सत्यमेव जयते

भारत सरकार
Government of India
विद्युत् मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
तापीय परियोजना योजना एवं विकास प्रभाग
Thermal Project Planning & Development Division

No. 219/GC/BO/TPPD/CEA/2021/224 Date: 20.07.2021

To,
As per Distribution List

Sub: Norms for Annual Contracted Quantity (ACQ) for Thermal Power Plants to be effective from 14.07.2021– reg.

Ministry of Power vide its letter no. FU-5/2019-IPC dated 14.07.2021 had approved the recommendations of the Committee constituted to recommend revised Coal Consumption Norms on account of various factors.

The committee had recommended that the present Coal Consumption Norms for different grades of coal are specific to particular design of the unit and have been worked out to ascertain quantity of coal required in a boiler on "as fired basis". However, while calculating the Annual Contracted Quantity (ACQ), losses of heat value of coal occurring in between loading point and coal firing point should be considered additionally to the present Norms of Coal Consumption and thus, there should be separate norms of ACQ that will specify the raw coal quantity to be supplied to a power plant considering various losses.

Based on the approval of MoP, the separate Norms for Annual Contracted Quantity (ACQ) providing the normative requirement of raw coal to be supplied to a power plant are hereby specified for two categories viz. (a) for Pit head Thermal Power Plants, and (b) for Non-pit head Thermal Power Plants. A copy of these ACQ Norms is enclosed at *Annexure*.

These Norms will come into effect from 14th July, 2021 with applicability for all future ACQ determination.

Encl.: As stated above

MP Singh 20/7/2021

(M. P. Singh)
Chief Engineer

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Central Electricity Authority
TPP&D Division

The Normative Coal Requirement for different sizes of Pit head Thermal Power Plants for determination of ACQ w.e.f. 14.07.2021

Grade	GCV Considered (kcal/kg)[1]	Adjusted GCV after considering effect of Total Moisture* (kcal/kg)	Sub Critical Technology				Supercritical units $
			Less than 100 MW	100 MW to less than 200 MW	200 MW to less than 250 MW **	250 MW and above$	
			Unit Heat Rate (kcal/kWh)[1]				
			2600	2600	2500	2375	2250
			Annual Coal Requirement at 85% PLF (Tonnes per MW per Annum)				
G1	6915	6569	2953	2953	2839	2697	2555
G2	6615	6284	3087	3087	2968	2820	2671
G3	6315	5999	3234	3234	3109	2954	2798
G4	6015	5714	3395	3395	3264	3101	2938
G5	5715	5429	3573	3573	3436	3264	3092
G6	5415	5144	3771	3771	3626	3445	3263
G7	5115	4859	3992	3992	3839	3647	3455
G8	4815	4574	4241	4241	4078	3874	3670
G9	4515	4289	4523	4523	4349	4131	3914
G10	4215	4004	4845	4845	4658	4425	4193
G11	3915	3719	5216	5216	5015	4765	4514
G12	3615	3434	5649	5649	5432	5160	4888
G13	3315	3149	6160	6160	5923	5627	5331
G14	3015	2864	6773	6773	6513	6187	5861
G15	2715	2579	7522	7522	7232	6871	6509
G16	2415	2294	8456	8456	8131	7724	7318
G17	2115	2009	9656	9656	9284	8820	8356

[1] *As per Norms of Coal Consumption issued by CEA on 27.03.2019, GCV considered includes storage loss of 85 kcal/kg as prescribed by CERC in its Tariff Regulations 2019*

*Adjusted GCV in above table has been calculated as follows:

Adjusted GCV= GCV Considered – {5% GCV Loss due to difference between GCV(ARB) & GCV(EQ)}

Reconciliation of final coal quantity shall be carried out as per actual data regarding Equilibrated Moisture (%EM) and Total Moisture (%TM) provided by third party sampler using following formula:

$$GCV\ (TM) = GCV\ (EM)\ x \frac{(1 - TM)}{(1 - EM)}$$

** In case, Main Steam pressure is 150 ata or above, the Unit Heat Rate shall be reduced by 100 kcal/kWh

$ In case of units having Motor Driven Boiler Feed Pump (MDBFP) of 500 MW and above size units (including Super Critical units), the unit heat rate shall be reduced by 50 kcal/kwh

