Punjab State Power Corporation's suggestions/comments on CERC draft regulation 2019-2024

<table>
<tr><th>S.No</th><th>Regulations</th><th>Clause as per Draft Regulation</th><th>Suggestions/Comments</th></tr>
<tr><td>1.</td><td>Clause no :-31 Page 66 (Tax on return on equity)</td><td>Tax on Return on Equity. (1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate. (2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below: Rate of pre-tax return on equity = Base rate / (1-t) Where "t" is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of no generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess. Illustration (i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess: Rate of return on equity = 15.50/(1-0.2155) = 19.758% (ii) In case of</td><td>As per this clause, Return on Equity determined as per the clause 30 shall be grossed up by the tax rate determined under this clause. To determine the tax rate income from relevant business of generation/transmission and actual tax paid is required to be taken. The rate determined under this clause shall be used to get the rate of pre tax return on equity as per the following formula:-

Rate of Pre tax return on equity = Base rate/1-t
(Where t = tax rate calculated under this clause)
In present regulation main emphasis has been given to tax rate applicable in respective year and no consideration has been given to the absolute amount of income tax paid by generating/transmission company. By doing this in some cases the tax amount allowed to these companies in a particular year becomes higher than the actual tax paid. The Basic reason behind it that as per CERC regulations fixed rate of return on equity in percentage term is allowed whereas the actual rate of return, earned by these companies on equity is lesser than return determined under these regulations. The Income tax is required to be paid on actual profits earned by these companies and not on the notional profit/Return allowed to these companies under CERC regulations. In our views the income tax grossing up must be restricted up to the actual tax paid by these companies in respective year.
Our point can be better understand by the example given below:
Exp: A generating company invested 1,000 crore as equity and same is allowed as per the regulation.

<table>
<tr><td>Return on Equity allowed</td><td>15.5%</td></tr>
<tr><td>Actual Return on Equity</td><td>110 crore (in year 2018-2019)</td></tr>
<tr><td>Income tax paid</td><td>22 Crore</td></tr>
<tr><td>Income tax rate as per regulation 31</td><td>22/110*100=20%</td></tr>
<tr><td>Rate of pre tax return</td><td>15.5/1-20% = 19.375</td></tr>
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<td>generating company or the transmission licensee paying normal corporate tax including surcharge and cess: (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore; (b) Estimated Advance Tax for the year on above is Rs 240 crore; (c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs ,1000 Crore = 24%; (d) Rate of return on equity = 15.50/ (1-0.24) = 20.395% (3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers as the case may be on year to year basis.</td>
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<table>
<tr><td>on equity</td><td></td></tr>
<tr><td>Absolute return on equity</td><td>1,000 crore *15.5% = 155 crore</td></tr>
<tr><td>Pre tax return on equity</td><td>1,000 crore * 19.375% = 193.75 crore</td></tr>
<tr><td>Tax allowed as per current provisions</td><td>193.75 - 155 = 38.75 crore</td></tr>
<tr><td>Actual tax paid</td><td>22 crore</td></tr>
<tr><td>Excess allowed under these provisions</td><td>38.75 - 22 = 16.75 crore</td></tr>
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Accordingly as per example given above the actual tax paid by the generating company is 22 crore whereas allowed under these regulation is 38.75 crore. In our views the total tax on return on equity must not be more than actual tax paid by the company. As the tax is an uncontrollable factor, So no benefits must be accrue to the generating/transmission company on account of tax paid by them. Hence the regulation may be amended accordingly.
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<td>2.</td>
<td>Clause no 32 (3)</td>
<td>The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.</td>
<td>It is submitted that generally financial institutions and banks sanction the capex loans for the tenure of 10-13 years (including moratorium period of 3 years) only and the repayment of these loans has been made accordingly, whereas the useful life of assets is considered as 20-25 years as per Regulation 3 (67) of CERC regulations 2014 and MoP notification dated 29-03-2014, which do not commensurate with each other. As such, repayment of capex loans should be allowed on actual basis instead of linking with depreciation of the assets</td>
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3.	**Clause no. 33 (2)**	The value base for the purpose of depreciation shall be the capital cost of the asset submitted by the Commission. *In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied.* Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the part of the year, depreciation shall be charged on pro rata basis.	The part of regulation (highlighted in bold) should be placed as a proviso to the regulation 33(2). Moreover, the words mentioned in above regulations as 'weighted average life for the generating station of the transmission system shall be applied' needs to be clarified as how the weighted average life of transmission system shall be applied to generating stations. Further the underlined text actually pertains to useful life whereas the contents of the regulations relate to capital cost of assets. Further the words "Weighted average life" should be defined in the regulation.
4.	**Clause no 33 (3)**	The salvage value of the asset shall be considered as 5% and depreciation shall be allowed up to maximum of 95% of the Capital cost of the asset. Provided the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable. Provided further that in case of hydro generating station, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the Plant. Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long term power purchase agreement at regulated tariff. Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be shall not be allowed to be recovered at a later stage during the useful life and the extended life.	Presently, the regulations provide 10% salvage value and depreciation can be provided upto 90% of the Capital cost of assets. Whereas, the draft regulations have increased the capping for providing depreciation from 90% to 95% in case of normal assets and 100% in case of IT equipment. The regulations are silent about applicability of the same i.e. prospectively or retrospectively as numerous assets are outstanding on 10% salvage value. How such assets will be dealt? Whether depreciation for the difference i.e. (between 90% to 95/100%) will be allowed in one year or in multiple years? This needs to be clarified.
5.	**Clause no. 33 (5)**	Depreciation shall be calculated annually based on Straight Line Method and at rates specified in	It is requested to provide life of the assets along with rate of depreciation for the first 12 years and thereafter for uniform application

