COMPARISON OF FUEL AND POWER PURCHASE COST SURCHARGE FORMULA OF FIVE STATES

Description	Haryana	Maharashtra	Delhi	Gujrat	Rajasthan
FUEL AND POWER PURCHASE COST SURCHARGE ADJUSTMENT (FS/PPCA) FORMULA.	HERC has notified Regulation 66 (66.1 to 66.12) FUEL AND POWER PURCHASE COST SURCHARGE ADJUSTMENT (FSA) in HERC (Terms and conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail supply under Multi Year Tariff Framework) Regulations, 2012 (copy enclosed as Annexure-A): The extract of formula from regulations is reproduced as under: 66.7 For moderation purposes, the recovery of per unit FSA shall be limited to 10% of the approved per unit average power purchase cost or such other ceiling as may be stipulated by the Commission from time to time. For calculating FSA, variations in quarterly purchase volume from an approved source are allowed subject to an overall ceiling of annual approved volume from that source. In case a portion of the FSA for any quarter is	MERC has notified Regulation 13 (13.1 to 13.10) Fuel Adjustment Costs (FAC) Formula under MYT regulations 2011 (copy enclosed as Annex.-B1) Further, Reg. and 13.9 (formula) has been amended in MERC (MYT) (Third amendment) Regulations-2014 (copy enclosed as Annexure-B2). The extract of formula from regulations is reproduced as under: **Reg. 13.1 to 13.10 are enclosed as Annexure B1 , page no. 2 to 5.** **13.3** Components of Z-factor Charge: Z-factor Charge shall comprise of two components and shall be calculated as under: MYT Regulations 2011 Z = ZFAC + ZOUC where Z = Z-factor Charge ZFAC = Z-factor Charge component for FAC ZOUC = Z-factor Charge - component for Variation in any other uncontrollable factors **13.9 The formula for the calculation of the FAC component of Z-factor Charge shall be as given under:** **ZFAC(Rs crore) = F + C + B,**	DERC has approved the PPA formula for Power Purchase Cost Adjustment under para-4.143 to 4.156 of its Order dated July 13, 2012 (copy enclosed as Annexure-C1). Further, in TO for FY 2014-15 DERC has revised the formula under para 4.104 to 4.107 (copy enclosed as Annexure-C2). The extract of PPA formula from regulations is reproduced as under: **Power Purchase Adjustment (PPA) formula** PPA for nth Qtr (%) = $\frac{(A*B)*C+(D-E)}{\{Z*(1-\text{Distribution losses in }\%)\}*ABR}*100$ Where, A = Total units procured in (n-1)th Qtr (in kWh) from power stations having long term PPAs – (To be taken from the bills of the GENCOs issued to distribution licensees) B = Proportionate bulk sale of power from Power stations having long term PPAs in (n-1)th Qtr (in kWh) = $\frac{\text{Total bulk sale in (n-1)th Qtr (in kWh) * A}}{\text{Gross Power Purchase including short term power in (n-1)th Qtr (in kWh)}}$ Total bulk sale and gross power purchase in (n-1)th Qtr to be taken from provisional accounts to be issued by SLDC by the 10th of each month.	Gujrat Electricity Regulatory Commission approved FPPPA formula under para-19 of its order dt. 29.10.2013 (copy enclosed as Annexure-D) The extract of FPPPA formula from regulations is reproduced as under: FPPPA = $\frac{[(PPCA-PPCB)]}{[100-\text{Loss in }\%]}$ Where, i) PPCA = is the average power purchase cost per unit of delivered energy (including transmission cost), computed based on the operational parameters approved by the Commission or principles laid down in the Power Purchase Agreements in Rs. / KWh for all the generations sources as approved by the Commission while determining ARR and who have supplied power in the given quarter and transmission charges as approved by the Commission for transmission network calculated as total power purchase cost billed in Rs. Million divided by the total quantum of power purchase in Million Units made during the quarter. ii) PPCB = is the approved average base power purchase cost per unit of delivered energy (including transmission cost) for all the generating stations considered by	Regulation 88 Fuel Surcharge formula has been notified in RERC (Term and conditions for determination of Tariff) regulations 2014, (copy enclosed as Annexure- E). The extract of Fuel Surcharge formula from Regulation is reproduced as under 1. The Fuel Surcharge (FS) chargeable by the Distribution Licensee from its consumers for any quarter, shall be computed as per the following formula: FS = $\frac{C}{E}$ Rs./ kWh where C (in Rs. Lakh) = {(Weighted Average Variable Cost of all sources of power purchase during previous quarter in Rs/kWh – Base Weighted Average Variable Cost of all sources of power purchase as approved under Tariff Order for the year under operation in Rs/kWh) x Corresponding Power Purchase from all sources during previous quarter in LU} E (in Lakh Units) = Energy sold (metered plus estimated) during previous quarter. Note: (i) Quarter referred under this formula shall correspond to financial quarter (s) viz. Q1 (Apr. to Jun), Q2 (Jul to Sept), Q3 (Oct to Dec), and Q4 (Jan to Mar).

not recovered due to the ceiling of 10%, the under recovered amount shall be added to the FSA for the next quarter. 66.10 FSA (Rs/kWh) shall be worked out as per the following formula: **Total FSA (Rs million) = PC + Int + AdJst Q + (AdJst A/4)** **FSA (Rs / kWh) = {PC + Int + AdJst Q + (AdJstA/4)} + PS** where • PC = {(Actual average power purchase cost (Rs/kWh) for the quarter) - (Average power purchase cost (Rs/KWh) approved by the Commission for the relevant year)} X PP • PP = Total volume of power purchase during the quarter worked out based on total volume of powers sold to all the consumer categories grossed up by approved T&D loss. Sales to AP consumers are to be worked out in accordance with the methodology approved by the Commission in the ARR for the relevant year (MU).	where ZFAC = Z-factor Charge - component for FAC for nth month. F = Change in fuel cost of own generation and variable cost of power purchase C = Carrying Cost for any under recovery/over recovery on account of Change in fuel cost of own generation and cost of power purchase computed at the State Bank of India Advance Rate prevailing at the beginning of nth month. B = Adjustment factor for under - recovery / over -recovery The calculation for FAC to be charged for the month 'n' shall be as follows : FACn (Rs crore) = Fn-2 + Cn-2 + Bn-2 Explanation I – for the purpose of this Regulation, the term "F" shall be computed in accordance with the following formula: F (Rs. Crore) = AFC,Gen + AFC,PP, where: AFC,Gen: Change in fuel cost of own generation. This change would be computed based on the norms and directives of the Commission, including heat	C = Actual average Power Purchase Cost (PPC) from power stations having long term PPAs in (n-1)th Qtr (Rs./ kWh) – Projected average Power Purchase Cost (PPC) from power stations having long term PPAs (Rs./ kWh) (from tariff order) D = Actual Transmission Charges paid in the (n-1)th Qtr E = Base Cost of Transmission Charges for (n-1)th Qtr= (Approved Transmission Charges/4) Z = [{Actual Power purchased from Central Generating Stations having long term PPA in (n-1)th Qtr (in kWh)*(1 – interstate transmission licensee losses in % / 100) + Power from Delhi GENCOs including BTPS (in kWh)}*(1 – Intra state losses in % / 100) – B] in kWh ABR = Average Billing Rate for the year (to be taken from the Tariff Order) Distribution Losses (in %) = Target Distribution Losses (from Tariff Order) INTER STATE TRANSMISSION LICENSEE Losses (in %) = 100* approved INTER STATE TRANSMISSION LICENSEE losses in Tariff Order (kWh) /Approved long term power purchase from central generating stations having long term PPA in the Tariff Order (kWh) Intra state Losses (in %) = 100 * Approved DTL Losses (from the Tariff Order) / Power available at Delhi periphery	the Commission for supplying power to the company in Rs. / KWh and transmission charges as approved by the Commission calculated as the total power purchase cost approved by the Commission in Rs. Million divided by the total quantum of power purchase in Million Units considered by the Commission.' iii) Loss in % = is the weighted average of the approved level of Transmission and Distribution losses (%) of four Discoms/GUVNL and TPL applicable for a particular quarter or actual weighted average in Transmission and Distribution losses (%) of four Discoms/GUVNL and TPL of the previous year for which true up have been done by the Commission, whichever is lower. For any increase in FPPPA, worked out on the basis of above formula, beyond ten (10) paisa per kWh in a quarter, prior approval of the Commission shall be necessary. And only on approval of such additional increase by the Commission, the FPPPA can be billed to the consumers.	(ii) The variation in power purchase cost due to Unscheduled Interchange and Hydro based generation and other unapproved purchases shall not be covered under fuel surcharge adjustment. (iii) For the generation stations/power purchase sources, which have single part tariff, 1/3 of the tariff shall be considered as fixed charge and 2/3 of the tariff shall be considered as energy charge for adjustment under this formula. (iv) The cost and quantum of power purchase shall be based on bills paid/credits received during the previous quarter irrespective of period to which it pertains and shall include arrears or refunds, if any, for previous period, not considered earlier. (2) The rate of Fuel Surcharge shall be worked out in Rs./kWh rounded off to the next second decimal place. (3) The Fuel Surcharge per unit for any quarter shall not exceed 10% of weighted average power purchase cost approved by the Commission, or such other ceiling as may be stipulated by the Commission from time to time. (4) The total Fuel Surcharge recoverable, as per the formula specified above, shall be recovered from the actual sales and in case of un-metered

• PS = Estimated sales volume for the following quarter with AP sales as approved by the Commission in the ARR for the relevant year(MU). • Actual average power purchase cost (Rs./KWh) = (total cost of power purchased during the quarter from approved sources and UI as per regulation 66.2 in Rs million) / (total volume of power purchased in the quarter from approved sources and UI in MU) as per regulation 66.2) • Int = Additional working capital cost allowed on account of FSA amount to be worked out as under: Int = {(total FSA/12) X (interest rate allowed for calculation of working capital in the ARR of the current financial year)} in Rs million. • AdJst Q = Under/over recovered FSA of the previous quarter in accordance with regulation 66.3 and 66.7 in Rs million. • AdJst A = Annual adjustment amount based on truing up of the FSA of the previous year by the Commission in Rs million. **66.11** The licensee shall ensure that the Actual/	rate, auxiliary consumption etc. $A_{FC,PP}$: Change in variable and/or fixed cost of power procured from other sources. This change would be allowed to the extent it satisfies the criteria prescribed in these Regulations and the prevailing MYT Order, and subject to applicable norms. Explanation II – for the purpose of this Regulation, the term "C" shall mean carrying cost on account of change in fuel cost of own generation and cost of power purchase. Explanation III – for the purpose of this Regulation, the term "B" shall be computed in accordance with the following formula: B_{n-2} (Rs. Crore) = $ZFAC_{n-4} - R_{n-2}$ where: B_{n-2} Adjustment factor for under-recovery/ over-recovery for the month 'n-2'. $ZFAC_{n-4}$ = ZFAC for the month 'n-4' R_{n-2} = ZFAC for the month 'n-4' actually recovered in the month 'n-2'. Provided that the monthly FAC charge shall not exceed 20% of the variable component of tariff or such other ceiling as may be stipulated by the Commission from time to time. Provided further that any excess in the FAC charge over and above such stipulated ceiling shall be carried forward	(from energy balance table tariff order) **4.105** The base Power Purchase Cost computation based upon quantum and cost of power purchases from various generating stations over which any increase has to be taken during FY 2014-15 is given in Table **4.27 of Annexure – C2.** **4.106** DISCOMs may claim the increase in the power purchase cost in accordance with the formula approved by the Commission and recover from the consumers after necessary approval of the Commission. **4.107** In order to give effect to PPAC on quarterly basis the following are to be implemented: (a) The PPAC will be charged to all categories of consumers. (b) The PPAC for any quarter would be charged only after it is approved by the Commission. (c) The weighted average base cost in Rs/kWh shall be as approved in this Tariff Order for FY 2014-15 is Rs 4.09 for Petitioner. Detailed computation is given in Table 4.27. The Schedule will be revised in every subsequent Tariff Order. (d) The Distribution licensee shall submit to the Commission the details in respect of changes in power purchase cost of plants having long term PPAC as listed above for (n-1) th quarter. Further, Auditor's Certificate along with statement indicating plant-wise		consumers, it shall be recoverable based on estimated sales to such consumers calculated in accordance with such methodology as may be stipulated by the Commission

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estimated FSA arising in a quarter is recovered in the following quarter. In case the licensee does not ensure levy of FSA based on the methodology given herein, the licensee shall have no claim to recover the FSA from the consumers in any manner in any subsequent period except in accordance with regulation 66(3) and 66(7). The unrecovered FSA for the previous financial year, details of which are supplied to the Commission by the distribution licensee, may either form part of power purchase cost for the next financial year or may be allowed to be recovered as annual adjustment amount in the quarterly recovery of FSA in the next financial year as the Commission may decide. **66.12** In case Government of Haryana decides to provide subsidy on account of FSA to a particular consumer category, the amount of subsidy equivalent to the FSA recoverable from the concerned consumer category, shall be deposited in advance by the Govt. Otherwise the	by the Distribution Licencee and shall be recovered over such future period as may be directed by the Commission. 13.9.1 The total FAC component of Z-factor Charge recoverable, as per the formula specified above, shall be recovered from the actual sales in "Rupees per kilowatthour" terms: Provided that in case of unmetered consumers, FAC component of Z-factor Charge shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission: Provided further that where the actual distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of FAC component of Z factor Charge corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total FAC component of Z-factor Charge recoverable. Calculation of Z_{FAC} per kWh for a particular tariff category/ subcategory /consumption slab shall be as per the following formula:	details of fixed charges, variable charges, other charges and units purchased from each plant having long term PPAs, as listed above, for (n-1)th quarter alongwith actual transmission charges for (n-1)th quarter shall be furnished along with the proposal of PPA surcharge submitted for the Commission's approval. Further, similar information in respect of current bills should also be furnished in the Auditor's certificate. (e) The percentage of PPAC will be rounded off to two decimal places. (f) The percentage increase on account of PPA will be applied as a surcharge on the total energy and fixed charges (excluding arrears, LPSC, E-Tax etc.) billed to a consumer of the utility. Further, PPAC surcharge should not be levied on the 8% surcharge and also the 8% surcharge towards recovery of past accumulated deficit is not to be levied on PPAC. (g) The bill format shall clearly identify the PPA percentage and amount of PPAC billed as separate entries. (h) The PPAC calculated for any quarter, shall be applied prospectively for 3 months after approval is received from the Commission. (i) In view of the fact that PPAC computed for any quarter will be applied after a time delay for a subsequent 3-month period, there could be a difference between the actual power purchase cost increase		

	recovery shall be affected from the consumer through electricity bills. It shall be the responsibility of the distribution licensees to seek prior approval of the State Government in this regard and maintain appropriate record of the same.	Z FAC Cat Rs./kWh = [Z / (Metered sales + Unmetered consumption estimates + Excess distribution losses)] * k * 10 where: Z FAC Cat = FAC component for a particular tariff category/sub-category/ consumption slab in 'Rupees per kWh' terms of Z-factor charge. k = Average Billing Rate/ ACOS Average Billing Rate = Average Billing Rate for a particular tariff category /subcategory / consumption slab under consideration in 'Rupees per kWh' as approved by the Commission in Tariff Order: Provided that the Average Billing Rate for the unmetered consumers shall be based on the estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission. ACOS = Average Cost of Supply in 'Rupees per kWh' as approved for recovery by the Commission in Tariff Order. **Reg. 13.10.& 49.6 As per Annexure B 2 / page-3 to4.**	and the recovery by the distribution utility through the quarterly adjustments. The difference, if any, will thus be adjusted at the time of annual true-up undertaken by the Commission for that year. (j) The PPAC claim of any quarter submitted by the Petitioner shall be examined by the Commission. In view of public interest, the Commission will endeavor that while approving the PPAC, there is no Tariff shock and at the same time reasonable PPAC is provided to the DISCOMs. The Commission may take appropriate view to carry forward or spread some amount of PPAC in the subsequent quarters. (k) This PPAC formula shall remain applicable till it is reviewed, revised or otherwise amended.		

