UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

'Vidyut Niyamak Bhawan', Near I.S.B.T., P.O.-Majra, Dehradun-248171

Coram

Shri Subhash Kumar Chairman

Statement of Reasons for Draft UERC (Terms and Conditions for Determination of Multi Year Tariff) (Second Amendment) Regulations, 2017

Statement of Reasons

The Commission had issued UERC (Terms and Conditions for Determination of Multi Year Tariff) Regulations, 2015 (hereinafter referred to as "Principal Regulations" or "UERC Tariff Regulations, 2015") vide notification dated September 10th, 2015.

Since the Principal Regulations had not specified O&M expenses for F-Class machines, accordingly, the Commission incorporated norms for O&M expenses for F-class machine in respect of Open Cycle Gas Turbine/Combined Cycle generating stations by issuance of amendment to the Principal Regulations as first amendment vide notification dated 18.01.2017.

The Commission has observed that incentive, to be recovered from the licensee, has been allowed twice inadvertently vide Regulation 49 (2) and Regulation 49 (4) of UERC Tariff Regulations, 2015.

With regard to computation and payment of Annual Fixed Charges (inclusive of incentive) for Thermal Generating station, clause (2) of Regulation 49 of UERC Tariff Regulations, 2015 provides that AFC shall be recoverable based on the availability of the plant in relation to normative availability. The Regulations 49 (2) specifies as follows:

"(2) The capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

AFC 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
NDY = Number of days in the year
PAFM = Plant availability factor achieved during the month, in percent:

Provided that in case of generating station or unit thereof or transmission system or an element thereof, as the case may be, under shutdown due to Renovation and Modernisation, the generating

company or the transmission licensee shall be allowed to recover part of AFC which shall include O&M expenses and interest on loan only."

It can be seen from the above stated formula in Regulation 49 (2) of UERC Tariff Regulation, 2015, in case the actual plant availability factor during the month is more than the normative plant availability factor during the month, the generator will be incentivised by way of excess recovery over and above the approved Annual Fixed Charges.

Further, clause (4) of Regulation 49 of UERC Tariff Regulations, 2015 provides for incentive @ 50 paisa/kWh to a generating station or unit thereof based on the energy generated by it in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor as specified in Regulation 47 (2). The Regulation 49 (4) specifies as follows:

"Incentive to a generating station or unit thereof shall be payable at a flat rate of 50 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in Regulation 47(2)."

The Commission has also gone through the CERC Tariff Regulations, 2014 and observes that the Central Commission has put a ceiling limit on the recovery of the Annual Fixed Charges based on the availability factor and allows the incentive only on energy generated in excess of the ex-bus energy corresponding to the specified Normative Annual Plant Load Factor (NAPLF). Regulation 30 (2) of CERC Tariff Regulations, 2014 provides as follows:

"The capacity charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

$CC_1 = (AFC/12)\ (PAF_1 / NAPAF)$ *subject to ceiling of* $(AFC/12)$

$CC_2 = (AFC/6)\ (PAF_2 / NAPAF)$ *subject to ceiling of* $((AFC/6) - CC_1)$

$CC_3 = (AFC/4)\ (PAF_3 / NAPAF)$ *subject to ceiling of* $((AFC/4) - (CC_1+CC_2))$

$CC_4 = (AFC/3)\ (PAF_4 / NAPAF)$ *subject to ceiling of* $((AFC/3) - (CC_1+CC_2+CC_3))$

$CC_5 = (AFC\ x\ 5/12)\ (PAF_5 / NAPAF)$ *subject to ceiling of* $((AFC\ x\ 5/12) - (CC_1+CC_2+CC_3+CC_4))$

$CC_6 = (AFC/2)\ (PAF_6 / NAPAF)$ *subject to ceiling of* $((AFC/2) - (CC_1+CC_2+CC_3+CC_4+CC_5))$

$CC_7 = (AFCx7/12)\ (PAF_7/NAPAF)$ *subject to ceiling of* $((AFCx7/12)-(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6))$

$CC_8 = (AFCx2/3)\ (PAF_8/NAPAF)$ *subject to ceiling of* $((AFCx2/3)-(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7))$

$CC_9 = (AFCx3/4)\ (PAF_9/NAPAF)$ *subject to ceiling of* $((AFCx3/4))-(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8))$

CC_{10} = (AFCx5/6) (PAF_{10}/NAPAF) subject to ceiling of ((AFCx5/6)–(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9))

CC_{11} = (AFCx11/12) (PAF_{11}/NAPAF) subject to ceiling of ((AFCx11/12)–(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9+CC_{10}))

CC_{12} = (AFC) (PAF_Y/NAPAF) subject to ceiling of ((AFC)–(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9+CC_{10}+CC_{11}))

Provided that in case of generating station or unit thereof or transmission system or an element thereof, as the case may be, under shutdown due to Renovation and Modernisation, the generating company or the transmission licensee shall be allowed to recover part of AFC which shall include O&M expenses and interest on loan only.

