



PUNJAB STATE TRANSMISSION CORPORATION LIMITED
Regd. Office: PSEB Head Office, The Mall Patiala-147001, Punjab, India.
Corporate Identity Number: U40109PB2010SGC033814 (www.pstcl.org)
(Office of Chief Accounts Officer (Finance & Audit), ARR Section
3rd Floor, Shakti Sadan, Patiala)
Fax/Ph. No.0175-2970183 Email : fa@pstcl.org

To

The Dy. Registrar,
Punjab State Electricity Regulatory Commission,
Site No. 3, Madhya Marg,
Sector-18A, Chandigarh.

Memo No. 436 /CAO(F&A)/MYT-III/APR-1A

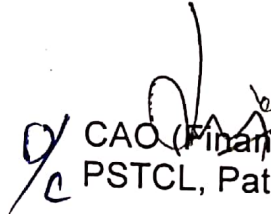
Dated: 17/2/2021

Subject: Petition for True up for FY 2019-20, APR for FY 2020-21 & revised ARR for FY 2021-22 (Petition no. 44/2020) : Objections thereof.

Ref: Your office email dated 11.02.2021.

In response to email under reference please find enclosed herewith the reply of the objections raised by PSEB Engineer's Association (Objection No. 5) on subject cited petition filed by PSTCL before PSERC.

DA/As Above (12 Copies)


CAO (Finance & Audit),
PSTCL, Patiala.

CC:

PSEB Engineer's Association , Passey Road, Patiala - 147001.

DA/As Above

137
12/2021

OBJECTION No 5

PSEB Engineer's Associations

Comments on Petition no. 44 of 2020 filed by PSTCL for True up for FY 2019-20, Annual Performance Review of FY 2020-21 and Revised ARR and Tariff Determination for FY 2021-22 filed before the Commission appeared in Tribune and Punjab Keseri dated 01-01-2021 respectively

Objection 1:

It is stated by PSTCL that the approved vis-a-vis actual capital expenditure for first control period is given in Annexure-1.

1.1 Annexure-1 is at Page 542 to 582

The list of capital works relating to power transformers of 100 MVA, 160 MVA (220/66 kV) and 500 MVA (400/220 kV) is extracted for Annexure-1, as under.

As per this list, power transformer have been constructed at following grid sub stations. The following details may be supplied by PSTCL for each power transformer.

(i) Present status: Whether completed and commissioned or whether work is yet to be completed.

(ii) Actual or expected date of commissioning

(iii) Actual or estimated completion cost.

The list of power transformer in Annexure-1 is as under.

TF MVA	Sub Station
100	Dharamkot
500	Dhuri
160	Ladowal
100	Maur
160	Hosiarpur
100	Bagha Purana
100	Kanjali
100	Verpal
100	Mahilpur
100	Ablowal
100	Badhni kalan
100	Alwalpur
100	Talwandi Bhai
160	Amlah
160	Mansa
160	Kartarpur
500	Muktsar

100	Dera Bassi
500	Makhu
100	Bangan
100	Rajla
100	Jamsher
100	Gubhaya
160	Chogawan
100	Badal
100	Dasuya
100	Banga
160	Sherpur
160	Lalru
100	Tibber
160	Udhoke
160	Hosiarpur
100	Bhawanigarh
160	Jadla
160	Botianwala
100	Majitha

Summary	MVA
100 MVA Transformers 21 No.	2100
160 MVA Transformers 13 No.	1920
500 MVA Transformers 3 No.	1500

The Augmentation of Transformers capacity is seen as 1500 MVA for 400 kV and 4020 MVA for 220 kV.

This augmentation is compared with existing Transformers capacity as on 31.3.2020 as under.

	Existing	Augmentation	Augmentation%
400 kV	4890	1500	30.7
220 kV	28440	4020	14.1

For prudence check on capital cost, the capital cost of various 100 MVA Transformers may be tabulated and compared and similarly for 160 MVA Transformers. For new 500 MVA Transformers 400 kV the capital cost may be compared with existing Transformers.

Reply 1:

Details of Capital Cost of Various Power transformers present status, Actual or expected date of commissioning, Actual or estimated completion cost are provided as Annexure I.

Objection 2:

At para 3.2 the description of transmission system of PTCL is given as on 1-4-2019 and as on 31.3.2020.

The details of transmission bays do not mention 66 kV bays. The figures of 220 and 66 kV bays are given at page 355 and 516 of petition.

The particulars of substation bays at page 516 are as under

	1-4-2019	31-3-2020
400 kV	62	72
220 kV	681	703
132 kV	505	505
66 kV	1168	1196
33 kV	12	12

At page 25 of petition 220 kV bays are stated as 669 whereas the substation bays at page 516 are 681.