Annex A

HARYANA ELECTRICTY REGULATORY COMMISSION

Notification

The 5th December, 2012

Regulation No. HERC/ 26 / 2012: - The Haryana Electricity Regulatory Commission, in exercise of the powers conferred on it by section 181 of the Electricity Act 2003 (Act 36 of 2003) and all other powers enabling it in this behalf, after previous publication, hereby frames the following regulations:-

PART - I PRELIMINARY

1. SHORT TITLE, COMMENCEMENT, EXTENT, AND INTERPRETATION

1.1 These regulations shall be called the Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2012.

1.2 These regulations shall come into force w.e.f. the date of publication in the Haryana Government Gazette.

1.3 These regulations shall extend to the whole of the State of Haryana.

2. SCOPE OF APPLICATION

2.1 These regulations shall be applicable to all existing and future Generating Companies, Transmission Licensees and Distribution Licensees and their successors/assignees, if any, and shall apply where the Commission determines tariff:-

(i) for supply of electricity by a generating company to a distribution licensee,

(ii) for transmission of electricity by a transmission licensee to a distribution licensee or to open access consumers and

(iii) for wheeling & retail supply of electricity by a distribution licensee under Section 62 & 64 of the Act,

(iv) in all other cases where the Commission has the jurisdiction for tariff determination

2.2 In case the tariff has been determined through the transparent process of competitive bidding as per Section 63 of the Act; the Commission shall adopt such tariff in accordance with the provisions of the Act;

2.3 These regulations shall not apply for tariff determination of renewable energy generation projects. The tariff for such generation projects shall be determined as per Haryana Electricity Regulatory Commission

8.3 **Controllable and Uncontrollable items of ARR**

(a) For the purpose of this regulation, the items of ARR shall be identified as 'controllable' or 'uncontrollable'. The variation on account of uncontrollable items shall be treated as a pass-through subject to prudence check/validation and approval by the Commission;

Provided that the Commission may allow variations in controllable items on account of Force Majeure events and also those attributable to uncontrollable factors as pass-through in the ARR for the ensuing year based on actual values submitted by the generating company and licensees and subsequent validation and approval by the Commission during true-up.

(b) The items in the ARR shall be treated as 'controllable' or 'uncontrollable' as follows:

ARR Element	**Controllable/ Uncontrollable**
Interest and Finance Charges	Controllable
Return on Equity	Controllable
Availability	Controllable
Plant availability factor	Controllable
Heat Rate	Controllable
Auxiliary Energy Consumption	Controllable
Secondary Fuel Oil Consumption (SFC)	Controllable
O&M Expenses (excluding terminal liabilities with regard to employees on account of changes in pay scales or dearness allowance due to inflation)	Controllable
Terminal liabilities with regard to employees on account of changes in pay scales or dearness allowance due to inflation	Uncontrollable
Depreciation	Controllable
Transit loss of coal	Controllable
Capital Expenditure	Controllable
All statutory levies and taxes, if any excluding tax on Income	Uncontrollable
Fuel Price (excluding that pertaining to domestic coal procured through e-auction/open market and imported coal)	Uncontrollable
Fuel Price pertaining to domestic coal procured through e-auction /open market and imported coal	Controllable

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ARR Element	Controllable/ Uncontrollable
GCV of Fuel (excluding domestic coal procured through e-auction/open market and imported coal)	Uncontrollable
GCV of domestic coal procured through e-auction/open market and imported coal	controllable
Distribution Losses	Controllable
Collection Efficiency	Controllable
Energy Sales(excluding interstate and inter Discom energy sales)	Uncontrollable
Interstate and inter discom energy sales	Controllable
Power Purchase Price (other than for short-term power purchase and UI)	Uncontrollable
Power Purchase Price for short-term power and UI	Controllable
Power Purchase Quantum (MUs)	Controllable
Intra State Transmission losses	Controllable
Quality of Supply	Controllable
Non-Tariff income	Uncontrollable

8.4 **Norms:** Commission shall determine norms for 'controllable' items and where the performance of the utilities for their respective businesses is sought to be improved upon through incentive and penalty framework, trajectory for specific variables may be stipulated. The variations in the controllable items over and above the specified norms will be governed by incentive and penalty framework specified in these regulations.

8.5 **Forecast of expected revenue from tariff:** The applicant shall develop the forecast of expected revenue from tariff and charges and submit the same along with complete supporting details, including but not limited to the details of past performance, proposed initiatives for achieving efficiency or productivity gains, technical studies or secondary research and contractual arrangements, to enable the Commission to assess the reasonableness of the forecast.

9. CAPITAL INVESTMENT PLAN

9.1 The generating company and the licensees, in respect of their respective businesses, shall file for approval of the Commission a capital investment plan for a period covering at least the entire control period. The capital investment plan shall be filed by 1st June of the year preceding the first year of the control period by the distribution licensee percentage of the quantity of coal dispatched by the coal supply company during the month as follows:

(i) Non-pithead generating plants	:	$\leq$ 1.5%
(ii) Pit head generating plants	:	0.2%

33 PRIMARY FUEL PRICE ADJUSTMENT (FPA) FOR THERMAL POWER STATIONS

HPGCL shall claim FPA as per the details provided hereunder:-

Initially gross calorific value of coal shall be taken as per actual in the preceding financial year for which data is available. Any deviation shall be adjusted based on the gross calorific value of coal received and burnt and landed cost incurred by the generating company for procurement of coal on month to month basis. No separate petition shall be required to be filed with the Commission for fuel price adjustment. In case of any dispute related to primary fuel price adjustment, an appropriate application in accordance with Haryana Electricity Regulatory Commission (Conduct of Business) Regulations, 2004, as amended from time to time or any statutory re-enactment thereof, shall be made by the affected party before the Commission. For determining fuel price adjustment (FPA) amount the following formula shall be adopted:

$$FPA = \frac{10*[SHRn - SFCn*Kos]*[\frac{Pcm}{Kcm} - \frac{Pcs}{Kcs}]}{(100 - ACn)}$$

Where,

FPA	=	Primary Fuel Price Adjustment in Paise/kWh;
SFC_n	=	Normative Specific Fuel Oil consumption in ml / kWh;
SHR_n	=	Normative Gross Station Heat Rate in kCal / kWh;
AC_n	=	Normative Auxiliary Energy Consumption in percentage;
K_{os}	=	Base value of GCV of fuel oil as taken for determination of base energy charge in tariff order in kCal/ml;
P_{cm}	=	Weighted average price of coal as per the invoices submitted for the month at the power station in Rs/MT;

K_{cm}	=	Weighted average GCV of coal fired at boiler front for the month in KCal/Kg;
P_{cs}	=	Base value of price of coal as taken for determination of base energy charge in tariff order in Rs/MT;
K_{cs}	=	Base value of GCV of coal as taken for determination of base energy charge in tariff order in KCal/Kg.

34 NORMS OF OPERATION AND DETERMINATION OF TARIFF FOR HYDRO POWER PLANTS

Norms of operation and determination of tariff for hydro power plants other than those covered under renewable energy sources, shall be as under:

34.1 Normative plant load factor for the determination of tariff shall be computed on the basis of past data and other information submitted by the generating company.

34.2 Auxiliary energy consumption for Micro Hydro Generating plants including WYC projects and Kakroi shall be 0.5% of the energy generated.

34.3 Transformation losses from generation voltage to transmission voltage shall be 0.5 % of energy generated.

34.4 **Capital Cost and Additional Capitalization**

For the purpose of determination of tariff, the capital cost and additional capitalisation for Hydro Power Plants shall be allowed/approved in accordance with the provisions outlined under regulation 18.

34.5 **Computation of tariff**

(a) The tariff shall be single part comprising only of an energy rate in terms of Rs. /kWh of energy generated on an annual basis. The annual expenses will consist of:

(i) Interest and financing charges on loan capital,

(ii) Depreciation

(iii) Return on equity,

(iv) Operation and maintenance expenses, and

(v) Interest on working capital.

(vi) Foreign exchange rate variation

(vii) All statutory levies and taxes, if any, excluding taxes on income

65.2 Monitoring progress on Standards of Performance

(i) The distribution licensee shall provide requisite report on the progress of compliance of the performance parameters as specified in the HERC (Standards of Performance for the Distribution licensee) Regulations, 2004 as amended from time to time;

(ii) The transmission licensee shall also provide requisite report on the progress of compliance of the performance parameters as may be specified by the Commission in the "Standards of Performance for the Transmission Licensee Regulations" to be notified by the Commission and as amended from time to time.

(iii) In case the distribution/transmission licensee fails to submit the report to Commission or delays the submission by more than 2 months, the commission may reduce the return on equity by 0.50% if the licensee is not able to provide adequate justification for the delay.

66 FUEL AND POWER PURCHASE COST SURCHARGE ADJUSTMENT (FSA)

66.1 The distribution licensees shall recover FSA amount on account of increase in fuel and power purchase costs from the consumers on a quarterly basis so as to ensure that FSA accrued in a quarter is recovered in the following quarter without going through the regulatory process i.e. FSA for the quarter "July to September" is recovered in the following quarter "October to December".

66.2 FSA shall be calculated only in respect of approved power purchase volume including short term power purchase cost, if any, for the relevant year from all approved sources. Drawl of power under UI mechanism, if any, shall be allowed only when it is not in violation of grid discipline and shall be subject to a price cap of average revenue realisation from all consumer categories for that year.

Average revenue realisation = (Total revenue assessed for electricity supply in Rs + Government Subsidy in Rs) / Total sales in Units.

66.3 For the purpose of recovery of FSA, power purchase cost shall include all invoices raised by the approved suppliers of power and credits received by the distribution licensees during the quarter irrespective of the period to which these pertain for any change in cost in accordance with tariff approved by any regulator/ government agency mentioned in regulation 59.4. This shall include arrears/refunds, if any, not settled earlier. In case data of the last month in a quarter is not available for calculating FSA to be levied in the following quarter, the licensee shall use an estimate based on available data of the first two months of the quarter. On availability of the actual figures, the difference on this account shall form part of FSA of the subsequent quarter. If the actual data for any quarter is not made available by the licensee before the end of the following quarter for this adjustment, the FSA finally allowed for that quarter based on actual figures supplied after the prescribed

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date shall be limited to the earlier estimated amount or the amount based on the actual figures, whichever is lower.

66.4 In case of negative FSA, the credit shall be given to the consumers by setting off the minus figure against the positive figure of FSA being charged from the consumers. In other words, credit of FSA shall be given only against FSA being charged so that the base tariff determined by the Commission remains unchanged.

66.5 Only the allowed percentage of transmission and distribution losses for the relevant year as per the approved ARR shall be taken into account for working out FSA.

66.6 The amount of FSA shall be recovered by each distribution licensee by charging a uniform FSA (per kWh) across all consumer categories in his area of license.

66.7 For moderation purposes, the recovery of per unit FSA shall be limited to 10% of the approved per unit 'average power purchase cost' or such other ceiling as may be stipulated by the Commission from time to time. For calculating FSA, variations in quarterly purchase volume from an approved source are allowed subject to an overall ceiling of annual approved volume from that source. In case a portion of the FSA for any quarter is not recovered due to the ceiling of 10%, the under recovered amount shall be added to the FSA for the next quarter.

66.8 Per unit rate of FSA (paisa/kWh) shall be worked out after rounding off to the nearest paisa;

66.9 The distribution licensee shall submit details relating to FSA recovery to the Commission for each quarter in the following format by the end of the following quarter.

(i)	Approved power purchase volume from approved sources (MU)
(ii)	Approved power purchase cost (Rs. million)
(iii)	Actual power purchase volume (MU)
(iv)	Power purchased (MU) from sources not covered under regulation 66.2 giving source wise details and in case of UI the frequency at which UI drawls were made. (disallowed power purchase)
(v)	Actual cost of power purchase from all sources except (iv) (Rs. million)
(vi)	Actual cost of disallowed power purchase relating to (iv)(Rs. million)
(vii)	Total FSA estimated to be recovered for the quarter(Rs. million)
(viii)	FSA per unit (Rs/kWh)being recovered during the following quarter
(ix)	Actual FSA recovered/estimated to be recovered out of estimated FSA till the end of the following quarter (Rs. million)
(x)	Under/ over recovered FSA (vii-ix) (Rs. million)
(xi)	Approved sales (Consumer category wise / month wise) for the quarter (MU)

(xii)	Actual sales (Consumer category wise / month wise) for the quarter (MU)
(xiii)	Estimated sales, consumer category wise, for the following quarter (MU)

Note:

1. All the source-wise details should be supported with requisite documentary evidence / invoices raised by the generators / suppliers of the power.
2. Actual sales to AP consumers are to be calculated in accordance with the methodology approved by the Commission in the ARR for the relevant year.

66.10 FSA (Rs/kWh) shall be worked out as per the following formula:

Total FSA (Rs million) = $PC + I_{nt} + A_{dJst} Q + (A_{dJst}A/4)$

FSA (Rs / kWh) = $\{PC + I_{nt} + A_{dJst} Q + (A_{dJst}A/4)\} \div PS$

Where

- PC = {(Actual average power purchase cost (Rs/kWh) for the quarter) - (Average power purchase cost (Rs/KWh) approved by the Commission for the relevant year)} X PP
- PP = Total volume of power purchase during the quarter worked out based on total volume of powers sold to all the consumer categories grossed up by approved T&D loss. Sales to AP consumers are to be worked out in accordance with the methodology approved by the Commission in the ARR for the relevant year (MU).
- PS = Estimated sales volume for the following quarter with AP sales as approved by the Commission in the ARR for the relevant year(MU).
- Actual average power purchase cost (Rs./KWh) = (total cost of power purchased during the quarter from approved sources and UI as per regulation 66.2 in Rs million) / (total volume of power purchased in the quarter from approved sources and UI in MU) as per regulation 66.2)
- I_{nt} = Additional working capital cost allowed on account of FSA amount to be worked out as under:

  I_{nt} = {(total FSA/12) X (interest rate allowed for calculation of working capital in the ARR of the current financial year)} in Rs million.
- A_{dJst} Q = Under/over recovered FSA of the previous quarter in accordance with regulation 66.3 and 66.7 in Rs million.
- $A_{dJst}A$ = Annual adjustment amount based on truing up of the FSA of the previous year by the Commission in Rs million.