Where,

AFC = Annual fixed cost specified for the year, in Rupees.

NAPAF = Normative annual plant availability factor in percentage.

PAF_N = Percent Plant availability factor achieved upto the end of the nth month.

PAF_Y = Percent Plant availability factor achieved during the Year

CC_1, CC_2, CC_3, CC_4, CC_5, CC_6, CC_7, CC_8, CC_9, CC_{10}, CC_{11} and CC_{12} are the Capacity Charges of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th months respectively."

Further, Regulation 30(4) of CERC Tariff Regulations, 2014 provides as follows:

"(4) Incentive to a generating station or unit thereof shall be payable at a flat rate of 50 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in regulation 36 (B)"

Incentives in case of thermal generation stations should ideally be linked to generation or the PLF instead of Availability as it has been observed that mere availability of the station does not lead to commensurate benefit to the beneficiaries. However, the purpose of linking recovery of full fixed charges linked to the target availability is that the generator also ensures recovery of its Fixed charges if its machines are available. If the distribution companies are required to pay incentives beyond the target availability without receiving power, the same will lead to increased average cost of power purchase of the distribution licensees. Further, in case incentive is linked to PAF, it will not incentivise the generator to optimise the procurement of fuel from alternate sources in case of shortage. Accordingly, the Commission is therefore, of the view that as the PLF of thermal station have reduced considerably now-a-days due to fuel supply constraints or despatch restriction by Discoms and incentive linked to PAF will lead to payment of

incentives to generators even when PLF is much below the NAPAF, it will result in loading of such cost to energy purchase thereby increasing the per unit cost of power. Moreover, if the incentives are linked with the plant availability, even if the generating station is not scheduled to provide electricity, the beneficiaries will be bound to make payment of incentives in addition to payment of entire fixed cost without receiving any power from the generating station leading to loss to the beneficiaries. The Commission has, therefore, decided to correct the anomaly in the Principal Regulations where the generators are getting incentivised twice by way of PAF and also by PLF. Accordingly, to remove the anomaly, the Commission is of the view to replace the existing Regulation 49(2) of UERC Tariff Regulation 2015 with the following:

"The capacity charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

$CC_1 = (AFC/12)\ (PAF_1 / NAPAF)$ *subject to ceiling of* $(AFC/12)$

$CC_2 = (AFC/6)\ (PAF_2 / NAPAF)$ *subject to ceiling of* $((AFC/6) - CC_1)$

$CC_3 = (AFC/4)\ (PAF_3 / NAPAF)$ *subject to ceiling of* $((AFC/4) - (CC_1+CC_2))$

$CC_4 = (AFC/3)\ (PAF_4 / NAPAF)$ *subject to ceiling of* $((AFC/3) - (CC_1+CC_2+CC_3))$

$CC_5 = (AFC\ x\ 5/12)\ (PAF_5 / NAPAF)$ *subject to ceiling of* $((AFC\ x\ 5/12) - (CC_1+CC_2+CC_3+CC_4))$

$CC_6 = (AFC/2)\ (PAF_6 / NAPAF)$ *subject to ceiling of* $((AFC/2) - (CC_1+CC_2+CC_3+CC_4+CC_5))$

$CC_7 = (AFCx7/12)\ (PAF_7/NAPAF)$ *subject to ceiling of* $((AFCx7/12)-(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6))$

$CC_8 = (AFCx2/3)\ (PAF_8/NAPAF)$ *subject to ceiling of* $((AFCx2/3)-(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7))$

$CC_9 = (AFCx3/4)\ (PAF_9/NAPAF)$ *subject to ceiling of* $((AFCx3/4))-(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8))$

$CC_{10} = (AFCx5/6)\ (PAF_{10}/NAPAF)$ *subject to ceiling of* $((AFCx5/6)- (CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9))$

$CC_{11} = (AFCx11/12)\ (PAF_{11}/NAPAF)$ *subject to ceiling of* $((AFCx11/12)-(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9+CC_{10}))$

$CC_{12} = (AFC)\ (PAF_Y/NAPAF)$ *subject to ceiling of* $((AFC)-(CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9+CC_{10}+CC_{11}))$

Provided that in case of generating station or unit thereof or transmission system or an element thereof, as the case may be, under shutdown due to Renovation and Modernisation, the generating company or the transmission licensee shall be allowed to recover part of AFC which shall include

O&M expenses and interest on loan only.

Where,

AFC = Annual fixed cost specified for the year, in Rupees.

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PAF_Y = Percent Plant availability factor achieved during the Year

CC_1, CC_2, CC_3, CC_4, CC_5, CC_6, CC_7, CC_8, CC_9, CC_{10}, CC_{11} and CC_{12} are the Capacity Charges of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th months respectively. "

By the order of the Commission

(Neeraj Sati)
Secretary