

**Summary of the comments and suggestions received on Approach Paper on Terms and Conditions of Tariff Regulations for the tariff period 1.4.2014 to 31.3.2019**

(Ref No. 20/2013/CERC/Fin(Vol-I)/Tariff Reg/CERC Date: 25<sup>th</sup> June'2013)

**5.2.4 Normative Annual Plant Availability**

The Comments are invited in regard to following issues, namely\_

- a) Whether the existing norms of annual plant availability should be reviewed for thermal generating station considering the scenarios with and without fuel shortage? What should be the treatment of normative availability in the event of procuring alternative fuel in case of shortage condition?*

**Comments/suggestions:**

<b>Sr. No.</b>	<b>Name of organization/ stakeholders</b>	<b>Comments/ Suggestions</b>
<b>A) Autonomous Bodies (JERCs/SERCs/Other Commissions)</b>		
A.1	Rajasthan Electricity Regulatory Commission	If there is fuel shortage not enabling a generating station to achieve normative availability, then loss of availability may be added to determine fixed charges (and not incentive). However, it will be difficult to determine such norm because the reduction in stock of fuel generating station starts reduces generation and there is difficulty in establishing the quantum of loss of availability. Another aspect is that with consideration of such deemed availability a generating company will become complacent and will not endeavor to procure fuel from alternative sources. In considerations to these, normative availability may not be reduced but deemed availability may be considered where it is affected by (i) Specific instruction by RLDC or SLDC or beneficiary (ies) or (ii) Where beneficiary decline to purchase electricity from available alternate/imported fuel at a price determined by FPA or where due to force majeure stock of fuel is exhausted.
A.2	Chhattisgarh State Electricity Regulatory Commission (CSERC)	The existing norms of annual plant availability may be continued. Even in case of shortage of fuel, normative availability of the plant should remain unchanged.
<b>B) Government Departments</b>		
B.1	Govt. of Odisha	A. Sufficient fuel supply linkage should be assured for each of the generating stations.

		<p>B. The normative annual plant availability for TTPS should be at par with other thermal stations as its running at an average of more than 95% due to massive R&amp;M activity.</p> <p>C. The blending ratio should be standardized and a normative ratio as per the manufactures' specification may be fixed. Pit-head Stations may not be allowed for blending of imported/e-auction coal with the linkage coal. However, the consent of the beneficiary may be made mandatory before carrying out any sort of blending of coal.</p> <p>D. The beneficiaries should be asked to furnish their views on use of e-auction and imported coal in case there is shortage of coal.</p> <p>E. Imported/e-auction coal should not be allowed to be used in case of pit-head generating stations.</p>
B.2	Government of Punjab, Dept. of Power	The existing norms of annual plant availability should not be reviewed for thermal generating station.
B.3	Govt. of Tripura, Dept. of Power	Plant availability (without fuel shortage) - as per existing norms 85%. Plant availability (with fuel shortage) - 75%. Plant availability (with alternative fuel) - 80%.
<b>C) Central Sector (Generators/Transmission Cos./NLDCs/RLDCs)</b>		
C.1	Damodar Valley Corporation (DVC)	<p>A normalization of PAF for the DTPS Station from the 74% to 60% may be considered during Tariff Regime 2014-19 till retirement of DTPS U#3 is undertaken.</p> <p>DVC is suffering generation loss on account of inadequate supply of coal resulting in reduced achievable annual PAF of 72.25% (85% of 85%) considering coal constrain only. There are other factors such as standard operator's margin, partial loss, terminal condition deviation and normal degradation of steam path during continuous operation which also required to be duly considered. Therefore to achieve NAPAF more than 65 % is not practicable by using coal supplied by govt. administered coal companies only.</p>
C.2	IL & FS Energy	The shortage of domestic fuel has significantly affected availability of the plants. So that, it is our humble submission that the existing norm for availability therefore needs to be revised.
C.3	Southern Region Power Committee	Beneficiaries are interested in availing power. Hence, suitable regulatory framework needs to be in place so as to ensure that capacity is not stranded due to fuel deficit. Prior consent could be taken on considering lead time for e-auction and imported coal to meet the deficit. In case consent is given, it should be suitably factored in the NAPAF. However, if only a few beneficiaries are interested then there is a need to address the way to overcome the issue.
C.4	North Eastern Electric Power Corporation Ltd. (NEEPCO)	Shortage of gas may be considered as one of the criteria while fixing the normative annual plant availability factor. As the contracted quantity of fuel is fixed as per the agreement