66.11 The licensee shall ensure that the Actual/ estimated FSA arising in a quarter is recovered in the following quarter. In case the licensee does not ensure levy of FSA based on the methodology given herein, the licensee shall have no claim to recover the FSA from the consumers in any manner in any subsequent period except in accordance with regulation 66(3) and 66(7). The unrecovered FSA for the previous financial year, details of which are supplied to the Commission by the distribution licensee, may either form part of power purchase cost for the next financial year or may be allowed to be recovered as annual adjustment amount in the quarterly recovery of FSA in the next financial year as the Commission may decide.

66.12 In case Government of Haryana decides to provide subsidy on account of FSA to a particular consumer category, the amount of subsidy equivalent to the FSA recoverable from the concerned consumer category, shall be deposited in advance by the Govt. Otherwise the recovery shall be affected from the consumer through electricity bills. It shall be the responsibility of the distribution licensees to seek prior approval of the State Government in this regard and maintain appropriate record of the same.

67. NON TARIFF INCOME

67.1 All incomes being incidental to electricity business and derived by the licensee from sources, including but not limited to profit derived from disposal of assets, rents, delayed payment surcharge, meter rent, income from investments other than contingency reserves, miscellaneous receipts from the consumers, etc shall constitute non-tariff income of the licensee;

67.2 The amount received by the distribution licensee on account of non-tariff income shall be deducted from the aggregate revenue requirement in calculating the net revenue requirement.

Provided that the distribution licensee shall submit full details of his forecast of non-tariff income to the Commission in such form as may be stipulated by the Commission from time to time.

68. SUBSIDY

68.1 Pursuant to Section 65 of the Electricity Act, 2003 in case the State Government requires grant of any subsidy to any consumer or class of consumers in the tariff determined under Section 62, the distribution licensee should ensure that the State Government shall, notwithstanding any direction which may be given under Section 108, pay in advance the requisite amount as determined by the Commission to compensate the distribution licensee affected by the grant of subsidy.

Annex - B1

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION (MULTI YEAR TARIFF) REGULATIONS, 2011

12.2 Some illustrative variations or expected variations in the performance of the applicant, which may be attributed by the Commission to controllable factors include, but are not limited to the following:

(a) Variations in capital expenditure on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;

(b) Variations in technical and commercial losses, including bad debts;

(c) Variations in performance parameters;

(d) Variations in working capital requirements;

(e) Failure to meet the standards specified in the Standards of Performance Regulations, except where exempted in accordance with those Regulations;

(f) Variations in labour productivity;

(g) Variation in operation & maintenance expenses;

(h) Variation in Wires Availability and Supply Availability; and

(i) Coal transit losses.

13 Mechanism for pass through of gains or losses on account of uncontrollable factors

13.1 The approved aggregate gain or loss to the Generating Company (except the adjustment provided to the Generating Company as per Regulation 49.6 of these Regulations) or Transmission Licensee or Distribution Licensee on account of uncontrollable factors shall be passed through under Z-factor Charge, as an adjustment in the tariff of the Generating Company or Transmission Licensee or Distribution Licensee on a half yearly basis or a yearly basis, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations.

13.2 The Generating Company or Transmission Licensee or Distribution Licensee shall submit details in the stipulated format to the Commission on a half yearly basis for obtaining the Commission's approval for the Z-factor Charge and, for this purpose, shall submit such details of the variation between expenses incurred and the figures approved by the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission. However, for Generating Company, the Z-factor Charge shall exclude the variations in fuel expenses as the Generating Company is allowed to recover fuel expense on monthly basis through Fuel Surcharge Adjustment as specified in Regulation 49.6.

Provided that subsequent to the notification of these Regulations, the Generating Company or Transmission Licensee or Distribution Licensee, shall obtain the approval of the Commission prior to levying the Z-factor Charge:

13.3 <u>Components of Z-factor Charge:</u>

Z-factor Charge shall comprise of two components and shall be calculated as under:

$$Z = Z_{FAC} + Z_{OUC}$$

Where

Z = Z-factor Charge

Z_{FAC} = Z-factor Charge - component for FAC.

Z_{OUC} = Z-factor Charge - component for Variation in any other uncontrollable factors.

13.4 Fuel surcharge adjustment (Z_{FAC})

The Distribution Licensee shall pass on adjustments, due to changes in the cost of power procured due to change in fuel cost, through the Fuel Adjustment Cost (FAC) component of Z-factor Charge, as specified below:

13.5 The Z_{FAC} component shall be applicable to the entire sale of the Distribution Licensee without any exemption to any consumer.

13.6 The Z_{FAC} component shall be computed and charged on the basis of actual variation in fuel costs relating to power procured during any month subsequent to such costs being incurred, in accordance with these Regulations, and shall not be computed on the basis of estimated or expected variations in fuel costs.

13.7 First Approval of Z-factor Charge in the second Control Period

The Distribution Licensee shall submit details in the stipulated format to the Commission for the first half of the first year of second Control Period, for prior approval of Z-factor charge to be recovered in the second Control Period, as stipulated by the Commission:

Provided that the Distribution Licensee shall submit the details of fuel costs relating to power generated from own generation stations and variable cost of power procured for first half of the first year of second Control Period, within Sixty (60) days of completion of first half:.

Provided further that the Commission shall approve Z-factor Charge for first half of the first year of second Control Period, to be recovered in the second Control Period, subject to prudence check.

13.8 Subsequent Approval of Z-factor Charge in the second Control Period

The Distribution Licensee shall submit details in the stipulated format to the Commission for the subsequent half yearly periods of the second Control Period, for prior approval of Z-factor charge to be recovered in the ensuing half yearly periods of the second Control Period:

Provided that the Distribution Licensee shall submit the details of fuel costs relating to power generated from own generation stations and variable cost of power procured for the subsequent half yearly periods of the second Control Period, within sixty (60) days of completion of such half:

Provided further that the Distribution Licensee shall submit the Z-factor Charge levied to all consumers for the preceding half yearly period vis-a-vis the Z-factor component recoverable, along with the detailed computations and supporting documents as may be required for verification by the Commission:

Provided further that the Distribution Licensee shall put up on its internet website such details of the Commission's approval for levy of Z-Factor Charge, from time to time.

13.9 The formula for the calculation of the FAC component of Z-factor Charge shall be as given under:

Z_{FAC}(Rs crore) = F + C + B,

Where

Z_{FAC}	=	Z-factor Charge - component for FAC
F	=	Change in fuel cost of own generation and variable cost of power purchase
C	=	Carrying Cost for any under recovery/over recovery on account of Change in fuel cost of own generation and variable cost of power purchase
B	=	Adjustment factor for over-recovery / under-recovery

Explanation I – for the purpose of this Regulation, the term "F" shall be computed in accordance with the following formula:

F (Rs. Crore) = $A_{FC,Gen} + A_{FC,PP}$, Where:

$A_{FC,Gen}$ Change in fuel cost of own generation. This change would be computed based on the norms and directives of the Commission, including heat rate, auxiliary consumption, generation and power purchase mix, etc.

$A_{FC,PP}$: Change in energy charges of power procured from other sources. This change would be allowed to the extent it satisfies the criteria prescribed in these Regulations and the prevailing MYT Order, and subject to applicable norms.

Explanation II – for the purpose of this Regulation, the term "C" shall mean carrying cost on account of change in fuel cost of own generation and variable cost of power purchase.

Explanation III – for the purpose of this Regulation, the term "B" shall be computed in accordance with the following formula:

B_{Hn} (Rs. Crore) = $A_{Hn-1} + R_{Hn}$

Where:

B_{Hn} = Adjustment factor for over-recovery / under-recovery in the half "n"

A_{Hn-1} = Incremental cost in the half "n-1".

R_{Hn} = Incremental cost in half "n-1" actually recovered in ensuing half "n".

13.9.1 The total FAC component of Z-factor Charge recoverable, as per the formula specified above, shall be recovered from the actual sales in "Rupees per kilowatt-hour" terms:

Provided that in case of unmetered consumers, FAC component of Z-factor Charge shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission:

Provided further that where the actual distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of FAC component of Z-factor Charge corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total FAC component of Z-factor Charge recoverable.

Calculation of Z_{FAC} per kWh for a particular tariff category/sub-category/consumption slab shall be as per the following formula:

$Z_{FAC\ Cat}$ Rs./kWh = (Z / (Metered sales + Unmetered consumption estimates + Excess distribution losses)) * k * 10

Where:

$Z_{FAC\ Cat}$ = FAC component for a particular tariff category/sub-category/consumption slab in 'Rupees per kWh' terms of Z-factor charge.

k = Average Billing Rate/ ACOS

Average Billing Rate = Average Billing Rate for a particular tariff category/sub-category/consumption slab under consideration in 'Rupees per kWh' as approved by the Commission in Tariff Order:

Provided that the Average Billing Rate for the unmetered consumers shall be based on the estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission.

ACOS = Average Cost of Supply in 'Rupees per kWh' as approved for recovery by the Commission in Tariff Order.

13.10 Other components of Z-Factor Charge (Z_{OUC})

In case there is variation in cost for Generating Company or Transmission Licensee or Distribution Licensee, on account of any other uncontrollable factors as specified in Regulation 12, the same shall be pass-through under Z factor Charge, on a yearly basis, in a manner as stipulated by the Commission.

14 Mechanism for sharing of gains or losses on account of controllable factors

14.1 The approved aggregate gain to the Generating Company or Transmission Licensee or Distribution Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One-third of the amount of such gain shall be passed on as a rebate in tariff over such period as may be stipulated in the Order of the Commission under Regulation 11.6;

49.5 Rate of Energy Charges (REC) in Rs/kWh shall be the sum of the cost of normative quantities of primary and secondary fuel for delivering ex-bus one kWh of electricity and shall be computed as under:

$$REC = \frac{100\{P_p \times (Q_p)_n + P_s \times (Q_s)_n\}}{(100-(AUX_n))} \text{ (Rs/kWh)}$$

Where, P_p = Price of primary fuel namely coal or lignite or gas or liquid fuel and lime stone, if applicable, in Rs/kg or Rs/cum or Rs/litre, as the case may be.

$(Q_p)_n$ = Quantity of primary fuel required for generation of one kWh of electricity at generator terminals in kg or litre or standard cubic metre, as the case may be, and shall be computed on the basis of normative Gross Station Heat Rate (less heat contributed by secondary fuel oil for coal/lignite based Generating Stations) and gross calorific value of coal/lignite or gas or liquid fuel as fired.

P_s = Price of Secondary fuel oil in Rs./ml,

$(Q_s)_n$ = Normative Quantity of Secondary fuel oil in ml/kWh as per Regulation 44.4, and

AUX_n= Normative Auxiliary Energy Consumption as % of gross generation as per Regulation 44.5.

Energy Charges, for the purpose of billing/Fuel Surcharge shall be worked out station-wise based on weighted average rate based on actual generation from the Units of each Station

49.6 Adjustment of rate of energy charge (REC) [Fuel Surcharge Adjustment] on account of variation in price or heat value of fuels

Any variation in Price and Gross Calorific Value of coal/lignite or gas or liquid fuel vis-a-vis approved values shall be adjusted on month to month basis on the basis of average Gross Calorific Value of coal/lignite or gas or liquid fuel in stock, received and burnt and weighted average landed cost incurred by the Generating Company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be for a power station. In its bills, the Generating Company shall indicate rate of energy charges at base price of primary and secondary fuel specified by the Commission and the Fuel Surcharge to it separately. The Generating Company should submit the computation to the Commission on six-monthly basis for post-facto approval of Fuel Surcharge adjustment.

49.7 Landed Cost of fuel

The landed cost of fuel shall include price of fuel corresponding to the grade/quality/calorific value of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road/gas pipe line or any other means, and, for the purpose of computation of energy charges, shall be arrived at after considering normative transit and handling losses as percentage of the quantity of fuel dispatched by the fuel supply company during the month as specified in Regulation 49.5.

C. Incentive

49.8 Incentive shall be payable at a flat rate of 25.0 paise/kWh for actual energy generation in excess of ex-bus energy corresponding to target Plant Load Factor.

Provided that the actual generation shall also consider the generation loss on account of any backing down instruction from the Maharashtra State Load Despatch Centre.

The Incentive amount shall be computed and billed on monthly basis based on the cumulative Plant Load Factor till the respective month in a Year, subject to adjustment at the end of the year.

50 Computation and Payment of Capacity Charges, Energy Charges and Lease Rent for Hydro Generating Stations

50.1 The Annual Fixed Charges of a Hydro Generating Station shall be computed on annual basis, based on norms specified under these Regulations, and recovered on monthly basis under capacity charge (inclusive of incentive) and ,Energy Charge, which shall be payable by the beneficiaries in proportion to their respective share in the capacity of the Generating Station. Further, in addition to Annual Fixed Charges to be recovered through Capacity Charge and Energy Charge, the Lease Rent and Water Royalty shall be payable by the beneficiaries in proportion to their respective share in the capacity of the Generating Station on monthly basis.

50.2 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 Annual Plant Availability Factor in percentage

NDM = Number of days in the month

Annex B 2

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

NOTIFICATION

ELECTRICITY ACT, 2003.

In exercise of the powers conferred under Section 181 of the Electricity Act, 2003 and all other powers enabling it in this behalf, the Maharashtra Electricity Regulatory Commission hereby makes the following Regulations to amend the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2011, namely:—

1. Short title and commencement.—*(1)* These Regulations may be called the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) (Third Amendment) Regulations, 2014.

(2) These Regulations shall come into force with effect from the date of their publication in the *Official Gazette.*

2. Amendment to Regulation 13.1.—Regulation 13.1 of the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2011 (hereinafter referred to as the "MYT Regulations, 2011") will be replaced by the following, namely:—

"13.1 The approved aggregate gain or loss to the Generating Company (except the adjustment provided to the Generating Company as per Regulation 49.6 of these Regulations) or Distribution Licensee on account of uncontrollable factors due to variation in fuel and power purchase cost shall be passed through under the FAC component of the Z-factor Charge (Z_{FAC}), as an adjustment in the tariff of the Generating Company or Distribution Licensee on a monthly basis, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations."

