:

In prevailing mechanism it is a two part sharing method where POWERGRID telecom shares capital cost of OPGW as well a fixed charge/km/year termed as Length of ROW charge.

In the proposed mechanism, Hon'ble CERC has proposed a new methodology where 10% of Gross revenue is to be shared. Thus proposed mechanism is not in continuation to the existing mechanism. There may be two methodology of sharing of charges-

B. Revision of ROW Charges :

As per the explanatory memorandum, the cost of Right of Way was evolved in 2007 and needs to be revised. The need for the same was covered in Tariff regulations, 2019 also. Hence, it is proposed that the present mechanism of capital cost sharing may be continued and ROW charges may be revised. There can be various methodologies to revise ROW charges as given below;

a) ROW charges considering inflation/escalation rates

- Row Charges in as per CERC Regulation 2007 : **3000/Km/Year**
- i. CERC O&M Escalation rate 2019-24 for Transmission Asset : 3.4 % per year
Row Charges in 2018 considering escalation **3.4% per year** : **4500/Km/Year**
- ii. Average all Commodities inflation rates(20011-2017) : 2.69% per year
Row Charges in 2018 considering inflation @**2.69% per Year** : **4019/Km/Year**
- iii. Average Electricity inflation rates (20011-2017) : 1.39% per year
Row Charges in 2018 considering inflation@**1.39% per Year** : **3491/Km/Year**

(Source: www.data.gov.in for ii, & iii)

It may be seen that above figures are in line with the rates at which various State Discoms are renting-out their Electrical Poles for laying of Fibers/ADSS and are as given below-

State	Row Charge/Kms/ Annum (Considering 10 Pole per Km based on utilisation of 11KV/33KV/66KV Lines)
Kerala	Rs.3130/-
Uttarakhand	Rs.5,000/-
Haryana	Rs.5,000/-
Meghalaya	Rs.1250/-
Odisha	Rs.750/-

Proposal 1: Considering above, RoW charges of ~ 4500/Km/Year with yearly escalation rate of 3.4 % may be considered along with capital cost sharing as per present mechanism.

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

C. Sharing of Revenue

Hon'ble Commission in para 6.3 of the explanatory memorandum to the draft regulation has given detailed calculation for arriving at 10% figure as proposed in draft regulation. Following are POWERGRID's observation regarding the methodology considered:

- Consideration of one financial year data for calculation: Proposed revenue sharing mechanism is derived based on only one year data i.e FY 2017-18. Hon'ble Commission in past has always considered large set of historical data for multiple Financial years while arriving at any such decisions. Even for finalising tariff regulations for different control periods, 5 year data has always been considered in past. It is understood and accepted fact that a large set of data is necessary to remove any exception, abnormality and subjectivity in data and further to normalize it. Thus, calculation based on historical data of last 4-5 years will only give any meaningful result.

The proposed draft regulation is coming after 12 years from last regulation in 2007. These regulations generally remain in vogue for a considerable period and thus have an impact for a longer period for its stakeholders. Considering the importance and effect of this regulation on overall financial health of POWERGRID telecom, it is essential that any conclusion may only be formed based on at least 4-5 year data.

- Hon'ble CERC in its calculations has considered POWERGRID Telecom's PBT, 2017-18 as 22.13% of total fixed assets (Including saving in capital cost due to use of OPGW Vs Underground Fibre). It is humbly submitted that this 22.13% does not give a true picture of POWERGRID Telecom's financial condition. As explained at para 1) E above, POWERGRID Telecom revenue is subject to large variability and vary significantly depending upon external market conditions, competitions, branding etc. Running expenditures in terms of marketing and regular upgradation of equipment play significant role in overall revenue generation for the business. Historically POWERGRID telecom has remained a loss making entity till 2008-09 before turning profitable. Even from 2009 to 2015 these figures were very less and in single digits only. In present scenario also Telecom sector is undergoing a large structural change. Therefore, as discussed above one year data can neither give a reliable picture of the sector or the company nor it can reflect true financial condition of POWERGRID Telecom. Therefore, average of 5 year data should be considered.

