FW: NTPL - Comments on "Methodology for Computing Deterrent Charges for maintaining lower coal stock"

From : Harpreet Singh Pruthi <secy@cercind.gov.in>   Fri, May 27, 2022 06:24 PM

Subject : FW: NTPL - Comments on "Methodology for Computing   📎1 attachment
Deterrent Charges for maintaining lower coal stock"

To : Sunil Kumar Jain <sunil_jain@nic.in>

Cc : sushanta chat <sushanta_chat@yahoo.com>

From: DGM EEMG NTPL <>
Sent: 27 May 2022 17:08
To: Harpreet Singh Pruthi <secy@cercind.gov.in>
Subject: NTPL - Comments on "Methodology for Computing Deterrent Charges for maintaining lower coal stock"

Sir,

Please find enclosed the comments on "Methodology for Computing Deterrent Charges for maintaining lower coal stock" in respect of NLC Tamilnadu Power Limited, 2 x 500 MW Thermal Power Plant, Tuticorin, Tamilnadu.

Regards,

DGM (EEMG)
NLC TAMILNADU POWER LIMITED (NTPL)
2x500 MW THERMAL POWER PLANT
TUTICORIN - 628 004.

📄 **NTPL_Signed Comments on Deterrent Charges computation.pdf**
628 KB

26-05-2022

COMMENTS ON "METHODOLOGY FOR COMPUTING 'DETERRENT CHARGES' FOR MAINTAINING LOWER COAL STOCK BY COAL BASED THERMAL GENERATING STATIONS"

I: Background

3. As per the revised coal stocking norms, coal-based pit-head thermal power plants are required to maintain coal stock in the range of 12 days to 17 days, depending on the month of the year, as against prevailing coal stock norm of 15 days. Power plants situated away from the mines i.e., the non-pit head plants are required to maintain coal stock in the range of 20 days to 26 days compared to the prevailing coal stock norms of 20 days to 30 days. The revised coal stocking norms specified by the CEA are as under:

Month	Coal Stock to be maintained by the power plant during the month (in number of days)	
April	17	26
May	17	26
June	17	26
July	14	22
August	13	21
September	12	20
October	13	21
November	14	22
December	15	23
January	16	24
February	17	26
March	17	26

NTPL Comments on I: Background

NTPL (2 x 500 MW) coal based thermal power plant is a non-pit head power plant located in Tuticorin, Tamilnadu and is far away from the sources of coal. NTPL is getting Low Gross Calorific Value (LGCV) Coal from Mahanadhi Coalfields Limited (MCL), Odisha and Talabira II & III OCP Mines, NLCIL, Odisha.

NTPL is getting coal from Talabira II & III OCP Mines of NLCIL through **Road cum Rail cum Sea mode via Paradip Port to NTPL, Tuticorin**. Due to weather conditions prevailing in the mines area, it is challenging to move coal from mines to railway siding by road. Construction of own railway siding from Talabira II & III OCP to Paradip Port is under progress. Hence, private railway siding is used for moving coal to Paradip Port with minimum handling capacity of rakes. Due to insufficient rake allotment by East Coast Railways (ECoR), Odisha, NTPL is striving hard to move the coal to Paradip Port.

NTPL is getting coal from MCL through **Rail cum Sea Mode**. NTPL is giving monthly coal request to MCL and MCL allots coal according to production/availability in mines. Rakes are allotted by ECoR to move the coal allotted by MCL from different collieries/mines to Paradip port, Odisha. Due to non-availability of rakes, Railways is not providing the daily intended rakes for NTPL to materialize the 100% coal quantity allotted by MCL.

Also, for movement of coal from Paradip Port to NTPL, logistic contractors are facing many constraints like weather forecasting, cyclone, pandemic situations, fleet of vessel for berthing, delay in berthing and placement of vessels at Paradip Port which in turn affects the movement of coal.

Besides all our efforts to maintain coal stock as per CEA norms and supply continuous power to our beneficiaries, NTPL is suffering under-recovery of capacity charges on coal shortage due to the reasons mentioned above. In this situation, levy of additional reduction in capacity charges will severely affect the financials of our company.

III: The Proposed Methodology

7. ……….. Accordingly, the following provision is proposed to be inserted after Regulation 42 (7) of the 2019 Tariff Regulations.