3. Amendment to Regulation 13.2.—Regulation 13.2 of the MYT Regulations, 2011 stands deleted.

4. Amendment to Regulation 13.3.—Regulation 13.3 of the MYT Regulations, 2011 stands deleted.

5. Amendment to Regulation 13.7.—Regulation 13.7 of the MYT Regulations, 2011 will be replaced by the following, namely:—

"13.7 First Approval of Z_{FAC} in the second Control Period

The Distribution Licensee shall submit details in the stipulated formats to the Commission along with such details of the variation between expenses incurred and the figures approved by the Commission, and the detailed computations and supporting documents as may be required for verification by the Commission for the first month of the first year of the second Control Period, for approval of Z_{FAC} to be recovered in the second Control Period, as stipulated by the Commission:

Provided that the Distribution Licensee shall submit the details of fuel costs relating to power generated from own generation stations and cost of power procured for the first month of the first year of second Control Period, after completion of first month:

Provided further that the Commission shall approve Z_{FAC} for first month of the first year of second Control Period, to be recovered in subsequent months of the second Control Period, subject to prudence check:

Provided further that if the Distribution Licensee has already charged FAC for the first month of the first year of second Control Period, post-facto approval for the Z_{FAC} charged for the first month shall be sought by the Distribution Licensee.

6. Amendment to Regulation 13.8.—Regulation 13.8 of the MYT Regulations, 2011 will be replaced by the following, namely:—

"13.8 Subsequent Approval of Z_{FAC} in the second Control Period

The Distribution Licensee shall submit details in the stipulated formats to the Commission along with such details of the variation between expenses incurred and the figures approved by the Commission, and the detailed computations and supporting documents as may be required for verification by the Commission for the subsequent months of the second Control Period on a quarterly basis, for post-facto approval of Z_{FAC}:

Provided that the first quarter of the first year of the Control Period shall include the first month of the first year of the Control Period for which approval is required to be obtained:

Provided further that the Distribution Licensee shall submit the details of fuel costs relating to power generated from own generation stations and cost of power procured for the subsequent months of the second Control Period, on a quarterly basis within 60 days after completion of each quarter for post facto approval:

Provided further that the Distribution Licensee shall submit the Z_{FAC} levied to all consumers for the preceding quarter *vis-a-vis* the Z_{FAC} recoverable, along with the detailed computations and supporting documents as may be required for verification by the Commission:

Provided further that the Distribution Licensee shall put up on its internet website such details of the Commission's approval for levy of Z_{FAC}, from time to time."

7. *Amendment to Regulation 13.9.*—Regulation 13.9 of the MYT Regulations, 2011 will be replaced by the following, namely:

"13.9 The formula for the calculation of the FAC component of Z-factor Charge shall be as given under:—

ZFAC(Rs. Crore) = F + C + B,

Where,

ZFAC = Z-factor Charge – component of FAC for the nth month

F = Change in fuel cost of own generation and cost of power purchase

C = Carrying Cost for any under recovery/over recovery on account of Change in fuel cost of own generation and cost of power purchase, computed at the State Bank of India Advance Rate prevailing at the beginning of nth month;

B = Adjustment factor for under-recovery/over-recovery

The calculation for FAC to be charged for the month "n" shall be as follows:—

FACn (Rs crore) = Fn-2 + C n-2 + Bn-2

Explanation I.— for the purpose of this Regulation, the term "F" shall be computed in accordance with the following formula:—

F (Rs. Crore) = $A_{FC,\ Gen}$ + AFC, PP, Where :

AFC,Gen: Change in fuel cost of own generation. This change would be computed based on the norms and directives of the Commission, including heat rate, auxiliary consumption, etc.

AFC,PP: Change in variable and/or fixed cost of power procured from other sources. This change would be allowed to the extent it satisfies the criteria prescribed in these Regulations and the prevailing MYT Order, and subject to applicable norms.

Explanation II.—for the purpose of this Regulation, the term "C" shall mean carrying cost on account of change in fuel cost of own generation and cost of power purchase.

Explanation III.—for the purpose of this Regulation, the term "B" shall be computed in accordance with the following formula:

Bn-2 (Rs. Crore) = Z_{FAC}n-4 - Rn-2

Where,

Bn-2 = Adjustment factor for under-recovery/over-recovery for the month "n-2"

ZFACn-4 = Z_{FAC} for the month "n-4"

Rn-2 = Z_{FAC} for the month "n-4" actually recovered in the month "n-2"

Provided that the monthly FAC charge shall not exceed 20% of the variable component of tariff, or such other ceiling as may be stipulated by the Commission from time to time:

Provided further that any excess in the FAC charge over and above such stipulated ceiling shall be carried forward by the Distribution Licensee and shall be recovered over such future period as may be directed by the Commission.

13.9.1 The total FAC component of Z-factor Charge recoverable, as per the formula specified above, shall be recovered from the actual sales in "Rupees per kilowatt-hour" terms:

Provided that in case of unmetered consumers, FAC component of Z-factor Charge shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission:

Provided further that where the actual distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of FAC component of Z-factor Charge corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total FAC component of Z-factor Charge recoverable.

Calculation of Z_{FAC} per kWh for a particular tariff category/sub-category/consumption slab shall be as per the following formula:

Z_{FAC} Cat Rs./kWh = [Z / (Metered sales + Unmetered consumption estimates + Excess distribution losses)] * k * 10

Where:

Z_{FAC} Cat = FAC component for a particular tariff category/sub-category/consumption slab in 'Rupees per kWh' terms of Z-factor charge.

k = Average Billing Rate/ ACOS

Average Billing Rate = Average Billing Rate for a particular tariff category/sub-category/ consumption slab under consideration in 'Rupees per kWh' as approved by the Commission in Tariff Order:

Provided that the Average Billing Rate for the unmetered consumers shall be based on the estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission.

ACOS = Average Cost of Supply in 'Rupees per kWh' as approved for recovery by the Commission in Tariff Order.

8. *Amendment to Regulation 13.10.*—Regulation 13.10 of the MYT Regulations, 2011 will be replaced by the following, namely:

"13.10 Other components of Z-Factor Charge (Z_{OUC})

The approved aggregate gain or loss to the Generating Company [except the MERC (Multi Year Tariff) (Third Amendment) Regulations, 2014 adjustment provided to the Generating Company as per Regulation 49.6 of these Regulations] or Transmission Licensee or Distribution Licensee on account of uncontrollable factors (other than due to variation in fuel and power purchase rates) shall be passed through under the Other Uncontrollable Cost component of the Z-factor Charge (Z_{OUC}), as an adjustment in the tariff of the Generating Company or Transmission Licensee or Distribution Licensee on a yearly basis, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations:

Provided that the Generating Company or Transmission Licensee or Distribution Licensee shall submit details of Z_{OUC} to the Commission for obtaining the Commission's approval for the Z_{OUC} and, for this purpose, shall submit such details of the variation between expenses incurred and the figures approved by the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission:

Provided further that the Generating Company or Transmission Licensee or Distribution Licensee shall submit the variation in cost on account of any other uncontrollable factors as specified in Regulation 12 on a yearly basis:

Provided further that the Commission shall approve the Z_{OUC} to be recovered in the second Control Period on a yearly basis subject to prudence check in a manner as stipulated by the Commission."

9. *Amendment to Regulation 49.6.*—Regulation 49.6 of the MYT Regulations, 2011 will be replaced by the following, namely:—

"49.6 Adjustment of rate of energy charge (REC) [Fuel Surcharge Adjustment] on account of variation in price or heat value of fuels

Any variation in Price and Gross Calorific Value of coal/lignite or gas or liquid fuel vis-a-vis approved values shall be adjusted on month to month basis on the basis of average Gross Calorific Value of coal/lignite or gas or liquid fuel in stock, received and burnt and weighted average landed cost incurred by the Generating Company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be for a power station. In its bills, the Generating Company shall indicate rate of energy charges at base price of primary and secondary fuel specified by the Commission and the Fuel Surcharge to it separately. The Generating Company shall submit the computation to the Commission on monthly basis for post-facto approval of Fuel Surcharge adjustment in the stipulated formats and shall submit such details of the variation between expenses incurred and the figures approved by the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission."

Mumbai,
8 May, 2014

ASHWANI KUMAR,
Secretary,
Maharashtra Electricity Regulatory Commission

Note.— The Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2011 were notified in the Gazette on 4 February 2011; these were further amended by Maharashtra Electricity Regulatory Commission (Multi Year Tariff) (First Amendment) Regulations, 2011 on 21 October 2011 and Maharashtra Electricity Regulatory Commission (Multi Year Tariff) (Second Amendment) Regulations, 2013 on 17 February 2014.

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Annex – C-1

Order
on
True up for FY 2010-11,
Aggregate Revenue Requirement
for
FY 2012-13 to FY 2014-15
and
Distribution Tariff (Wheeling & Retail Supply)
for
FY 2012-13
for
TATA Power Delhi Distribution Limited

DELHI ELECTRICITY REGULATORY COMMISSION

JULY, 2012

Power Purchase Adjustment

4.143 The Distribution Licensees procure power from central generating stations, state generating stations through the long-term power purchase agreements and through short-term purchases. The power purchase cost accounts for about 80% of Annual Revenue Requirement of the distribution licensees and includes the cost paid for procurement of power, transmission charges, UI charges, SLDC/RLDC charges. The net power purchase cost after deducting amounts realized from sale of surplus power is considered for purpose of ARR.

4.144 The Commission recognizes that the power purchase costs are uncontrollable in nature and are volatile making it difficult to accurately estimate power purchase costs at the time of annual tariff fixation. The power purchase cost is beyond the control of distribution licensees and dependent upon following factors:

(a) Price of Fuel (Coal/Gas) which is highly unpredictable as has been seen from the data of past few years.

(b) Availability of power from new sources.

(c) Weather conditions such as extreme harsh summers/cold which have direct impact on the demand.

(d) Demand supply gap of power within the country.

4.145 Any fluctuation in the cost of fuel is a pass through for the generator through a fuel price adjustment formula and is payable by the distribution licensees in their monthly bills.

4.146 Power purchase cost being uncontrollable, in nature, is pass-through to the consumers but the difference in actual cost of procurement of power and the estimated cost of purchase of power gets trued up only after 2 years. The time lag of two years puts additional burden on consumers by way of interest charges which have to be borne by the consumers, additionally.

4.147 A public hearing was held in the Commission's court room from April 26, 2012 to April 30, 2012 regarding the petitions filed by the TPDDL, BRPL, BYPL and NDMC for true-up of expenses for FY 2010-11 and approval of ARR and Generation Tariff for FY 2012-13 to FY 2014-15. In the public hearing, stakeholders put forth their comments/suggestions before the Commission in the presence of the Petitioner. Some of the stakeholders put forth their views on power purchase adjustments also.

4.148 The Commission heard the stakeholders, consumers and the petitioners at length. The Commission has also pursued the suggestions and objections of various stakeholders and consumers received in the Commission. Further, the Commission has examined the entire record placed before the Commission and also considered the relevant provisions of the Electricity Act, 2003, Rules & Regulations made there under, Tariff Policy and National Electricity Policy.

4.149 The Commission observed that Section 62(4) of the Electricity Act, 2003 provides that:

"No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified"

4.150 The provision 5.3(4) of the Tariff Policy provides that:

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation taxes and cess, variations in power purchase unit costs including on account of hydro-thermal mix in case of adverse natural events."

4.151 The Hon'ble ATE vide in its judgment dated November 11, 2011 in the matter of Suo-Motu action on the letter received from Ministry of Power (O.P. 1 of 2011) has observed that the Power Purchase Cost is a major expenditure in the ARR of the Distribution Licensee. Both the Fuel and Power Purchase Cost are uncontrollable and both have to be allowed to be recovered as quickly as possible.

4.152 In view of the above, Commission has decided to implement a Power Purchase Cost Adjustment for generating stations having long term PPA's with DISCOMs on quarterly basis in order to adjust the changes in the Power Purchase Cost levied by these Generating Companies on the Distribution Companies.

4.153 The power purchase adjustment mechanism will ensure that these changes are passed on to the consumer in a timely manner instead of being deferred to the time when true up is carried out for the Discoms and then recovered with carrying cost.

4.154 The Commission does not intend to include the variation on account of short term power purchase and sale in the power purchase adjustment since it would require prudence check and would delay quarterly Power Purchase Adjustment.

4.155 The Power Purchase Adjustment would be done according to the formula given below:

Power Purchase Adjustment (PPA) formula

$$\text{PPA for } n^{th} \text{ Qtr. } (\%) = \frac{(A-B)*C}{\{Z * (1 - \frac{\text{Distribution losses in }\%}{100})\} * ABR}$$

Where,

A – Total units procured in (n-1)th Qtr (in kWh) from power stations having long term PPAs – (To be taken from the bills of the Gencos issued to distribution licensees)

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B = Proportionate bulk sale of power from Power stations having long term PPAs in $(n-1)^{th}$ Qtr (in kWh)

$$= \frac{\text{Total bulk sale in } (n-1)^{th} \text{ Qtr (in kWh)} * A}{\text{Gross Power Purchase including short term power in } (n-1)^{th} \text{ Qtr (in kWh).}}$$

Total bulk sale and gross power purchase in $(n-1)^{th}$ Qtr to be taken from provisional accounts to be issued by SLDC by the 10^{th} of each month

C = Actual average Power Purchase Cost (PPC) from power stations having long term PPAs in (n-1)th Qtr (Rs./ kWh) – Projected average Power Purchase Cost (PPC) from power stations having long term PPAs (Rs./ kWh) (from tariff order).