66 kV bays have been excluded from summary in table 14 at page 25. The particulars at Table 14 page 25 should include total number of 66 kV and 33 kV bays as shown at page 516.

It is stated that PSTCL grid substations mostly include 220/66kV Transformers, 66 kV is bus bars and 66 kV outgoing circuit breakers (bays). The entire 66 kV equipment located with the premises of substation are of PTCL and the O&M is done by PSTCL, and these bays should be included in table 14.

Reply 2:

Reconciliation of 66 kV bays and 220 kV sub-station bays submitted as Annexure II

Objection 3:

O&M Expenses

ARR Table, Table 34 (Page 49) gives the true-up figures for 2019-20 (Transmission business as under).

	Rs. Crore
Employee Cost	500.10
R&M, A&G	55.68
Total O&M	555.78

Reply 3:

No comments against this as these are submissions of PSTCL in the petition.

Objection 4:

O&M expenses as per CERC norms

The O&M charges as per CERC norms are worked out as per transmission system date of PSTCL and applying CERC norms. The detailed calculations are shown as at Annexure and summary is as under.

	Rs. Lacs
Substation MVA	9791.19

Substation Bays	45687.3
Transmission lines	3143.4
Total O&M As per CERC	58621.89

Comparison of PSTCL actual for O&M with CERC norms for 2019-20.

	Rs. Crore
PSTCL Actual	555.78
As per CERC Norms	586.2

The Actual of O&M expenses are thus Rs. 30.4 Crore less than CERC norms. ARR for 2020-21 and revised ARR for 2021-22.

Reply 4:

PSTCL appreciates objector's comparison of applicable O&M cost according to CERC norms but would like to submit that costs are claiming as per the PSERC MYT regulations and other regulations as applicable in the state.

Objection 5:

Para 4.3 description of transmission system

The details / particulars of 66 kV bays should be given in respect of 66 kV bays located in PSTCL substations at the details given in page 517 give the details as on 30.9.2020.

400 kV bays	72
220 kV bays	704
132 kV bays	508
66 kV bays	1205
33 kV bays	12

Reply 5:

Reconciliation of 66 kV bays and 220 kV sub-station bays submitted as Annexure II

Objection 6:

Loan – Equity ratio Table 40

In case of CERC regulations, with 70:30 loans-equity ratio in case actual equity is more than 30% then the excess above 30% is treated as normative loan on which intent is allowed. To treat 100% capital cost as loan and 0% as equity is not justified.

Reply 6:

The capex is claimed to be funded through 100% loan in FY 19-20 which is in line with the approach adopted by the Hon'ble Commission in previous Tariff Orders.

Objection 7:

Para 4.7 O&M Expenses

As per calculations for 2019-20 (actual) with CERC norms and O&M admissible for PSTCL is Rs. 586.2 Crore as against actual (audited) of Rs. 555.78 Crore which is about Rs. 30 Crore lower.

The same pattern is expected for 2020-21, 2021-22 also the comparative figure as (transmission business)

	19-20	20-21	21-22
Employee	500.10	525.4	536.37 Rs. Cr.
R&M A&G	55.68	61.65	62.9 Rs. Cr.
Total O&M	555.78	587.05	599.27 Rs. Cr.

Reply 7:

PSTCL appreciates objector's comparison of applicable O&M cost according to CERC norms but would like to submit that same PSERC MYT regulations and other regulations as applicable in the state.

Objection 8:

Chapter 6 Page 82 compliance to directives

Sr. 5.3 Page 83 loading status of PSTCL transmission lines and substations.

The loading status is gives on Annexure A at page 184 -189

PSTCL may give details

a) Conductor of 220kV PGCIL – Kartarpur circuit 1,2 is to be augmented (Page 186). The status / estimate of augmentation may be given

(b) Vide page 188-189 it is stated that conductor of Gobindgarh Rajpura 220 kV ckts 1,2 is to be augmented as these liens get overloaded when only 1 unit is running at Ropar thermal, Status time frame of conductor augmentation may be given by PSTCL.

c) At page 189 PSTCL has stated that there is overloading problem of 66 kV system at 220 kV substation Ferozepur since there is space constraint at 220 kV substation Ferozepur and addl 220/66 k V power transformer cannot be installed.

PSTCL has stated the possibility of new 220kV substation at Jhoke Harihar which can then supply 66 kV load of Ferozepur. PSTCL may give status of 220 kV proposed substation at Jhoke Harihar which will be the long-term solution for overloading of 66 kV System at Ferozepur.

Reply 8:

PSTCL would like to submit that for issues listed as (a) & (b), the conductor of these lines is planned to be augmented with HTLS conductor & since PSDF schemes are available for augmentation of conductor to HTLS, the BOD's of PSTCL had decided to augment conductor of these lines after taking PSDF grants.