Note:

1. The above norms include Transit Loss as 0.2%. Further, prevailing transit loss will be applicable as per future CERC Tariff Regulations.
2. In case of power projects where approved heat rate by the Regulator is higher than the above considered value, the Heat Rate approved by the Regulator would be considered with upper ceiling of 2600 kcal/kwh.
3. ACQ for the current year may be further adjusted on the basis of Grade Variation data for Q1, Q2 and Q3 of previous year.
4. The above mechanisms for Moisture/Grade correction will have no tariff implications and no performance incentive to be levied by the Coal Companies for supplying the additional quantity due to any variation
5. These Norms will be applicable for Captive Power Plants also.

Central Electricity Authority
TPP&D Division

The Normative Coal Requirement for different sizes of Non-Pit head Thermal Power Plants for determination of ACQ w.e.f. 14.07.2021

Grade	GCV Considered (kcal/kg)[1]	Adjusted GCV after considering effect of Total Moisture* (kcal/kg)	Sub Critical Technology				Supercritical units $
			Less than 100 MW	100 MW to less than 200 MW	200 MW to less than 250 MW **	250 MW and above $	
			Unit Heat Rate (kcal/kWh)[1]				
			2600	2600	2500	2375	2250
			Annual coal consumption at 85% PLF (Tonnes per MW per Annum)				
G1	6915	6569	2971	2971	2856	2714	2571
G2	6615	6284	3105	3105	2986	2837	2687
G3	6315	5999	3253	3253	3128	2971	2815
G4	6015	5714	3415	3415	3284	3120	2955
G5	5715	5429	3594	3594	3456	3283	3111
G6	5415	5144	3794	3794	3648	3465	3283
G7	5115	4859	4016	4016	3862	3669	3476
G8	4815	4574	4266	4266	4102	3897	3692
G9	4515	4289	4550	4550	4375	4156	3937
G10	4215	4004	4874	4874	4686	4452	4218
G11	3915	3719	5247	5247	5045	4793	4541
G12	3615	3434	5683	5683	5464	5191	4918
G13	3315	3149	6197	6197	5959	5661	5363
G14	3015	2864	6814	6814	6552	6224	5896
G15	2715	2579	7567	7567	7276	6912	6548
G16	2415	2294	8507	8507	8180	7771	7362
G17	2115	2009	9714	9714	9340	8873	8406

[1] *As per Norms of Coal Consumption issued by CEA on 27.03.2019, GCV considered includes storage loss of 85 kcal/kg as prescribed by CERC in its Tariff Regulations 2019*

*Adjusted GCV in above table has been calculated as follows:

Adjusted GCV= GCV Considered – {5% GCV Loss due to difference between GCV(ARB) & GCV(EQ)}

Reconciliation of final coal quantity shall be carried out as per actual data regarding Equilibrated Moisture (%EM) and Total Moisture (%TM) provided by third party sampler using following formula:

$$GCV\ (TM) = GCV\ (EM)\ x \frac{(1 - TM)}{(1 - EM)}$$

** In case, Main Steam pressure is 150 ata or above, the Unit Heat Rate shall be reduced by 100 kcal/kWh

$ In case of units having Motor Driven Boiler Feed Pump (MDBFP) of 500 MW and above size units (including Super Critical units), the unit heat rate shall be reduced by 50 kcal/kwh

Note:

1. The above norms include Transit Loss as 0.8%. Further, prevailing transit loss will be applicable as per future CERC Tariff Regulations.
2. In case of power projects where approved heat rate by the Regulator is higher than the above considered value, the Heat Rate approved by the Regulator would be considered with upper ceiling of 2600 kcal/kwh.
3. ACQ for the current year may be further adjusted on the basis of Grade Variation data for Q1, Q2 and Q3 of previous year.
4. The above mechanisms for Moisture/Grade correction will have no tariff implications and no performance incentive to be levied by the Coal Companies for supplying the additional quantity due to any variation
5. These Norms will be applicable for Captive Power Plants also.