Z= [{Actual Power purchased from Central Generating Stations having long term PPA in $(n-1)^{th}$ Qtr (in kWh) $*(1 - \frac{\text{PGCIL losses in \%}}{100})$ + Power from Delhi Gencos including BTPS (in kWh)} $*(1 - \frac{\text{DTL losses in \%}}{100})$ – B] in kWh

Power from Delhi Gencos including BTPS to be taken from provisional accounts to be issued by SLDC by the 10^{th} of each month

ABR = Average Billing Rate for the year (to be taken from the Tariff Order)

Distribution Losses (in %) = Target Distribution Losses (from Tariff Order)

PGCIL Losses (in %)

$$= 100 \times \frac{\text{Approved PGCIL losses in Tariff Order (kWh)}}{\text{Approved Long Term Power Purchase from Central Generating Stations having long term PPA in the Tariff Order (kWh)}}$$

$$\text{DTL Losses (in \%)} = \frac{\text{Approved DTL Losses (from the Tariff Order)}}{\text{Power available at Delhi periphery (from energy balance table tariff order)}}$$

Table 75: Schedule – Base Cost FY 2012-13*

Name of the station	Gross power purchase	Total Cost	Average rate
ANTA GAS	80.04	27.31	3.41
AURAIYA GAS	134.74	47.20	3.50
DADRI GAS	181.02	62.48	3.45
FARAKKA	39.02	15.98	4.10
KAHALGAON-I	78.16	30.65	3.92
KAHALGAON STAGE-II	247.82	97.31	3.93
RIHAND -I	227.53	45.01	1.98
RIHAND -II	292.44	61.67	2.11

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Name of the station	Gross power purchase	Total Cost	Average rate
SINGRAULI	341.93	71.11	2.08
UNCHAHAR-I	53.40	17.89	3.35
UNCHAHAR-II	104.18	36.42	3.50
UNCHAHAR-III	65.05	25.22	3.88
Dadri Ext. unit 5&6	1532.05	656.86	4.29
RAPS - 5&6	116.30	39.68	3.41
NPCIL - NAPS	55.95	13.59	2.43
BTPS	1038.69	487.61	4.69
NCTPS (Dadri)	1304.35	502.78	3.85
Rajghat	235.31	117.00	4.97
GAS TURBINE	552.54	227.30	4.11
Pragati -I	538.40	175.56	3.26
BAIRA SIUL	24.84	3.56	1.43
CHAMERA-I	37.91	6.86	1.81
CHAMERA-II	59.95	15.54	2.59
DHAULIGANGA	44.66	12.24	2.74
DULHASTI	72.96	42.55	5.83
SALAL	103.46	9.27	0.90
TANAKPUR	16.73	3.61	2.16
URI-I	82.35	12.21	1.48
Sewa-II	13.50	8.76	6.49
TEHRI HEP	94.53	23.07	2.44
NJPC (SATLUJ)	196.61	42.49	2.16
TALA HEP	34.15	6.90	2.02
DVC Mejia-6	59.73	23.89	4.00
Mejia-II (Unit 7&8)	1777.58	711.03	4.00
Chandrapura- 7&8	593.16	237.26	4.00
Maithon (Unit-1 & 2)	1353.32	484.49	3.58
Koteshwar(Unit-1, II, III, IV)	35.15	15.82	4.50
PPCL-III, Bawana	924.26	415.92	4.50
CLP Jhajjar	649.58	217.61	3.35
GRAND TOTAL	**13393.31**	**5051.70**	**3.77**

**Power Purchase Cost of stations from which power is being received as on March 31, 2012 have been considered for calculation of the Base Rate*

4.156 In order to give effect to the Power Purchase Adjustment (PPA) on quarterly basis the following be implemented:

(a) The PPA will be charged to all categories of consumers.

(b) The PPA for any quarter would be charged only after it is approved by the Commission.

(c) The weighted average base cost in Rs/kWh shall be as approved in this Tariff Order for FY 2012-13, as given below.

TPDDL = Rs. 3.77*

* Detailed computation is given in Table 75 above for TPDDL. The Schedule will be revised in every subsequent Tariff Order

(d) In case power is procured from those sources considered as surrendered in this tariff order, then PPAC shall be considered as applicable to them as well.

(e) The Distribution licensee shall submit to the Commission the details in respect of changes in power purchase cost of plants having long term PPAs, as listed in Table 75, for the $(n-1)^{th}$ quarter. Further, Auditor's Certificate along with statement indicating plant-wise details of fixed charges, variable charges, other charges and units purchased from each plant having long term PPA, as listed in Table 75, for the $(n-1)^{th}$ quarter shall be furnished along with the proposal of PPA surcharge submitted for the Commission's approval.

(f) The percentage of PPA will be rounded off to two decimal places.

(g) The percentage increase on account of PPA will be applied as a surcharge on the total energy and fixed charges (excluding theft bills, arrears, LPSC, E. Tax etc.) billed to a consumer of the utility.

(h) The bill format shall clearly identify the PPA percentage and amount of PPA billed as separate entries.

(i) The PPA calculated for any quarter, the first quarter being July-September 2012, shall be applied prospectively for 3 months after approval is received from the Commission.

(j) In view of the fact that PPA computed for any quarter will be applied after a time delay for a subsequent 3-month period, there would necessarily be a difference between the actual power purchase cost increase and the recovery by the distribution utility through the quarterly adjustments. The difference will be adjusted at the time of annual true-up undertaken by the Commission for that year.

(k) This Power Purchase Adjustment (PPA) formula shall remain applicable till it is amended, reviewed, revised or otherwise amended.

Operation and Maintenance Expenses

4.157 As per MYT Regulations 2011 the Operation and Maintenance (O&M) expenses for a licensee shall include:

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Annex C-2

सत्यमेव जयते

Order
on
TRUE UP
for
FY 2012-13,
Aggregate Revenue Requirement
and
Distribution Tariff (Wheeling & Retail Supply)
for
FY 2014-15
for
Tata Power Delhi Distribution Limited (TPDDL)

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D E R C

DELHI ELECTRICITY REGULATORY COMMISSION

July, 2014

2.136 The determination of interest to be charged on consumer deposits is the prerogative of the Commission in terms of the provision of Electricity Act, 2003.

Commission's view

2.137 The Commission is in the process of revising Delhi Electricity Supply Code and Performance Standard Regulations, 2007 and will examine the issue of interest rate on security deposit, while finalizing the revised Delhi Electricity Supply Code and Performance Standards Regulations.

2.138 The Commission is of the view that the Consumers Security Deposits are meant for funding the working capital requirements of the Petitioner. Accordingly, the Commission is considering the notional interest earned on consumers security deposits at the cost of debt considered by the Commission for RoCE. The notional interest as pointed out by the stakeholder (13%-6%) is considered as Non-tariff income of the Petitioner and the same is reduced from Aggregate Revenue Requirement (ARR) of the relevant year. Therefore, the benefit of difference in interest rates is already being passed on to the consumers in the area of Licensee.

PPAC / FAC CHARGES

a) **Bi-monthly fuel adjustment**

Stakeholder's View

2.139 DISCOMs should not be burdened with the arrears of fuel adjustment cost and it should be worked out bi-monthly.

2.140 PPAC: Without any provision in MYT Regulations, the Commission has approved PPAC formula in Tariff order for FY 2012-13 without proper discussion. The enhanced cost of power is to be reimbursed and it is being done in true up along with interest. The CERC in its Annual reports for 2011-12 and 2012-13 has stated that the cost of power sold by central generating stations and NHPC has actually gone down by over 20%. The letter from the Secretary to Government of India to Chairman, ATE and suomoto Petition No. OP 1 of 2011 has helped some DISCOMs to avoid payment of dues to CGS/NHPC/State generating company. The PPAC formula may be cancelled as the cost of power purchase has gone down.

2.141 The DERC is allowing FCA as a percentage of Retail cost whereas FCA should be applicable on production cost only.

2.142 The DERC has been allowing upto 8% as Fuel Cost Adjustment but DISCOMs have not been paying their dues to NTPC and others for power purchased/ supplied and hence where is the question of FCA.

2.143 DERC over time has blurred the line between FCA and PPCA. The EA provides for FCA to be adjusted quarterly and not any other production cost as that is a true up exercise.

TPDDL's Submission

2.144 Fuel Adjustment Charge or Power Purchase Adjustment Charge has been introduced by the Commission in line with the provision of Electricity Act, 2003. Such a charge is being allowed by most of the SERCs in the country so as to ensure that consumers are not burdened with a tariff shock at the end of the year which would be the case if a one-time true up is resorted for. Further FAC/PPAC is allowed by the Commission only after detailed verification of power purchase invoices and substantiated by certification of actual cost incurred as provided by the statutory auditors of the DISCOMs.

2.145 Timely recovery of power purchase cost is a must for utilities given the liquidity crisis being faced on account of accumulated Regulatory Asset. The generators are allowed to pass on costs of any increase in fuel to distribution companies on monthly basis. Hence it is essential that such costs are passed on to end consumers in a regular manner (quarterly currently) to avoid cumulative tariff shocks in future as well as additional carrying cost burden.

2.146 The PPAC formula has been instituted for timely recovery of power purchase cost and is in line with ATE order dated 1.11.2011 which makes it mandatory for all SERCs to device a mechanism for timely recovery of PPAC. The current PPAC formula does not include the loss on sale of surplus, transmission charges, short term transactions, etc. There is need to include the same to avoid major true ups at the end of the year which will burden the consumers.

2.147 Fuel adjustment change or power purchase adjustment charge has been introduced by the Commission in line with the provision of Electricity Act 2003. Such a charge is being allowed by most of the SERCs, in the country so as to ensure that consumers are not burdened with a tariff shock at the end of the year which would be the case if one-time true up is reported to.

2.148 The FAC/PPAC is allowed by the Commission only after detailed verification of audited power purchase cost figures. TPDDL is making timely payment to NTPC and other generators and the question of default does not arise.

BYPL's Submission

2.149 The fuel and power purchase cost is uncontrollable and it has to be allowed as quickly as possible according to tariff policy. The Central Commission in its tariff regulations has provided a formula for fuel price adjustment and the charges for generation are increased as and when the fuel prices are increased. In view of the precarious financial condition of the distribution companies, it is necessary that the state Commission also to provide for Power Purchase Cost Adjustment formula as intended in Section 621(4) of the Act, 2003, to compensate the distribution companies for the increase in cost of procurement during the financial year. The same also been directed by the APTEL to all State Commissions in its judgement dated 11.11.2011 in OP 1 of 2011.

2.150 The fuel and power purchase cost is uncontrollable and it has to be allowed as quickly as possible according to Tariff Policy. In its regulations, the CERC has provided a formula for fuel adjustment and the charges of the generation companies are increased as and when the fuel prices are increased. In view of the present financial

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condition of the DISCOMs, it is necessary that the SERCs also provide for Power Purchase Cost Adjustment formula as intended in Section 62(4) of E Act, 2003 to compensate the DISCOMs for the increase in cost of power procurement during a financial year. The same has also been directed by the APTEL in its judgement dated 11.11.2011 in OP No.1 of 2011.

Commission's View

2.151 The Commission is allowing PPAC on a quarterly basis so that differential of power purchase costs incurred during the course of the year are passed on to the consumers in a timely manner without burdening them subsequently with carrying costs which would accrue if the extra charges are passed on at later dates/years. With adoption of philosophy, the overall burden of power purchase costs on the consumer is sought to be reduced and a tariff shock avoided.

2.152 The PPAC concept has also been endorsed by Hon'ble APTEL in its order in OP 1 of 2011 dated 11.11.2011 and its introduction made mandatory for all SERCs. Earlier the Commission has restricted the PPAC calculation to enhancement of power purchase charges only but there is a strong case for including increase in transmission charges and arrears as well which has been duly incorporated in the renewed PPAC formula for FY 2014-15.

POWER PURCHASE

a) **Downward revision of generation cost by NTPC etc. to be passed on to consumers**

Stakeholder's View

2.153 With the tightening of regulatory norms by CERC, there is downward revision of generation cost by entities like NTPC, etc and this reduction in power purchase costs should be passed on the consumer by DISCOMs.

2.154 The DERC must ensure that DISCOMs reflect the power purchase costs as fixed by the CERC for various generating stations. It was noticed that while the generating

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Table 4.26: Total Power purchase Cost approved by the Commission for FY 2014-15

Sl. No.	Particulars	Quantity (MU)	Amount (Rs. Crore)	Average cost (Rs./kWh)	Remarks
1	Power Purchase from CSGS*	10080.51	3913.19	3.88	Table 4.17
2	Inter-state Transmission Losses	361.89	378.93		Table 4.20
3	Power Purchase from Delhi Stations#	2145.96	1083.80		Table 4.17
4	Cost towards RPO	1.93$	83.58^		Table 4.19
5	Power Available at Delhi Periphery	11866.51	5459.50	4.60	MU=1-2+3+4 Amt=1+2+3+4
6	Intrastate Transmission Including SLDC charges	80.99	340.05		Table 4.20
7	Less: Power Purchase Rebate		99.94		Table 4.25
8	Less: Rebate on Transmission Charges		11.73		
9	Power Available to DISCOM	11785.52	5687.88	4.82	MU=(5-6) Amt=5+6-7-8
10	Sales	7511.82			Table 4.5
11	Distribution Loss	934.12			Table 4.10
12	Required Power at DISCOM periphery	8445.95	4337.68	5.14	MU=(10+11) Amt=(9-15)
13	Surplus Power Available at DISCOM boundary	3339.58	1185.55	3.55	(9-12)
14	Sale of Surplus power on account of procurement of actual Renewable Energy	463.80	164.65	3.55	Table 4.22
15	Net Surplus Power	3803.38	1350.20	3.55	(13+14)

*Includes future stations excluding BTPS, SGS & Solar
# Includes PPCL, Rajghat, GTPS and BTPS
$ includes Actual Renewable Energy (1.93 MU Petitioner's Solar)
^ includes Total cost including Solar and REC

Power Purchase Cost Adjustment Charges (PPAC)

Petitioner's Submission

4.102 The Petitioner has submitted in its Petition for revision of PPAC formula and requested the Commission to consider the following in the revised formula:

a) The variance in power purchase is being allowed but the variance in sale rate (which is also a part of power purchase) should also be in-built in the PPA formula.

b) Any under recovery/over recovery of PPA of previous quarters should be included in the existing PPA formula.

c) Only due and paid /bills payable of power purchase should be considered.

Commission's Analysis

4.103 The Commission has analysed the above submissions of the Petitioner and has considered only variation in transmission charges and arrears payable to GENCOs/TRANSCOs in the revised PPAC formula. The Commission will not consider the fixed cost on account of Regulated power.The Commission doesn't intend to include the variation on account of short term Power Purchase adjustment since it would require prudence check and would delay quarterly Power Purchase Adjustment.

4.104 The Commission had approved the formula for Power Purchase Cost Adjustment vide its Order dated July 13, 2012. The Power Purchase Adjustment would be now considered according to the revised formula as given below:

Power Purchase Adjustment (PPA) formula

$$\text{PPA for } n^{th} \text{ Qtr. (\%)} = \frac{(A-B)*C + (D-E)}{\{Z * (1- \frac{\text{Distribution losses in \%}}{100})\} * ABR}$$

Where,

A = Total units procured in $(n-1)^{th}$ Qtr (in kWh) from power stations having long term PPAs – (To be taken from the bills of the GENCOs issued to distribution licensees)

B = Proportionate bulk sale of power from Power stations having long term PPAs in $(n-1)^{th}$ Qtr (in kWh)

$$= \frac{\text{Total bulk sale in } (n-1)^{th} \text{ Qtr (in kWh)} * A}{\text{Gross Power Purchase including short term power in } (n-1)^{th} \text{ Qtr (in kWh)}}$$

Total bulk sale and gross power purchase in $(n-1)^{th}$ Qtr to be taken from provisional accounts to be issued by SLDC by the 10^{th} of each month.