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		Appendix-I to these regulations for the assets of the generating station and transmission system. Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.	of rates. Further the Appendix-I does not make clear that whether the given rates of depreciation is for first 12 years of commercial operation or for whole life of asset. As such, it is requested to provide life of assets along with separate rates for the both periods.
6.	**Clause no :- 35(6) Page 78 Operation and maintenance Expenses:**	The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately prudence check: Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition: Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses; Provided also that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization.	Security Expenses should not be allowed as separate item and only O & M expenses per MW be allowed in regulation 2019-24.
7.	**Page No 47, S.No.18 (2)(o) Scrapping of PAT Scheme**	Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.	The Perform, Achieve & Trade (PAT) scheme of Bureau of Energy Efficiency (BEE) under Ministry of Power, GoI is a scheme used for motivating the energy saving at industrial level and includes various industries, but the comparison must be done on same platform like age factor, capacity factor so that best energy saving measures can be taken and benchmarks can be set for same platform if that is not possible PAT may be reviewed or appropriate clause in this regard may be added to the Regulation.
8.	**Clause no 52.**	CVPF = (a) Weighted Average Gross calorific	It is suggested that CVPF be defined as (a) Weighted Average Gross

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	Computation and Payment of Energy Charge for Thermal Generating Stations	value of coal as received, in kCal per kg for coal based stations less 85 Kcal/Kg on account of variation during storage at generating station;	calorific value of coal as received, in kCal per kg for coal based stations as per the CERC Regulations, 2014.
9.	**Clause no :- 54(2) Page 105 Computation and Payment of Capacity charge and Energy Charge for Hydro Generating Stations**	54(2) The capacity charge (inclusive of incentive) payable to a hydro generating station for a calendar month shall be: AFC x 0.5 x NDM / NDY x (PAFM / NAPAF) (in Rupees) Where, AFC = Annual fixed cost specified for the year, in Rupees NAPAF = Normative plant availability factor in percentage NDM = Number of days in the month NDY = Number of days in the year PAFM = Plant availability factor achieved during the month, in percentage.	It has been noticed hydro electric plant (HEP) in many cases able to got fixed a lower NAPAF (Normative Plant availability factor in percentage) due to this they are able to recover fixed charges/ capacity charges by declaring a lower NAPAF. The action of these firms is correct where there are genially problems beyond the control of the generating companies but sometimes it is a source of huge profit as the formula for calculations of capacity charges allows then a incentive over & above, the actual relevant charges incurred by the companies, our suggestion is here that:- 1) The incentive must be restricted to a fixed percentage e.g. 5%, Suppose if NAPAF of HEP is fixed at 60% then they must be allowed only incentive up to actual PAFM up to 60%+5% of 60% = 63%. 2) Alternatively the incentive in capacity charges should be restricted to maximum 25 paisa per unit or actual capacity charges payable to company per Kwh, whichever is less.
10.	**Clause no. 59. The norms of operation as given hereunder shall apply to thermal generating stations**	(A) Normative Quarterly Plant Availability Factor (NQPAF) (a) For all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) - 83%	It is suggested that Normative Quarterly Plant Availability Factor (NQPAF) for all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) may be defined as 85%.
11.	**Clause no :-77 Page 146 (Deferred tax liability with respect to previous tariff period)**	Deferred Tax liability with respect to previous tariff period: Deferred tax liabilities for the period upto 31st March, 2009 whenever they materialize shall be recoverable directly by the generating companies or transmission licensees from the then beneficiaries or long term transmission customers/DICs, as the case may be. Deferred	As per clause Deferred tax liability for the period up to 31st march 2009 wherever materialized shall be recoverable by the generating /transmission licensee from the beneficiaries. Identical clause was provided in CERC tariff regulation 2014-2019 clause no:-49 and CERC tariff regulation:-2009-2014 clause :-35 However it has been noticed that generating companies are