Regulation 42 (8)

(i) In case, the Plant Availability in any month is short by more than 5% but up to 25% of NAPAF and average coal stock availability for the last three months (month for which reduction in capacity charges are computed and two months preceding that month) is lower than the average coal stock norms specified by CEA for the respective three months:

a) The reduction in capacity charges for the month for thermal plants designed on domestic coal =

$$0.2 \ x \ AFC_{Month} \ x \ \left(1 - \frac{PAFM_{\ Actual}}{PAFM_{\ NAPAF}}\right) x \left(1 - \frac{Averge \ coal \ Stock \ for \ last \ three \ months \ in \ no. \ of \ days}{Average \ Coal \ Stock \ for \ last \ three \ months \ in \ no. \ of \ days \ as \ per \ CEA}\right)$$

(ii) In case, the Plant Availability in any month is short by more 25% and average coal stock availability for the last three months (month for which reduction in capacity charges are computed and two months preceding that month) is lower than the average coal stock norms specified by CEA for the respective months:

b) The reduction in capacity charges for the month for thermal plants designed on domestic coal =

$$AFC_{Month} \ x \ \left(1 - \frac{PAFM_{\ Actual}}{PAFM_{\ NAPAF}}\right) x \left(1 - \frac{Averge \ coal \ Stock \ for \ last \ three \ months \ in \ no. \ of \ days}{Average \ Coal \ Stock \ for \ last \ three \ months \ in \ no. \ of \ days \ as \ per \ CEA}\right)$$

Where,

AFC_{Month} = AFC determined for respective month as per NAPAF

$PAFM_{NAPAF}$ = Normative Monthly availability as per regulations (NAPAF)

$PAFM_{Actual}$ = Monthly availability as per declared capacity

NTPL Comments on III: The Proposed Methodology (7)

i. NTPL (2 x 500 MW) coal based thermal power plant is using Low Gross Calorific Value (LGCV) and High Gross Calorific Value (HGCV) Coals for its daily generation in optimum blending ratio based on the coal stock

LGCV Coal	:	Talabira II & III OCP, Odisha
		Mahanadi Coalfields Limited (MCL)
HGCV coal	:	Import Coal
		Eastern Coalfields Limited (ECL)

For plants like NTPL using different varieties of coal with different GCVs, **monitoring mechanism for maintenance of coal stock** and the methodology for computing **Actual Coal Stock in Number of days for each month** for calculating reduction in capacity charges for the month and may be clarified.

ii. The Actual Monthly Availability as per declared capacity i.e., $PAFM_{Actual}$ defined in the proposed methodology covers the shortfall in availability due to coal stock and reasons other than low coal stock viz., Planned Outage, Forced Outage and Partial Loss.

In case, the Plant Availability in any month is short by more than 5% due to reasons other than coal stock and also the average coal stock is lower by one day than the norms specified by CEA, **the impact of deterrent charges on fixed cost will be very high** which is not justifiable.

Also, the period for computation of Average Coal Stock is not clear (quarterly basis/last three months). As per CEA, determination of deterrent charges payable for non-maintenance of coal stock is on **quarterly basis**. But in the proposed methodology, it is mentioned as average coal stock availability for **last three months** (month for which reduction in capacity charges are computed and two months preceding that month). Hence, the period of computation of average coal stock to be clarified.

However, for illustration, the period of computation of average coal stock is taken on quarterly basis.

Illustration 1

Considerations:

a) Plant designed on domestic coal

b) **Period of computation of Average Coal Stock - Quarterly basis (Q1)**

c) $PAFM_{Actual}$, NAPAF, Coal Stock Availability & Norms as follows

Month	$PAFM_{NAPAF}$ %	$PAFM_{Actual}$ %	Coal Stock Norms as per CEA (Number of Days)	Actual Average Coal Stock (Number of Days)	Reasons
April	85.00	80.50	26	25	$PAFM_{Actual}$< $PAFM_{NAPAF}$ due to Coal Stock

May	85.00	79.00	26	25	PAFM$_{Actual}$< PAFM$_{NAPAF}$ due to Forced Outage of Unit on Boiler Tube Leakage
June	85.00	50.00	26	25	PAFM$_{Actual}$< PAFM$_{NAPAF}$ due to Planned Outage of one Unit (30 days) for Annual Maintenance Works
Average			**26**	**25**	

a) **Computation of reduction in capacity charges for the month of April**

The shortfall in availability of plant in April = $(\frac{0.85-0.805}{0.85})$ = 5.29%

The shortfall is more than 5% but less than 25% due to Coal Stock. Considering AFC allowed for the month of April as ₹ 90.85 Crore, the reduction in capacity charges for the month of April as per proposed methodology is

= $0.2 \ x \ 90.85 \ x \ (\frac{26-25}{26}) \ x \ (\frac{0.85-0.805}{0.85})$ = ₹ 0.037 Crore = **₹ 3.70 Lakhs**