C = Actual average Power Purchase Cost (PPC) from power stations having long term PPAs in $(n-1)^{th}$ Qtr (Rs./ kWh) – Projected average Power Purchase Cost (PPC) from power stations having long term PPAs (Rs./ kWh) (from tariff order)

D = Actual Transmission Charges paid in the $(n-1)^{th}$ Qtr

E = Base Cost of Transmission Charges for $(n-1)^{th}$ Qtr= (Approved Transmission Charges/4)

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Z = [{Actual Power purchased from Central Generating Stations having long term PPA in (n-1)th Qtr (in kWh)*(1 - $\frac{\text{INTERSTATE TRANSMISSION LICENSEE losses in \%}}{100}$) + Power from Delhi GENCOs including BTPS (in kWh)}*(1 – $\frac{\text{Intra state losses in \%}}{100}$) – B] in kWh

ABR = Average Billing Rate for the year (to be taken from the Tariff Order)

Distribution Losses (in %) = Target Distribution Losses (from Tariff Order)

$$\text{INTER STATE TRANSMISSION LICENSEE Losses (in \%)} = \frac{\text{100* Approved INTER STATE TRANSMISSION LICENSEE losses in Tariff Order (kWh)}}{\text{Approved long term power purchase from central generating stations having long term PPA in the Tariff Order (kWh)}}$$

$$\text{Intra state Losses (in \%)} = \frac{\text{100 * Approved DTL Losses (from the Tariff Order)}}{\text{Power available at Delhi periphery (from energy balance table tariff order)}}$$

4.105 The base Power Purchase Cost computation based upon quantum and cost of power purchases from various generating stations over which any increase has to be taken during FY 2014-15 is given below:

Table 4.27: Schedule – Base cost for FY 2014-15

Sl. No.	Name of Generating Station	Gross Power Purchase (MU)	Avg. Rate (Rs./kWh)	Total Cost (Rs. Crore)
A	**NTPC**			
1	Anta Gas	58.32	4.33	25.23
2	Auriya Gas	43.02	5.57	23.94
3	BTPS	910.46	4.94	450.13
4	Dadri Gas	90.78	4.57	41.47
5	Farakka	45.13	4.21	19.02
6	Kahalgaon-I	98.19	4.12	40.44
7	NCPP Dadri-I	1302.10	4.41	574.06
8	Rihand-I	206.62	2.37	48.94
9	Rihand-II	268.92	2.38	64.11
10	Rihand-III	141.09	3.13	44.09
11	Singrauli	335.35	1.75	58.63
12	Unchahar-I	51.13	3.56	18.22
13	Unchahar-II	105.15	3.60	37.83
14	Unchahar-III	61.99	3.94	24.45
15	Kahalgaon-II	301.83	4.04	121.91
16	Dadri Extn.	1691.80	4.70	794.82

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Sl. No.	Name of Generating Station	Gross Power Purchase (MU)	Avg. Rate (Rs./kWh)	Total Cost (Rs. Crore)
17	Aravalli Power Corp. Ltd.	219.77	6.15	135.16
	Sub-Total	**5931.65**	**4.25**	**2522.47**
B	**NHPC**			
1	Bairasul	20.65	2.09	4.32
2	Chamera-I	55.30	1.79	9.92
3	Chamera-II	55.52	3.51	19.51
4	Chamera-III	35.92	4.10	14.71
5	Dhauliganga	11.62	5.09	5.92
6	Dulhasti	82.58	6.09	50.28
7	Salal	113.69	1.91	21.75
8	Tanakpur	12.53	2.81	3.52
9	Uri	82.52	2.31	19.05
10	Sewa-II	19.61	5.37	10.53
	Sub-Total	**489.93**	**3.26**	**159.51**
C	**NCPP**			
1	RAPS- 3&4			
2	RAPS- 5&6	134.17	3.46	46.41
3	NPCIL-NAPS	77.59	2.50	19.43
	Sub-Total	**211.76**	**3.11**	**65.85**
D	**State Generating Stations**			
1	IP Station			
2	Rajghat	102.03	6.36	64.85
3	Gas Turbine	321.21	5.27	169.38
4	Pragati-I	522.57	4.20	219.25
5	Pragati-III, Bawana	289.70	6.22	180.19
	Sub-Total	**1235.51**	**5.13**	**633.67**
E	**Other Stations**			
1	Tehri HEP	127.08	4.06	51.62
2	NJPC (Satluj)	245.44	2.39	58.55
3	Koteshwar	45.54	3.12	14.22
4	Tala HEP	30.44	2.02	6.15
5	CTPS 7&8	466.34	3.66	170.86
6	Mejia Units -6 (LT-4)	186.60	3.95	73.67
8	Haryana CLP Jhajjar (LT-5)	582.00	6.39	371.83
9	DVC (LT-9)	79.88	6.39	35.94
10	DVC(MPL-DVC) (LT-6)	1953.29	4.50	726.98
	Sub-Total	**3716.60**	**4.06**	**1509.82**
F	**New Generating Stations**			
1	Parbati-III	66.27	4.5	29.82
2	Sasan UMPP	552.24	1.19	65.72
3	Uri - II	22.52	4.50	10.14
	Sub-Total	**641.03**	**1.65**	**105.67**
	Grand-Total	**12226.47**	**4.09**	**4996.99**

4.106 DISCOMs may claim the increase in the power purchase cost in accordance with the formula approved by the Commission and recover from the consumers after necessary approval of the Commission.

4.107 In order to give effect to PPAC on quarterly basis the following are to be implemented:

(a) The PPAC will be charged to all categories of consumers.

(b) The PPAC for any quarter would be charged only after it is approved by the Commission.

(c) The weighted average base cost in Rs/kWh shall be as approved in this Tariff Order for FY 2014-15 is Rs 4.09 for Petitioner. Detailed computation is given in Table 4.27 above. The Schedule will be revised in every subsequent Tariff Order.

(d) The Distribution licensee shall submit to the Commission the details in respect of changes in power purchase cost of plants having long term PPAC, as listed above for $(n-1)^{th}$ quarter. Further, Auditor's Certificate along with statement indicating plant-wise details of fixed charges, variable charges, other charges and units purchased from each plant having long term PPAs, as listed above, for $(n-1)^{th}$ quarter alongwith actual transmission charges for (n-1)th quarter shall be furnished along with the proposal of PPA surcharge submitted for the Commission's approval. Further, similar information in respect of current bills should also be furnished in the Auditor's certificate.

(e) The percentage of PPAC will be rounded off to two decimal places.

(f) The percentage increase on account of PPA will be applied as a surcharge on the total energy and fixed charges (excluding arrears, LPSC, E-Tax etc.) billed to a consumer of the utility. Further, PPAC surcharge should not be levied on the 8% surcharge and also the 8% surcharge towards recovery of past accumulated deficit is not to be levied on PPAC.

(g) The bill format shall clearly identify the PPA percentage and amount of PPAC billed as separate entries.

(h) The PPAC calculated for any quarter, shall be applied prospectively for 3 months after approval is received from the Commission.

(i) In view of the fact that PPAC computed for any quarter will be applied after a time delay for a subsequent 3-month period, there could be a difference between the actual power purchase cost increase and the recovery by the distribution utility through the quarterly adjustments. The difference, if any, will thus be adjusted at the time of annual true-up undertaken by the Commission for that year.

(j) The PPAC claim of any quarter submitted by the Petitioner shall be examined by the Commission. In view of public interest, the Commission will endeavour that while approving the PPAC, there is no Tariff shock and at the same time reasonable PPAC is provided to the DISCOMs. The Commission may take appropriate view to carry forward or spread some amount of PPAC in the subsequent quarters.

(k) This PPAC formula shall remain applicable till it is reviewed, revised or otherwise amended.

Operation and Maintenance (O & M) Expenses

Employee Expenses

Petitioner's Submission

4.108 The Petitioner has estimated the Employee Expenses for FY 2014-15 based on the employee expenses for FY 2012-13 as given in the Table below:

Table 4.28: R&M Expenses submitted by Petitioner for FY 2014-15 (Rs. Crore)

Particulars	Petitioner's Submission
Employee Expenses	448.98
Less: Capitalization	44.90
Net Employee Expenses	404.08

Commissions' Analysis

4.109 The Regulation 4.7(d) of the MYT Regulations 2011, specifies the Operation and Maintenance Expenditure which includes employee expenses, repairs and maintenance expenses, administration and general expenses and other miscellaneous expenses, etc. are deemed as "Controllable" expenditure. As per Regulation 4.21(b)(i) of the MYT Regulations 2011, any surplus or deficit on account of O&M expenses shall be to the accounts of the licensee and shall not be trued up.

Annex-D

BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
AT GANDHINAGAR

Petition No. 1309 of 2013

In the matter of: Petition seeking modification of existing Fuel Price & Power Purchase Adjustment (FPPPA) Formula under the provision of Sections 62 and 86 of the Electricity Act, 2003.

Petitioner : Gujarat Urja Vikas Nigam Ltd (GUVNVL)
Sardar Patel Vidyut Bhavan,
Race Course, Vadodara – 390024.

Co-Petitioner (1) Madhya Gujarat Vij Company Limited (MGVCL)

(2) Uttar Gujarat Vij Company Limited (UGVCL)

(3) Paschim Gujarat Vij Company Limited (PGVCL)

(4) Dakshin Gujarat Vij Company Limited (DGVCL)

(5) Torrent Power Ltd., Ahmedabad

(6) Torrent Power Ltd., Surat

(7) Torrent Energy Ltd., Ahmedabad

(8) Aspen Infrastructure Ltd.

(9) Jubilant Infrastructure Ltd.

(10) MPSEZ Utilities Ltd.

(11) Kandla Port Trust Ltd.

Represented by (1) Learned Advocate Shri Anand Ganeshan
with S/Shri K.P.Jangid and V.T. Patel for Petitioner.

(2) Shri M.P.Trivedi for MGVCL.

(3) S/Shri R.P.Rawal and Kamal Sindhi for UGVCL.

(4) Shri J.J.Gandhi for the PGVCL.

(5) Shri G.H.Patel for DGVCL.

(6) S/Shri Murali Rangnathan and Chetan Bundela for co-petitioners 5, 6 and 7.

(7) For Co-petitioners Nos. 8, 9, 10 & 11 nobody was remain present.

V/s.

Objector No.1	:	Gondal Chamber of Commerce Udyog Bharti, Udyog Bharti Chowk, Gondal – 360311.
Represented by	:	Nobody was present
Objector No.2	:	Consumer Education Research Society Suraksha Sankool, G Nagar, Sarkhej Highway, Ahmedabad, Gujarat 380052.
Represented by	:	Nobody was present
Objector No.3	:	New Kandla Salt & Chemical Co. P. Ltd. Maitri Bhavan, 18, Sector 8, P.O.BOX No. 106, Gandhidham -370201.
Represented by	:	Nobody was present

Petition No. 1313 of 2013

In the matter of:

Petition seeking modification of existing Fuel Price & Power Purchase Adjustment (FPPPA) Formula under the provision of Sections 62 and 86 of the Electricity Act, 2003.

Petitioner	:	Torrent Power Limited Torrent House, Off. Ashram Road, Ahmedabad- 380009.
Represented by	:	S/Shri Murali Rangnathan and Chetan Bundela

V/s.

Objector	:	Utility Users Welfare Association Lakshmi Ginning Compound, Opp, Union Co-Op Bank, Naroda, Ahmedabad-382 330.
Represented by	:	Shri Bharat Gohil

CORAM:
Shri Pravinbhai Patel, Member (Tech)
Dr. M.K. Iyer, Member (Fin)

29/10/2013

ORDER

1.0 The issue involved in the petitions no 1309/2013 and 1313/2013 is modification of existing Fuel Price & Power Purchase Adjustment (FPPPA) formula under the provisions of Section 62 & 86 of the Electricity Act, 2003. Since, the issues involved in both the petitions are similar, both the matters were heard together on 13.08.2013 and we decide to pass common order in the matter.

2.0 The fact of the cases is as under;

2.1 The Commission has specified the Fuel and Power Purchase Adjustment (FPPPA) formula for recovery of variation of fuel and power purchase cost of distribution licensees in the state through order dated 25.06.2004 for erstwhile Gujarat Electricity Board and now GUVNL/Discoms and order dated 31.07.2007 for the Torrent Power Ltd. in pursuance to the Section 62 (4) of the Electricity Act,2003. The FPPPA formula specified by the Commission for the Gujarat Urja Vikas Nigam Limited (GUVNL) and thereby for the State Owned Distribution

Companies viz. Dakshin Gujarat Vij Company Limited (DGVCL), Paschim Gujarat Vij Company Limited (PGVCL), Uttar Gujarat Vij Company Limited (UGVCL) and Madhya Gujarat Vij Company Limited (MGVCL) is as under;

FPPPA = [FOG + PPP1 + PPP2] / [S.E.]

Where,

FOG	Adjustment on account of variations in delivered cost of Fuel at GEB's (now GSECL) Thermal Power Stations Rs. Millions
PPP1	Adjustment on account of variable cost of power purchased in Rs. Millions
PPP2	Adjustment on account of fixed cost of power purchased in Rs. Millions
SE	Saleable Energy in Million Units

The FPPPA formula specified by the Commission for Torrent Power Limited is as under;

$$\mathbf{FPPPA = [\ F_{OT} + PPP_1 + PPP_2\ ] \div [S.E.]}$$

Where,

$$\mathbf{F_{OT} = \sum_{n=1}^{k} [\ (H_B \times OTD_A) \times (Fuel\ C_A - Fuel\ C_B)\ ]}$$

Where,

F_{OT}	Adjustment on account of variations in delivered cost of Fuel at TPL's Thermal Power Stations Rs. in millions

n	! to k, the thermal power stations in TPL Table-I
OTD_A	is the actual level of delivered energy at the bus bar (net generation) from TPL's thermal plants in million units during the control period.
H_B	is the base station heat rate in K.Cal./ Kwh calculated on the net output using permitted auxiliary consumption
$FuelC_A$	is the new landed price of fuel at relevant TPL's generating stations, expressed in Rs. / Kcal calculated after allowing increases (or decreases) in the price of fuel/railway freight, taxes and duties on fuel as well as fuel price increase by fuel suppliers
$FuelC_B$	is the base landed price of fuel at relevant TPL's generating stations, expressed in Rs. / Kcal calculated using the base data. This parameter is constant (frozen) for the various quarters (periods) for which increases in fuel prices is being permitted.

Of

2.2 In the present petition, the petitioners along with the co-petitioners have prayed the Commission to modify the FPPPA formula, as the present formula does not address the variation in sources of power purchase approved in the MYT/Tariff orders. The contentions of petitioners are narrated in subsequent paragraphs.

3.0 The GUVNL, petitioner in the case of petition No. 1309 of 2013, has submitted that the formula specified by the Commission was designed for erstwhile GEB which was engaged in generation and purchase of power, i.e. both the activities

However, after unbundling of GEB, now for Discoms, the source of power is only through purchase of power and hence there is no direct fuel utilization. It is mentioned that due to the following reasons, they are facing the issue of under-recovery in the existing FPPPA formula;

3.1 Annual Revenue Requirement(ARR) of Discoms (DGVCL,PGVCL, UGVCL and MGVCL) for the control period from FY 2011-12 to FY 2015-16 have been approved by the Commission in MYT order dated 06.09.2011. Discoms are required to file True-up application of previous year and effect of any adjustment of previous year is to be given in the ARR of ensuing year. Any variation in fixed cost of GSECL stations for a given year (payable by Discoms during the year) as compared to fixed cost approved for respective year vide MYT order of Discoms is not captured in the existing FPPPA formula and is adjusted after period of two years burdening future consumers.