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<tr><td></td><td></td><td>tax liabilities for the past periods, if any shall not be recoverable from the beneficiaries or the long term transmission customers/DICs, as the case may be.</td><td>misinterpreting these clauses and while recovering the deferred tax liability for the period up to 31st march 2009, materialized during the relevant previous year, wrong grossing up the tax at the prevalent income tax rate has been done on the amount due under this clause in the relevant previous year. It is brought to your kind information that as per the present/purposed regulations grossing up of the deferred tax liability materialized in the relevant year is not allowed, hence due clarification that grossing up of the deferred taxis not allowed may be added/inserted in the draft regulation 77. Further while truing up the account of the generation /transmission companies data for recovery of deferred tax liability by generation/transmission companies from beneficiaries for the period 2009-2010 to 2018-2019 may please be sough and wherever the recovery done by these companies is not as per the regulations, companies may be directed to refund the excess recovered amount on account of wrong grossing up of the deferred tax liabilities, along with interest.</td></tr>
<tr><td>12.</td><td>Page-120, Clause no. 59 (C) (a) (Station Heat Rate)</td><td>Gross Station Heat Rate:
(a) Existing Thermal Generating Station
(i) For existing Coal-based Thermal Generating Stations, other than those covered under clauses (ii) and (iii) below: 121
<table><tr><th>200/210/250 MW sets</th><th>500 MW sets (sub- critical)</th></tr><tr><td>2,410 kCal/kWh</td><td>2,375 kCal/kWh</td></tr></table>Note 1
In respect of 500 MW and above units where the boiler feed pumps are electrically operated, the gross station heat rate shall be 40 kCal/kWh lower than the gross station heat rate specified above.
Note 2
For the generating stations having combination of 200/210/250 MW sets and 500 MW and above sets, the normative gross station heat rate shall be the weighted</td><td>PSPCL Power Plants are subjected to operate at partial load or even have to shut down due to low power demand. These operating conditions badly affect plant performance and Station Heat Rate.
The Station Heat Rate should be allowed on higher side by giving due consideration for operation of Thermal Plants Units on account of ageing and cyclic power demand conditions of the State. If the Normative plant load factor is less than 85%, compensation in heat rate must be given as per Plant load factor.
It is further added that fixing 2410 KCal/KWh as Gross Station Heat Rate (SHR) for 210/ 250 MW existing thermal generating station may be changed to be 2500 KCal/KWh for the Station running at Plant Load Factor equal to/ greater than Normative Quarterly Plant Load Factor (NQPLF), which is 85%. This value is more realistic in case of computation of Gross SHR based on GCV of Received Coal.</td></tr>
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		average gross station heat rate of the combinations. **Note 3** The normative gross station heat rate above is exclusive of the compensation specified in Regulation 6.3 B of the Grid Code. The generating company shall, based on unit loading factor, consider the compensation in addition to the normative gross heat rate above. (ii) For following Thermal generating stations of NTPC Ltd: Talcher TPS — 2,830 kCal/kWh Tanda TPS — 2,750 kCal/kWh (iv) For Lignite-fired Thermal Generating Stations: For lignite-fired thermal generating stations, except for TPS-I and TPS-II (Stage I & II) of NLC India Ltd, the gross station heat rates specified under sub-clause (i) for coal-based thermal generating stations shall be applied with correction, using multiplying factors as given below: (a) For lignite having 50% moisture: 1.10 (b) For lignite having 40% moisture: 1.07 (c) For lignite having 30% moisture: 1.04 For other values of moisture content, multiplying factor shall be pro-rated for moisture content between 30-40% and 40-50% depending upon the rated values of	

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multiplying factor for the respective range given under sub-clauses (a) to (c) above.
(v) TPS-I and TPS-II (Stage I & II) of NLC India Ltd:

TPS-I	:	4,000 kCal/kWh
TPS-II	:	2,720 kCal/kWh
TPS- I (Expansion):		2,750 kCal/kWh

(vi) Open Cycle Gas Turbine/Combined Cycle generating stations: For following existing gas based thermal generating stations:

Name of generating station	Combined cycle (kCal/kWh)	Open Cycle (kCal/kWh)
Gandhar GPS	2,040	2,960
Kawas GPS	2,050	3,010
Anta GPS	2,075	3,010
Dadri GPS	2,000	3,010
Auraiya GPS	2,100	3,045
Faridabad GPS	1,975	2,900
Kayamkulam GPS	2,000	2,900
Assan GPS	2,600	3,578
Agartala GPS	2,600	3,578
Sugen	1,760	2,554
Ratnagiri	1,820	2,641

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<td>13.</td>
<td>Page No 126, Clause no. 59 (D)(a) Sp. Fuel Oil Consumption</td>
<td>D) Secondary fuel oil consumption:
(a) For Coal-based generating stations other than at (c) below: 0.50 ml/kWh 127

(b) (i) For Lignite-fired generating stations except TPS-I : 1.0 ml/kWh
(ii) For TPS-I : 1.5 ml/kWh

(c) For Coal-based generating stations of DVC:
<table><tr><td>Bokaro TPS</td><td>1.5 ml/kWh</td></tr><tr><td>Chandrapur TPS</td><td>1.5 ml/kWh</td></tr><tr><td>Durgapur TPS</td><td>2.4 ml/kWh</td></tr></table></td>
<td>Oil is consumed mainly for start-up of the units and sometimes for flame stability when the units are run at part load and some problem arises like poor coal quality, equipment failure etc. Oil consumption is directly proportional to number of starts of the units and more the stoppage time more quantity of oil is required for startup.
In FY 2017-18, units at GGSSTP Ropar, were started 47 times after stoppage due to No Demand and Oil consumption due to this was 1.54 ml/KWh out of the total of 1.77 ml/kWh up to March-18. So, Oil consumption due to Generation was only 0.20 ml/kWh which is far less than the PSERC norms of 0.50 ml/kWh. So Keeping in view of continuous start/ Stops of units due to cyclic power demand, Specific fuel oil consumption may be relaxed depending upon No. of start stops due to back down and reserve outage.
The proposal of fixing Secondary fuel oil consumption for Coal-based generating stations to be 0.50 ml/kWh, may be changed as 0.50 ml/kWh for the Station running at Plant Load Factor equal to/ greater than Normative Quarterly Plant Load Factor (NQPLF), which is 85%. The above Secondary fuel oil consumption is exclusive of the compensation specified in Regulation 6.3 B of the Grid Code. The generating company shall, based on unit loading factor, consider the compensation in addition to the Secondary fuel oil consumption above.</td>
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<td>14.</td>
<td>Page No 127, Clause no. 59(E) (a) Aux. Consumption</td>
<td>(E) Auxiliary Energy Consumption :
(a) For Coal-based generating stations except at (b) below:</td>
<td>The Auxiliary Power Consumption (MUs) does not decrease proportionally when the units are operated at partial load and also the power is required to run the minimum essential standby auxiliaries of the stopped units to safeguard the main equipment. Thus, the running of units at partial load increases the auxiliary power consumption percentage (%) owing to less generation.</td>
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		S. No. / **Generating Station** / **With Natural Draft cooling tower or without cooling tower**	So Auxiliary consumption be relaxed and base of relaxation may be taken as reserve outage.
		(i) 200 MW series — 8.50%	The proposal of fixing Auxiliary Energy Consumption for Coal-based generating stations to be 8.50% may be changed as 8.50% for the Station running at Plant Load Factor equal to/ greater than Normative Quarterly Plant Load Factor (NQPLF), which is 85%. The above Auxiliary Energy Consumption is exclusive of the compensation specified in Regulation 6.3 B of the Grid Code. The generating company shall, based on unit loading factor, consider the compensation in addition to the Auxiliary Energy Consumption above.
		(ii) 300/330/350/500 MW series	
		Steam driven boiler feed pumps — 5.75%	
		Electrically driven boiler feed pumps — 8.00%	
		(iii) 600 MW and above	
		Steam driven boiler feed pumps — 5.75%	
		Electrically driven boiler feed pumps — 8.00%	
		Provided that for thermal generating stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8% respectively:	
		Provided further that Additional Auxiliary Energy Consumption as follows may be allowed for plants with Dry cooling	

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		Systems: Type of Dry Cooling system: (% of gross generation) Direct cooling air cooled condensers with mechanical draft fans: 1.0% Indirect cooling system employing jet condensers with pressure recovery turbine and natural draft tower: 0.5%	

CE/ARR&TR
PSPCL, Patiala