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

Based on above discussion, calculation has been done considering 5 year data of FY 2013-14 to FY 2017-18.

S. No	Detail	Reference	Unit	Financial Year				
				2013-14	2014-15	2015-16	2016-17	2017-18
A	Gross Revenue		Cr	288	300	435	559	678
B	Revenue Surplus /PBT		Cr	94	63	163	254	314
C	OPGW Fiber utilized by Telecom, which laid on Central Sector Lines		Kms	15185	16478	17741	21772	33403
D	POWERGRID Telecom Underground Fiber/Lease Fiber etc.		Kms	14455	16522	18759	20228	19765
E	Total Fiber Network (OPGW + Underground)	(C+D)	Kms	29640	33000	36500	42000	53168
F	Normative Asset (Estimated Saving of Capex due to OPGW (@ 1.5 Lacs/Km) on Sr. No.-3)	(1.5 lakh*C) /100	Cr	228	247	266	327	501
G	Segment Asset as per Annual Reports		Cr	853	801	817	861	919
H	Total Asset =Segment Asset + Normative Asset	(F+G)	Cr	1081	1048	1083	1188	1420
I	Net Revenue surplus as a % of Total Asset	(B/H)	%	9%	6%	15%	21%	22%
J	Average Net Revenue surplus as a % of Total Asset		%	14.65%				
K	Contribution of Transmission assets towards net Revenue surplus	(F*J)	Cr	33.37	36.21	38.99	47.85	73.41
L	Central sector OPGW as a % of Total fiber	(C/E)	%	51%	50%	49%	52%	63%
M	Net Revenue Surplus sharing with beneficiaries in proportion to the Transmission Asset (OPGW)	(K*L)	Cr	17.10	18.08	18.95	24.80	46.12
N	Revenue shared as a % of Gross Revenue	(12/I)	%	5.9%	6.0%	4.4%	4.4%	6.8%
O	Average Revenue Sharing % as per CERC methodology		%	5.5%				

Thus, even as per the methodology proposed in draft regulation, amount to be shared is 5.5 % of Gross Revenue. However, 5.5 % is the maximum benefit arising

POWERGRID's comment on Draft CERC (Sharing of Revenue Derived from Utilization of Transmission Assets for Other business) Regulations, 2019.

out of use of OPGW laid on POWERGRID transmission network by POWERGRID Telecom. It is combined result of use of tangible assets and non-tangible efforts by POWERGRID telecom in running its business including marketing, consultancy, revenue recovery etc. As explained at para 1) E above, in present market condition POWERGRID Telecom revenue is result of not just the OPGW infrastructure, regular investment towards upgradation of active equipment, technologies but also due to focused marketing efforts.

In fact, it is a win win situation for all where POWERGRID telecom with its effort is generating extra revenue from existing transmission assets. It is desirable that efforts should be made to encourage the growth of such business so that incentives are to be shared with the beneficiaries. It is fair that such additional benefits are to be shared between POWERGRID Telecom and ISTS long term customers in equal proportion. Therefore 5.5 % of gross revenue may be equally shared between ISTS long term customers and POWERGRID telecom i.e ~3 % of POWERGRID Telecom's gross revenue may be shared with the ISTS long term customers.

Proposal 2: ~ 3 % of POWERGRID Telecom's gross revenue may be shared with the ISTS long term customers

Further, POWERGRID Telecom has already shared capital cost of a portion of OPGW as one time investment. It was meant to be for complete useful life of OPGW. Therefore, under proposed methodology where POWERGRID telecom has to share a % of revenue in place of fixed ROW charges, the practice of Capital cost sharing by POWERGRID telecom shall be discontinued. Also, POWERGRID may be allowed to book capital expenditure shared by POWERGRID telecom with ULDC against OPGW while truing up for the tariff block 2014-19 and revised tariff shall be claimed accordingly.