It is further mentioned that the fixed charge variation is allowed under the FPPPA formula in respect of power purchase from IPPs, Central Sector stations, CPPs, Renewable Sources and purchase of power through the competitive bidding route. The entire power procurement by Discoms through GUVNL is purchase of power from external sources as the generating stations of erstwhile GEB is now owned and operated by a separate generating company i.e. GSECL, for which the Commission is determining tariff through a separate tariff order. Hence, Discoms are required to make payment to GSECL for purchase of power as per the Commission's Order for GSECL. Therefore, power purchase by GUVNL / Discoms from GSECL power stations is also purchase of power like the purchase of power from the other sources. It is requested to allow recovery of incremental Fixed Cost as well as Fuel Cost of GSECL stations in line with other Power

Purchase Agreements with Central Sector Generating stations and IPPs etc. under FPPPA mechanism.

3.2 Power purchase arrangement undergoes changes due to uncontrollable factors mainly on account of changes in sources (mix) of power supplies. Due to changes in sources (mix) of power purchase, it results in change in the generation mix as well as rate mix in comparison to approved in the MYT/ Tariff Order.

3.2.1 The existing FPPPA formula does not provide for recovery of costs due to variation in sources during the year. The same is demonstrated by the petitioner through the following illustrations.

a) Approved Variable Cost:

Source	Quantity (Mus)	Variable costs (Rs./Unit)(VC_B)	Total variable cost (in Rs. Cr.)
Source – 1	200	2.00	40.00
Source - 2	100	3.00	30.00
Source - 3	50	4.00	20.00
Total	350		90.00

b) Actual Variable Cost:

Source	Quantity (Mus)	Variable costs (Rs./Unit) (VC_A)	Total variable cost (in Rs. Cr.)
Source – 1	170	2.00	34.00
Source - 2	110	3.00	33.00
Source - 3	70	4.00	28.00
Total	350		95.00

c) FPPPA as per existing Formula:

Source	Quantity (Mus)	VC_A-VC_B	FPPPA

		(Rs./Unit)	(in Rs. Cr.)
Source – 1	170	-	-
Source - 2	110	-	-
Source - 3	70	-	-
Total	350	-	-

It is explained that as mentioned in the above tables, there is no change in total energy requirement as well as the variable cost. There is only an inter-change in utilization of the sources, which is commonly known as mix variance. Accordingly, the total cost has increased from Rs. 90 Crores to Rs. 95 Crores. However, the existing formula does not allow to recover an increase of Rs. 5.00 Crores due to mix variance. Thus, the variation in cost due to mix variance remains unrecovered and is considered for recovery only at the time of truing up exercise, which takes place after two years. However, the deferment of such recovery is not in the interest of the licensee as well as its consumers. This unrecovered cost affects the financial health of distribution licensee's operations.

4.0 The petitioner GUVNL, in support to their argument referred the Clause 5.3(h)-4 of the Tariff Policy. The clause is reproduced as under;

"Uncontrollable costs should be recovered speedily to ensure that the future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of hydro-thermal mix in case of adverse natural events.".

It is requested by the petitioner to review the existing FPPPA formula to achieve the ultimate goal envisaged in the tariff Policy i.e. "speedy recovery of power purchase cost".

5.0 The petitioner GUVNL referred the judgement by the Hon'ble Appellate Tribunal of Electricity in OP No.1 of 2011 where it has been emphasized to have a formula/mechanism for addressing variation in fuel and power purchase cost of a distribution company as mentioned below;

"(vi) Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this order must put in place such formula/ mechanism."

6.0 The petitioner GUVNL proposed a formula to recover variation of fuel and power purchase cost compared to that of the base year costs in the same year in which such variations took place. The proposed formula for calculation of per unit power purchase price adjustment charges is as follows:

PPPA = [(PPCA – PPCB)] / [1-LA]

Where,

PPCA	Is the average power purchase cost per unit of delivered energy (including transmission cost), computed based on the

	operational parameters approved by the Commission or principles laid down in the Power Purchase Agreements in Rs. / KWh for all the generating stations who have supplied power in the given quarter and transmission charges as approved by Hon'ble GERC for GETCO network and by Hon'ble CERC for CTU network, calculated as total power purchase cost billed in Rs. Million divided by the total quantum of power purchase in Million Units made during the quarter.
PPCB	Is the approved average base power purchase cost per unit of delivered energy (including transmission cost) for all the generating stations considered by the Hon'ble Commission for supplying power to the company in Rs. / KWh and transmission charges as approved by Hon'ble GERC for GETCO network and by Hon'ble CERC for CTU network, calculated as the total power purchase cost approved by the Hon'ble Commission in Rs. Million divided by the total quantum of power purchase in Million Units considered by the Commission.
LA	Is the weighted average of the approved level of Transmission and Distribution losses for the four Discoms applicable for a particular quarter.

It is further stated that the PPPA, as calculated above in Rs. /KWh, will be recovered in the form of power purchase price adjustment (PPPA) charge for every unit of the energy consumption and will be forming a part of the energy bill to be served on monthly/bimonthly or any other periodical basis. The implementation and application of the formula and all other terms may continue to be as per the Commission's earlier order (approved in June 2004).

7.0 The TPL, petitioner in case of petition No. 1313 of 2013, stated that the power purchase cost constitutes about 80% of total ARR of the distribution licensee. The power purchase cost is subject to variations on account of rate, quantity and source. The variation in power purchase cost is mainly on account of uncontrollable factors. The variation in power purchase cost, being uncontrollable in nature, is required to be recovered from the consumers on a regular basis. It is further stated by TPL that power purchase arrangement undergoes changes due to uncontrollable factors mainly on account of changes in sources of power supplies. Due to changes in sources of power purchase, it results in change in the power purchase mix as well as rate mix in comparison to those approved in the MYT/ Tariff Order.

8.0 The petitioner TPL has also given the identical argument and example to illustrate the under recovery in existing FPPPA formula due to variation in quantum of power purchase from the approved sources as has been done by GUVNL in its petition and mentioned in para 3.2.1 above.

9.0 TPL, further submitted that the distribution licensee is obligated to comply with the Renewable Power Purchase Obligation as per GERC (Procurement of Energy from Renewable sources) Regulations, 2010. However, due to supply constraint within the State, the Petitioner is required to fulfil the RPO through the purchase of Renewable Energy Certificates (RECs). The existing formula does not allow for recovery of expenditure incurred on purchase of RECs. Accordingly, the Cost of such REC purchase remains unrecovered though the Distribution licensee incurs for purchasing RECs to meet the renewable purchase obligation. Hence, it also adds to the accumulated gap.

10.0 TPL has also referred the Clause of Tariff Policy and judgement passed by the Hon'ble APTEL in OP NO.1 of 2011 as has been done by GUVNL and mentioned in para 4.0 and 5.0 above.

TPL requested the Commission to consider the below mention FPPPA formula;

$$FPPPA = (PPP1 + PPP2 + REC) \div S.E.$$

where,

(i) $PPP1 = \sum_{i=1}^{n} FC_A - FC_B$

Where FC_A is the actual Fixed cost of each source in Rs. Mn and FC_B is the base Fixed cost of each source in Rs. Mn

(ii) $PPP2 = (\text{Avg } VC_A - \text{Avg } VC_B) \times \sum_{i=1}^{n} Q_A$

$\text{Avg } VC_A = \sum_{i=1}^{n} VC_A \div \sum_{i=1}^{n} Q_A$;

Where VC_A is the actual variable cost of each source in Rs. Mn and Q_A is the corresponding energy in Mus for each source

$\text{Avg } VC_B = \sum_{i=1}^{n} VC_B \div \sum_{i=1}^{n} Q_B$

Where VC_B is the base variable cost of each source in Rs. Mn and Q_B is the corresponding energy in Mus for each source

(iii) REC = Cost of purchase of Renewable Energy Certificates in Rs. Mn

(iv) S.E = USO in Mus x (1- Approved Distribution loss)

12.0 The Commission directed GUVNL and DISCOMs on 14.06.2013 and TPL on 15.06.2013 through separate oral orders to invite suggestions/objections from public at large. Accordingly, the petitioners had given public notice in the news papers and hosted the petition on their websites.

13.0 The Commission received the suggestions/objections from three parties namely Gondal Chamber of Commerce & Industry, Consumer Education and Research Society and New Kandla Salt and Chemical Co. P. Ltd on GUVNL petition and from one party i.e. Utility Users' and Welfare Association on TPL petition.

14.0 Contentions of the objectors on GUVNL's petition are narrated below;

14.1 The Consumer Education and Research Society (CERS) stated that initially Gujarat had Fuel Cost Adjustment (FCA) formula which used to cover any increase in cost of fuel and thereafter, the Commission has introduced one more component i.e. Power Purchase Cost above the approved cost. The CERS further stated that the petitioner has purchased costlier power due to low Plant Load Factor (PLF) of Dhruvan and Ukai plant which is below 25% and also poor performance of Sikka and Kutch Lignite. The low generation of these plants has increased the cost to Rs.5 /Unit and violated merit order purchase of power and reduced its own generation and its share from Central Sector. This has put unjustified burden on its consumers.

CERS further stated that the petitioner has received inferior quality of grade coal which is having lower calorific value ranging from 20-30% which has resulted in increase in fuel consumption by more than 25%. The petitioner, in spite of receiving poor quality of coal, is paying for C and D grade of coal as per agreement. The amount of inefficiency of the petitioner is collected from consumers through FPPPA charges which are illegal and unjustified. The petitioner has collected nearly Rs.169 Crores form consumers in 2011-12 on account of receipt of inferior quality of coal through FPPPA formula.

CERS has further stated that the variation in fixed charges is considered by the Commission during true-up process, whereas the GUVNL wants it to be included in FPPPA formula; thus advancing the recovery of this component by two years. CERS requested the Commission to reject this proposal of recovery of fixed cost through FPPPA formula.

CERS contended that the petitioner has been considering the high Transmission and Distribution losses (T&D losses) as 22.67% instead of 19.33% for calculation of FPPPA charges. Thus, petitioner is overcharging consumers for additional T&D losses of 3.34%. CERS stated that two different yardsticks have been adopted by considering Transmission and distribution loss for GUVNL and by considering only distribution losses for Torrent Power Ltd.

14.2 The Gondal Chamber of Commerce & Industry requested to verify the CAG report of FY 2012-13 to gauge the financial health of petitioners and consider the formula accordingly.

14.3 The New Kandla Salt and Chemical Co. P. Ltd. requested to postpone the revised FPPPA formula till the ensuing petition for the truing up of FY 2013-14 and determination of tariff for FY 2014-15 to avoid any mismatch in the existing tariff structure

It is further stated that with an increase in tariff rates w.e.f. 01.04.2013, additional revenue of Rs. 1809 Crores is estimated for state owned DISCOMs and there is no apprehension of financial crunch. FPPPA is collected from consumers along with tariff, which adds the revenue of the licensees to balance the liquidity. Further, at every quarter FPPPA charges are revised based on the existing formula.

It is contended that due to high distribution losses, the power purchase cost has been increased

It is suggested that recovery of the fuel and power purchase cost should be done from year to year basis.

The objector has referred to the Section 62(4) of the Electricity Act,2003 which reads as "*No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year except in respect of any changes expressly permitted under the terms of any fuel surcharge as may be specified*". Based on this section, the objector requested to the Commission not to modify the scope of existing FPPPA formula.

15.0 Utility Users' Welfare Association (UUWA) submitted its view on TPL petition as under;

15.1 **The Utility Users' Welfare Association has stated that submission of the Torrent Power Limited(TPL) lacks clarity on the fuel supply agreements, action taken** by the licensee for violation of FSA and likewise for violation of PPA terms and **conditions from whom licensee has to purchase power for its consumers, lack of planning of upgradation of generating stations, delay in establishing new** generating stations, failure to discover power on either medium or long term on competitive rates. failure or intentionally or deliberately not following the standard practice for purchase of fuel at the competitive price with guaranteed calorific value in context with the price, failure to initiate litigation against railway and fuel suppliers for deficit in fuel in terms of quantity and quality.

It is further stated that the supply for SUGEN power plant in FY 2012-13 is only to the tune of 3547.89 MUs to Ahmedabad/Surat consumers which is only 59% of the total energy to be supplied as per PPA approved in petition No. 813/814 dated 23/12/2005. The SUGEN plant is supposed to supply 6000 MUs (75% of 1147.5 MW) to Ahmedabad/Surat for full fixed cost recovery. The consumers are burdened with the full recovery of fixed cost of the whole SUGEN plant even though the plant has not been able to generate at its capacity due to the non availability of the gas from the gas suppliers.

It is stated that the FPPPA formula is lacking in providing the evidence like invoice of fuel from the suppliers, bank statements of transactions, copy of correspondence, if any, between the fuel suppliers and generator or licensee in support of their attempt to get the fuel as per the terms and conditions of the FSA.

UUWA stated that the Commission is determining the power procurement price of the Distribution licensee from various sources with consideration of technical as well as financial parameters of the generating company and the same is allowed and considered as the part of the tariff determination.

The power procurement from various sources are approved by considering the electricity available from various sources like coal base, gas base, hydro, solar, wind, bio mass and other sources and also consideration of fuel, its cost, outage and R&M cost. Hence, no variation in the power procurement from the conventional fuel based power projects should be allowed by the Commission.

If prayer of the TPL is granted, the power procurement approved by the Commission in the tariff order becomes infructuous and distribution licensee will become free to procure power in variance in collusion with generator and the same will burden the consumers.

The variance in power procurement be allowed only in case where the generator is dependent on the natural sources like hydro, solar and wind power. In such cases, variance in power procurement may be allowed due to non availability of natural sources to the extent of shortfall in power procurement from such sources which is accepted at international level and other states of the country. UUWA contended that TPL has demanded that FPPPA formula by introducing Renewable Energy Certificate (REC) procurement as pass-through in FPPPA formula. REC is merely a certificate of electricity generation and cannot be categorized as electricity purchase. He has further stated that REC is not falling in the category of any kind of fuel or any variance of energy charges due to variation in GCV of cost of the fuel.

16.0 The petitioner GUVNL replied to the submission made by CERS, New Kandla Salt and Chemical Co. P. Ltd. and Gondal Chamber of Commerce & Industry stating that the issues raised by the objectors are misconceived and the present petition is only with regard to FPPPA formula specified by the Hon'ble Commission.

GUVNL further stated that issues regarding coal quality, plant load factor on account of gas non-availability are not adjudicated in the present proceedings and mentioned that they are purchasing electricity from approved sources/generators as per the regulated tariff approved by the Commission.

Further, GUVNL is considering only the approved T&D loss for calculation of FPPPA. GUVNL recovers only approved fixed cost in the applicability of tariff. GUVNL further stated that the power purchase cost includes both fixed and variable cost and any increase in the power purchase cost (from approved power purchase sources) during the year, needs to be recovered as part of FPPPA formula. The purpose of FPPPA formula is to ensure speedy recovery of cost at the same time not postponing the recovery in the future periods, not to put burden on future consumers.