The shortfall in PAF is attributable to Coal Stock. Hence, **the deterrent charge computed for shortfall in availability of plant is attributable to Coal Stock only**.

b) **Computation of reduction in capacity charges for the month of May**

The shortfall in availability of plant in May = $(\frac{0.85-0.79}{0.85})$ = 7.06%

The shortfall is more than 5% but less than 25% due to forced outage on Boiler Tube Leakage. Considering AFC allowed for the month of May as ₹ 90.85 Crore, the reduction in capacity charges for the month of May as per proposed methodology is

= $0.2 \ x \ 90.85 \ x \ (\frac{26-25}{26}) \ x \ (\frac{0.85-0.79}{0.85})$ = ₹ 0.0493 Crore = **₹ 4.93 Lakhs**

In this case, one-day reduction in average coal stock will not have any impact on PAF of the Plant. **The shortfall in PAF is attributable to forced outage on Boiler Tube Leakage only. Hence, the deterrent charge computed for shortfall in availability of plant is not due to Coal Stock.**

c) **Computation of reduction in capacity charges for the month of June**

The shortfall in availability of plant in June = $\left(\frac{0.85-0.50}{0.85}\right)$ = 41.18%

The shortfall is more than 25% due to planned outage. Considering AFC allowed for the month of June as ₹ 90.85 Crore, the reduction in capacity charges for the month of June as per proposed methodology is

= $90.85 \times \left(\frac{26-25}{26}\right) \times \left(\frac{0.85-0.50}{0.85}\right)$ = **₹ 1.44 Crore**

In the above case, one-day reduction in average coal stock will not have any impact on PAF of the Plant. **The shortfall in PAF is attributable to planned outage only. Hence**, **the deterrent charge computed for shortfall in availability of plant is not due to Coal Stock**.

Illustration 2

a) Plant designed on domestic coal

b) **Period of computation of Average Coal Stock - Quarterly basis (Q2)**

c) $PAFM_{Actual}$, NAPAF, Coal Stock Availability & Norms as follows

Month	$PAFM_{NAPAF}$ %	$PAFM_{Actual}$ %	Coal Stock Norms as per CEA (Number of Days)	Actual Average Coal Stock (Number of Days)	Reasons
July	85.00	85.00	22	22	-
August	85.00	76.50	21	18	$PAFM_{Actual}$< $PAFM_{NAPAF}$ due to Coal Stock and Forced outage on Boiler Tube Leakage
September	85.00	62.00	20	16	$PAFM_{Actual}$< $PAFM_{NAPAF}$ due to Coal Stock and Forced outage on Boiler Tube Leakage
Average			**21**	**19**	

a) **Computation of reduction in capacity charges for the month of August**

The shortfall in availability of plant in August = $\left(\frac{0.85-0.765}{0.85}\right)$ = 10.00%

The shortfall is more than 5% but less than 25% due to Coal Stock and Forced Outage on Boiler Tube Leakage. Considering AFC for the month of August as ₹ 90.85 Crore, the reduction in capacity charges for the month of August as per proposed methodology is

$$= 0.2 \ x \ 90.85 \ x \ \left(\frac{21-19}{21}\right) \ x \ \left(\frac{0.85-0.765}{0.85}\right) = ₹ \ 0.1730 \ \text{Crore} = ₹ \ \textbf{17.30 Lakhs}$$

b) Computation of reduction in capacity charges for the month of September

The shortfall in availability of plant in September = $\left(\frac{0.85-0.62}{0.85}\right)$ = 27.06%

The shortfall is more than 25% due to Coal Stock and Forced Outage on Boiler Tube Leakage. Considering AFC for the month of September as ₹ 90.85 Crore, the reduction in capacity charges for the month of September as per proposed methodology is

$$= 90.85 \ x \ \left(\frac{21-19}{21}\right) \ x \ \left(\frac{0.85-0.62}{0.85}\right) = ₹ \ \textbf{2.34 Crore}$$

In the above cases, **deterrent charge is computed for shortfall in availability of plant due to Coal Stock and also Forced Outage on Boiler Tube Leakage.**

- Shortfall in Plant Availability (PAF) due to Coal Stock, Forced Outage on Boiler Tube Leakage etc., and Planned Outage are being accounted in computation of Annual Fixed Cost Recovery as per existing CERC Regulations.

- **In the proposed methodology, the additional reduction in capacity charges i.e., deterrent charge calculated for shortfall in Plant Availability is not attributable to only coal stock.**

for NLC Tamilnadu Power Limited

26.05.22

General Manager
Operation & Maintenance