The DPR for PSDF grants stands submitted and the projects shall be under taken after approvals of grants.

No time frame can be given as no time frame is available to PSTCL w.r.t. approval of PSDF grants.

However it is confirmed that these conductor shall be augmented with in a year of approval of PSDF grant.

For issues listed in (c), PSTCL would like to submit that the overloading of 220 KV S/S Ferozpur can be controlled by converting 66 KV S/S Jhoke Harihar to 220 KV S/S which is already under study & have been projected in MYT as S/S to be augmented under study. The augmentation is not being planned hurriedly as there is no upcoming load in that area and PSPCL has been asked to study shifting of some 66 KV load from 220 KV S/S Ferozpur to some other nearby 66 KV S/S. by exploring the possibility of 66 KV links. The report of PSPCL is awaited to take the final decision.

Objection 9:

The directions given by Commission relate to overloading of PSTCL lines and substations. However, there is no system to check or monitor the overloading of PGCIL system, particularly.

(i) PGCIL 400 kV lines supplying sub stations in Punjab.

(ii) PGCIL power transformers of 315 MVA 400/220 kV and 500 MVA 400/220 kV.

It is suggested that Commission may issue direction to SLDC to monitor and give status report on loading of PGCIL 400 kV line and 400/220 kV transformers. Since SLDC has to oversee the operation of 400 kV system this includes monitoring of loading condition of 400 kV lines and transformers and so SLDC could be assigned task of monitoring the overloading of 400 kV system of PGCIL that is supplying power to Punjab.

Alternately, since PSTCL is also the STU, State Transmission Utility, it has the duty under Electricity Act 2003 to coordinate with PGCIL which is the CTU.

Reply 9:

No Comments.


CAO (Finance & Audit),
PSTCL, Patiala

Replies of comments of PSEB Engineers' Association (Objection No. 05)
Detail Of PTF Installed/Augmented During 2017-20 1st MYT Period

Sr No.	MYT Sr. No.	Name Of Sub Station	Capacity	Persent Status as on 31-03-2020	Actual OR expected date of commisioning	Expenditure In Crore Incurred/Expected
1	1	220 KV S/S Dharmkot	100 MVA 220/66KV	Work Completed	14-07-2017	7.04
2	8	400 KV S/S Dhuri	500 MVA 400/220 KV	Work Completed	21-07-2017	22.52
3	21	220 KV S/S Ladowal	160 MVA 220/66KV	Work Completed	15-03-2019	24.31
4	24	220 KV S/S Maur	100 MVA 220/132KV	Work Completed	22-06-2017	14.57
5	27	220 KV S/S Hoshiarpur	160 MVA 220/66KV	Work Completed	20-06-2018	20.73
6	28	220 KV S/S Baghapurana	100 MVA 220/66KV	Work Completed	22-06-2017	7.72
7	29	220 kv S/S Kanjali	100MVA, 220/66 kv	Work Completed	28-11-2017	6.44
8	76	220 KV S/S Verpal	100 MVA 220/66 KV	Work Completed	21-05-2018	8.00
9	32	220 KV S/S Mahilpur	100 MVA 220/66KV	Work Completed	21-07-2017	5.43
10	33	220 KV S/S Ablowal	100 MVA 220/66KV	Work Completed	27-03-2017	2.98
11	44	220 KV S/S Badhnai Kalan	100 MVA 220/66KV	Work Completed	11/3/2019	14.55
12	46	220 KV S/S Allawalpur	100 MVA 220/66KV	Work Completed	13-06-2019	8.90
13	48	220 KV S/S Talwandi Bhai	160 MVA 220/66 KV	Work Completed	30-09-2017	9.66
14	49	220 kv S/Stn Amlah	160 MVA, 220/66 kv	Work Completed	13-06-2019	9.98
15	50	220 KV S/S Mansa	160 MVA 220/66 KV	Work Completed	15-03-2018	8.05
16	51	220 KV S/S Kartarpur	160 MVA 220/66 KV	Work Completed	18-04-2018	7.89
17	55	400 KV S/S Mukatsar	500 MVA 400/220 KV	Work Completed	28-08-2019	27.72
18	60	220 KV S/S Dera Bassi/ Saidpur	100 MVA 220/66KV	Work Completed	29-12-2017	6.77
19	62	400 kv S/Stn. Makhu	Addl 500MVA 400/220 kv	Work In Progress	30/06/2021	28.00
20	75	220 kv S/Stn Bagan	100 MVA, 220/66	Work In Progress	20-05-2020	7.21
21	76	220 KV S/S Rajla	160 MVA 220/66 KV	Work Completed	30-03-2018	8.07
22	109	220 KV S/S Jamsher	160 MVA 220/66 KV	Work Completed	30-04-2019	9.72
23	110	220 KV S/S Ghubaya	160 MVA 220/66 KV	Work Completed	6/3/2020	7.73
24	112	220 KV S/S Chogawan	160 MVA 220/66 KV	Work Completed	2/8/2019	11.37
25	113	220 KV S/S Badal	100 MVA 220/66 KV	Work Completed	19-06-2019	9.42
26	114	220 kv S/Stn Dasuya	100MVA, 220/66 kv	Work In Progress	30-09-2021	4.21
27	116	220 kv S/Sfn Banga (U/G from 132 kv)	100 MVA, 220/132 kv	Work In Progress	31-03-2021	8.19