GUVNL has stated that variation in the mix in power purchase occurs due to non-availability of electricity from one approved source while requiring them to procure the electricity from another approved source. The variation in power purchase cost is due to variation in power purchase mix. Hence, there is no rationale or justification to exclude the same from FPPPA formula for the approved power sources.

17.0 The petitioner TPL replied that they have long-term power purchase agreements from its own generation at regulated tariff and arranged for sourcing power on short-term basis to cater the demand of its consumers. These sources have been approved by the Commission in accordance with the provision of the Act. TPL has taken necessary action in accordance with the provisions of the agreements regarding breach of terms and conditions of the power purchase and fuel supply agreements with the concerned.

TPL submitted that SUGEN has been allocated gas from KG basin. During the past year the allocation of gas has been reduced by the Ministry of Power, GoI due to lower output of gas from KG basin. The cost of RLNG is higher and accordingly the cost of procuring the entire contracted quantum from SUGEN by running the plant on RLNG gas is costlier. TPL has further submitted that as per the commercial prudence, the petitioner has lowered the off take from SUGEN despite its availability on RLNG.

TPL further submitted that the existing formula includes the base price and performance parameters as approved by the Hon'ble Commission in the tariff order read with the GERC (MYT) Regulations,2011. TPL submitted that FPPPA calculation is in accordance with approved formula and the same is being certified by the Statutory Auditors of the Company. The existing procedure takes care of all relevant aspects and does not require any change in verification process of FPPPA submission.

18.0 We have gone through the submission made by the petitioners and objectors. One of the issues raised by the objectors is regarding consideration of T&D loss figure as per actual and not as per the approved in the tariff order. We find the argument of the objector reasonable and decided to consider the T&D loss figure at the lower of the figures of T&D loss approved and the figure of T&D loss of the year for which true up has been done by the Commission. The issue of performance of GSECL stations and variation in billed and received coal quality also is not a matter of the present petition. The contention of the objector regarding purchase of costlier power by backing down state generating stations have been dealt with by the Commission by conducting a study on implementation of merit order by GUVNL and found that the merit order is satisfactorily followed. Hence, the same issue is out of place. The FPPPA submissions are being placed by GUVNL and TPL on its website; hence, there is no issue of lack of transparency in the FPPPA calculations and submissions.

Further, the Tariff Policy provides to recover the uncontrollable cost, which is the power purchase cost for a distribution licensee as early as possible in order to protect the future consumers from the past cost. With the increasing trend for availing open access by the eligible consumers, it becomes more important that the uncontrollable cost should be fully recovered in the same year in which it occurred and should not be postponed to be recovered at the time of true up i.e. after two years of its occurrence. Some of the consumers, for whom costlier power is purchased in a particular year, may in the subsequent year(s) purchase power under open access from sources other than the distribution licensee. Thus delaying such recovery would amount to cross subsidization by other consumers by paying higher tariff. In sum and substance, it is in the wider interest of all the consumers to recover the variations in entire power purchase cost as early as possible.

The power purchase cost of a distribution licensee comprises of three elements namely; Fixed Cost of generating Units, Variable Cost of the generating Unit and Transmission Cost. Now let us look at the existing FPPPA formula, and check whether it addresses variations in all the three elements of power purchase cost of licensees or not. On analyzing the existing FPPPA formula and submission made by the petitioners, we agree that existing FPPPA formula is not suitable to the current scenario of dynamic power purchase portfolio of the utilities because of uncertain availability of gas, variations in foreign exchange rates and inclusion of cheaper power in the power basket. Due to change in purchase quantity of power from various sources, though from the approved sources only, there is significant variation, which may be upward or downward, in the power purchase variable cost compared to that approved, which do not gets captured in the existing FPPPA formula. Further, variations in fixed cost of power purchase from central sector is addressed in the existing FPPPA formula but variation in GSECL's fixed cost and variations in Transmission Cost are addressed in the true up of the DISCOMs. The Commission does not find any reason to keep the GSECL's fixed cost variation and Transmission Cost variation out of the ambit of FPPPA formula particularly when such costs are trued up by the Commission and allowed GSECL and Transmission Companies to claim from DISCOMs in the subsequent year. In order to allow variation in all the three elements of power purchase cost on quarterly basis, we find it reasonable to allow GSECL's fixed cost variation also at par with the treatment given to the central sector power purchase cost variation in case of GUVNL/DISCOMs and to allow Transmission Cost variation in case of GUVNL/DISCOMs and TPL under FPPPA mechanism.

Regarding proposal of TPL to include cost of REC in FPPPA formula, the Commission does not find it appropriate to consider the REC cost as an element to be incorporated under the FPPPA mechanism as it is merely a certificate and not energy.

19.0 In view of the above, the Commission approves the revised FPPPA formula as under;

FPPPA = [(PPCA – PPCB)] / [100-Loss in %]

Where,

(i) PPCA = is the average power purchase cost per unit of delivered energy (including transmission cost), computed based on the operational parameters approved by the Commission or principles laid down in the

Power Purchase Agreements in Rs. / KWh for all the generation sources as approved by the Commission while determining ARR and who have supplied power in the given quarter and transmission charges as approved by the Commission for transmission network calculated as total power purchase cost billed in Rs. Million divided by the total quantum of power purchase in Million Units made during the quarter.

(ii) PPCB = is the approved average base power purchase cost per unit of delivered energy (including transmission cost) for all the generating stations considered by the Commission for supplying power to the company in Rs. / KWh and transmission charges as approved by the Commission calculated as the total power purchase cost approved by the Commission in Rs. Million divided by the total quantum of power purchase in Million Units considered by the Commission.

(iii) Loss in % = is the weighted average of the approved level of Transmission and Distribution losses (%) for the four Discoms/GUVNL and TPL applicable for a particular quarter or actual weighted average in Transmission and Distribution losses (%) of four Discoms/GUVNL and TPL of the previous year for which true up have been done by the Commission, whichever is lower.

Foe any increase in FPPPA, worked out on the basis of above formula, beyond ten (10) paise per kWh in a quarter, prior approval of the Commission shall be necessary. And only on approval of such additional increase by the Commission, the FPPPA can be billed to the consumers.

This formula shall be applicable for the calculation of FPPPA w.e.f. Q1 FY 2013-14 and onwards for both GUVNL/Discoms and TPL. Other terms of

FPPPA order dated 25.06.2004 and minor changes introduced by the order dated 05.05.2006 for erstwhile GEB and now GUVNL/Discoms and order dated 31.07.2007 for TPL shall remain unchanged.

20.0 We order accordingly.

21.0 With this order the petitions are disposed of.

Sd/-
[Dr.M.K.IYER]
Member (Fin)

Sd/-
[PRAVINBHAI PATEL]
Member (Tech)

Place: Gandhinagar

Date: 29/10/2013

Annex - E

RAJASTHAN ELECTRICITY REGULATORY COMMISSION

NOTIFICATION
Jaipur, 24th February, 2014

No. RERC/Secy/Reg. 105- In exercise of the powers conferred on it under Section 61 read with Section 181 of the Electricity Act, 2003 (No. 36 of 2003), and all other powers enabling it in this behalf, the Rajasthan Electricity Regulatory Commission, after previous publication, hereby makes the following Regulations, namely:

Part I
Preliminary

1. Short title, Extent and Commencement

(1) These Regulations may be called as '**Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014**'.

(2) These Regulations shall extend to the whole of the State of Rajasthan. These Regulations shall be applicable for determination of tariff in cases covered under these Regulations from FY 2014-15, i.e., April 1, 2014 and onwards up to FY 2018-19, i.e., March 31, 2019:

Provided that these Regulations shall not be applicable for determination of tariff from captive generating plant and Renewable Energy Sources but shall be applicable for Mini & Micro Hydel Plants:

Provided further that for all purposes including the review matters pertaining to the period till FY 2013-14, i.e., upto March 31, 2014, the issues related to determination of tariff shall be governed by RERC (Terms and Conditions for Determination of Tariff) Regulations, 2004, or RERC (Terms and Conditions for Determination of Tariff) Regulations, 2009, including amendments thereto as the case may be.

(3) These Regulations shall come into force from 01.04.2014. However, for filing the petitions for FY 2014-15, these Regulations shall be deemed to have come into force from the date of publication of these Regulations in the official gazette.

2. Definitions

a) In these Regulations, unless the context otherwise requires:

(1) "Accounting Statements" means for each financial year, the following statements, namely:
- (i) balance sheet, prepared in accordance with the form contained in Part I of Schedule VI to the Companies Act, 1956 as amended from time to time;
- (ii) profit and loss account, complying with the requirements contained in Part II of Schedule VI to the Companies Act, 1956 as amended from time to time;
- (iii) cash flow statement, prepared in accordance with the Accounting Standard on Cash Flow Statement (AS-3) of the Institute of Chartered Accountants of India as amended from time to time;
- (iv) report of the statutory auditors';
- (v) cost records prescribed by the Central Government under Section 209(1) (d) of the Companies Act, 1956 as amended from time to time;

Wheeling charges may consist of the following or any one or combination thereof:
(a) Fixed charge in Rs. per month per KW of contracted power.
(b) A charge in Rs. per KWh of energy wheeled separately for
(i) Wire business
(ii) Installation, operation and maintenance of meters, metering system and any other equipment at consumer's premises.
(iii) Billing & collection of payment
(iv) Consumer services.
(c) Connectivity fee.
(d) Reactive energy charge / incentive

(4) While determining wheeling charges for open access customers, the total electricity wheeled on the licensees distribution system including his own shall be taken into account.

(5) The average technical losses for each voltage level shall be determined and considered in the determination of wheeling charges and distribution losses as applicable and be applicable in kind to the users of the distribution system of that voltage level.

(6) The distribution licensee shall work out the voltage wise asset allocation and losses within one year of coming into force of these regulations. This period could be extended by one more year, if commission, based on petition of licensee, is satisfied that such extension be given. The distribution licensee shall also give the basis of allocation of fixed costs to the different voltage levels, energy supplied at each voltage level and prevalent distribution losses at each voltage level in the petition for determination of wheeling charges:

Provided that for the first year of the control period or the extended period, as above, the Commission may determine the wheeling charges based on its assessment of the voltage-wise costs and losses.

87. Rebate/Surcharge mechanism

(1) Voltage Rebate
The Consumers availing electricity at higher voltage shall be entitled to receive suitable rebate, as stipulated by the Commission. The rebate mechanism for the ensuing year shall be stipulated in the retail supply tariff Order of that year.

(2) Advance payment and Pre-paid meter Rebate
The Commission shall consider suitable incentive mechanism for the consumers who make advance payment or avail electricity through pre-paid meters.

(3) Other Rebates/Surcharges and Incentives
The Commission shall consider suitable incentive/surcharge mechanism for the consumers for other matters like power factor, load factor, etc., as stipulated in the retail supply tariff Order of that year.

88. Fuel Surcharge

(1) The Fuel Surcharge (FS) chargeable by the Distribution Licensee from its consumers for any quarter, shall be computed as per the following formula:

$$FS = \frac{C}{E} \text{ Rs./ kWh}$$

Where

C (in Rs. Lakh) = {(Weighted Average Variable Cost of all sources of power purchase during previous quarter in Rs/kWh – Base Weighted Average Variable Cost of all sources of power purchase as approved under Tariff Order for the year under operation in Rs/kWh) x Corresponding Power Purchase from all sources during previous quarter in LU}

E (in Lakh Units) = Energy sold (metered plus estimated) during previous quarter.

Note:

(i) Quarter referred under this formula shall correspond to financial quarter (s) viz. Q1 (Apr. to Jun), Q2 (Jul to Sept), Q3 (Oct to Dec), and Q4 (Jan to Mar).

(ii) The variation in power purchase cost due to Unscheduled Interchange and Hydro based generation and other unapproved purchases shall not be covered under fuel surcharge adjustment.

(iv) For the generation stations/power purchase sources, which have single part tariff, 1/3 of the tariff shall be considered as fixed charge and 2/3 of the tariff shall be considered as energy charge for adjustment under this formula.

(v) The cost and quantum of power purchase shall be based on bills paid/credits received during the previous quarter irrespective of period to which it pertains and shall include arrears or refunds, if any, for previous period, not considered earlier.

(2) The rate of Fuel Surcharge shall be worked out in Rs./kWh rounded off to the next second decimal place.

(3) The Fuel Surcharge per unit for any quarter shall not exceed 10% of weighted average power purchase cost approved by the Commission, or such other ceiling as may be stipulated by the Commission from time to time.

(4) The total Fuel Surcharge recoverable, as per the formula specified above, shall be recovered from the actual sales and in case of un-metered consumers, it shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission.

89. Cross subsidy

(1) The average cost of supply and realization from a category of consumer shall form the basis of estimating the extent of cross subsidy for that consumer category.

(2) The Commission shall endeavour to determine the tariff in such a manner that it progressively reflects the average cost of supply and the extent of cross subsidy to any consumer category is within maximum range of +/- 20% of average cost of supply:

Provided that consumers below poverty line who consume below specified level say 50 units per month may receive special support through cross-subsidy. Tariff for such designated group of consumers shall be at least 50% of the average cost of supply.

90. Cross-subsidy Surcharge

0175-2224168 (11) Kind attention CE/ARR & TR 19

CAO/TR F 13/8/15

PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SCO NO. 220-221, SECTOR 34-A, CHANDIGARH

Petition No. 37 of 2015
Date of hearing: 04.08.2015
Date of Order: 05.08.2015

Present: Smt.Romila Dubey, Chairperson
Shri Gurinder Jit Singh, Member

In the matter of: Petition for approval of Change of Regulation for Fuel Cost Adjustment (FCA) Surcharge Formula.

AND

In the matter of: Punjab State Power Corporation Limited, F-4, Shakti Vihar, Patiala-147001.

------Petitioner

For petitioner: Shri J.P.S.Trehan, SE/TR-2
CA Shri Madhav Gupta, CAO/TR (F)
Shri D.S.Sidhu, Addl.SE/TR-5
Shri Sukhwinder Singh, Sr.XEN/TR-2

ORDER

PSPCL was directed to file a revised petition vide Order dated 15.07.2015. PSPCL has filed revised petition vide C.E./ARR & TR memo No.2360 dated 28.07.2015.

After hearing PSPCL briefly, the Commission directed it to file within a week a statement showing comparison of Fuel and Power Purchase Price Adjustment Formulae of at least five / six State Electricity Regulatory Commissions of the States for scrutiny and consideration by the Commission.

The petition shall be taken up on 18.08.2015 at 11.30 A.M.

(Gurinder Jit Singh)
Member

(Romila Dubey)
Chairperson

Chandigarh
Dated: 05.08.2015

Authenticated
Registrar
Punjab State Electricity Regulatory Commission
Chandigarh