28	120	220 kV S/Stn Sherpur (Focal Point) (U/G from 66 kV grid with 220 kV side GIS and 66 kV side	1x160 MVA. 220/66 kV T/F	Not Yet start	31-03-2022	10.20 (Excluding Civil works)
29	148	220 KV S/S Lalru	160 MVA 220/66 KV	Work Completed	30-01-2019	4.01
30	149	220 kV S/Stn Tibber	Addl. 2nd 100 MVA, 220/66	Work In Progress	31-03-2022	7.01
31	150	220 kV S/Stn Udhoke	Addl. 2nd 160 MVA, 220/66	Work In Progress	31-03-2022	9.94
32	151	220 KV Hoshiarpur	160 MVA 220/66 KV	Work Completed	23-12-2019	11.89
33	166	220 kV S/Stn Bhawanigarh	Addl. 2nd 100 MVA, 220/66	Not Yet start	31-03-2022	7.44
34	167	220 kV S/Stn Jadla	Addl. 2nd 100MVA,	Not Yet start	31-03-2022	7.44
35	168	220 kV S/Stn Botianwala (Thatha Sahib)	Addl. 3rd 160 MVA, 220/66	Not Yet start	31-03-2022	10.1
36	169	220 kV S/Stn Majitha	Addl. 2nd 100 MVA, 220/66	Not Yet start	31-03-2022	7.44

Note :- Cost of individual T/Fs procured is attached herewith yearwise

Annexure - II

Particulars	Previous year				Current Year			Control Period Projections					
	FY 2019-20				FY 2020-21			FY 2020-21			FY 2021-22		
	Actual as on 31.3.2020				(Actual in H1) 30.9.2020			(Projected in H2)			Projected		
	At the start of year	Additions during the year	Withdrawal from service	At the end of year	Additions during the year	Withdrawal from service	At the end of year	Additions during the year	Withdrawal from service	At the end of year	Additions during the year	Withdrawal from service	At the end of year
Number of Bays at PSTCL													
i) 400 kV Sub-Station	62	10	0	72	0	0	72	4	0	76	2	0	78
ii) 220 kV Sub-Station	681	22	0	703	2	0	705	40	0	745	12	0	757
iii) 132 kV Sub-Station	505	0	0	505	3	0	508	6	0	514	0	0	514
iv) 66 kV Sub-station	1168	28	0	1196	9	0	1205	1	0	1206	12	0	1218

Annexure - B

Ex-Works rate of T/Fs									
T/F Rating	2016-17	2017-18		2018-19		2019-20		2020-21	
	Rates on which T/F ordered	Updated rate of previous PO	Rates on which T/F ordered	Updated rate of previous PO	Rates on which T/F ordered	Updated rate of previous PO	Rates on which T/F ordered	Updated rate of previous PO	Rates on which T/F ordered
160MVA 220/66kV	5,01,79,738.56 (PO dtd 31.03.16)	5,41,48,955.88	5,07,00,000.00	-	-	5,62,59,020.00	5,41,80,000.00	5,51,05,394.40	5,67,15,926.40
100MVA 220/66kV	3,50,10,305.01	-	-	-	-	-	-	4,34,81,048.30	4,08,84,524.82
100MVA 220/132kV	Not procured							T.E STQ-7052 under process	
20MVA 66/11kV	1,04,80,000.00 (ED- NIL)	96,90,050.02	95,01,360.00	-	-	-	96,96,212.02 (Qty-2No. at PSPCL rates)	T.E STQ-5125 under process	
						1,06,86,179.60	1,11,38,559.32 (PSPCL rate 1,12,23,305.00)		
315MVA 400/200kV	Not procured								
T/F ICT Bay complete as per requirement which includes 500MVA 400/220kV T/F	-	-	21,57,06,466 (Mukatsar)	-	-	24,35,76,704	24,20,39,752 (Makhu)	26,34,86,586	25,89,29,252 (Rajpura)*

Note: - Rates of turnkey package including T/F, Bay, Civil works etc are mentioned. Rates of transformer in turnkey package are not comparable separately as individual items can be cross loaded.

* Rajpura prices have been finalized but still to be allotted by competent authority.