		drawn with the fuel supplier and at the same time calorific value goes on decreasing in subsequent years, therefore, the same should be taken care of while determining the normative plant availability of old gas based power station, else a suitable regulatory methodology should be in force with necessary adjustment factor for protecting the contracted quantity due to such declination in fuel calorific value.
C.5	National Thermal Power Corporation (NTPC)	As the domestic coal availability would be mostly out of control of generators, there is a case for lowering of target availability to avoid under recovery of Fixed Cost by generators. To protect the interest of the developers, the Target Availability should be suitably aligned. Therefore, Target Availability may be set at 80% for existing power stations and 70% for the new stations, which are covered under new FSA. For gas based stations, existing norms of annual plant availability may be continued.
C.6	Neyveli Lignite Corporation	As in the past, Normative Annual Plant Availability of Lignite based Thermal Plants should continue to be fixed 5% lower than that for coal based plants, for the reasons already recognized and accepted by the Commission. This difference should be maintained for all new and old plants. For the new higher capacity lignite based plants and plants where a new process technology is introduced for the first time, the normative values should be fixed at still lower levels till the stabilization of Units. In NLC power plants at present there is no alternative fuel.
<b>D) State Sector (Generators/Transmission Cos./Distribution Cos./SEBs/SLDCs)</b>		
D.1	Madhya Pradesh Power Generation Co Ltd	The existing system of allowing availability in case of plant is unable to generate power due to coal shortages should be continued for the reasons that Generating Company do not have control over the coal supplies and Rail transport.
D.2	Rajasthan Discom Power Procurement Centre.	(i) No. (ii) Normative availability would remain the same in case of blended coal/Fuel since blending affects only variable charges and not the AFC. Blending is done only to maintain the desire level of availability.
D.3	Uttar Pradesh Power Corporation Ltd. (UPPCL)	NO Normative availability would remain the same in case of blended coal/fuel since blending effects only variable charges and not the AFC. Moreover blending is done only to maintain the desire level of availability
D.4	GRIDCO	Sufficient fuel supply linkage should be assured for each of the generating stations. The normative annual plant availability for TTPS should be at par with other thermal stations as its running at an average of more than 95% due to massive R & M activity. The blending ratio should be standardized and a normative ratio as per the manufacturers' specification may be fixed. Pit-

		<p>head Stations may not be allowed for blending of imported / e-auction coal with the linkage coal. However, the consent of the beneficiary may be made mandatory before carrying out any sort of blending of coal.</p> <p>The beneficiaries should be asked to furnish their views on use of e-auction and imported coal in case there is shortage of coal.</p> <p>Imported/ e-auction coal should not be allowed to be used in case of pit -head generating stations.</p>
D.5	Tripura State Electricity Corporation Ltd.	In case of fuel shortage beyond agreed quantum, the CGS/generator should claim penalty as per fuel supply agreement rather than claiming plant availability even though the generator cannot generate power owing to such shortage.
D.6	Power Company of Karnataka Ltd.	<p>The annual plant availability should be 90% for new power plants and 85% for the existing power plants. The calculation of normative annual plant availability shall be in accordance with CERC tariff regulation, 2004-09 i.e., as below:</p> $\text{Availability} = 10000 \times \frac{\sum_{i=1}^N \text{DC}_i}{\{ N \times \text{IC} \times (100 - \text{AUX}_n) \}} \%$ <p>Where,          IC = Installed Capacity of the generating station in MW,          DC<sub>i</sub> = Average declared capacity for the i<sup>th</sup> day of the period in MW,          N = Number of days during the period, and          AUX<sub>n</sub> = Normative Auxiliary Energy Consumption as a percentage of gross Generation;</p>
D.7	Orissa Power Generation Corporation Ltd.	Existing norms of NAPAF should be maintained except under fuel supply scenarios where demand availability concept needs to be considered.
D.8	Chhattisgarh State Power Distribution Co. Ltd.	Arranging fuel is the sole responsibility of the generator and the beneficiaries cannot be held responsible for fuel shortage conditions. NAPF could be considered for upward revision based on performance of major generators however in no condition downward revision should be considered. Further, normative availability would remain the same in case of blended fuel or indigenous fuel, since blending affects only variable charges and not the AFC.
D.9	MP Power Management Company Ltd.	The availability of fuel is the sole responsibility of the generator and the beneficiaries cannot be held responsible for fuel shortage conditions, and, hence, there should be no review of NAPF in the scenario of with or without fuel shortage. On the contrary, it is felt that the Central Commission should obtain the actual PAF achieved by the generator and consider an upward revision in NAPF to ensure higher availability of energy from existing capacity. Further, normative availability would remain the same in case of blended coal/fuel since blending effects only variable charges and not the AFC. Moreover blending is done only to

		maintain the desire level of availability.
D.10	Maharashtra State Power Generation Co. Ltd.	It is not desirable to revisit the normative annual plant availability. However, with regard to the bridging of the gap through e-auction or imported coal, it is submitted that it should be limited to the extent of 15% increase in the variable cost. If there is any increase beyond this limit, then the concurrence of the beneficiaries should be obtained.
D.11	Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)	<p>Fuel risk is an inherent risk that the generators have to bear and not the beneficiaries. In case of fuel shortage beyond agreed quantum, the CGS / generators should claim penalty as per Fuel Supply Agreements rather than claiming higher plant availability even though the generating stations cannot generate power owing to such shortage.</p> <p>While determining target availability of the stations on various types of fuel, the reasonability of fuel rate, tendency of scheduling power on costly fuel by beneficiaries need to be examined. E.g. it has been observed that beneficiaries are not generally scheduling on Liquid or RLNG of Kawas &amp; Gandhar but the stations declare availability on RLNG &amp; Liquid fuel and beneficiaries are compelled to pay capacity charges and incentive though it is not financially viable to buy such costly power.</p> <p>Further, the new regulations should also be guided by the risk allocation envisaged in the competitive bidding mechanism. Having a regulatory framework similar to competitive bidding mechanism (other than the basic mechanism of tariff determination) will provide for an easier and more accurate comparison of the cost of power under the two models and hence facilitate more accurate decision making by regulators and beneficiaries.</p>
D.12	Kerala State Electricity Board (KSEB)	Considering the plant availability of coal and lignite based stations, a plant availability of coal based stations may be adopted as 88% and that of lignite based stations may be adopted as 80%. Further, the import of coal or other fuel shall be done only with the consent of beneficiaries as also as per the recommendation of the regional power committees.
D.13	Tamil Nadu Generation and Distribution corporation limited (TANGEDCO)	<p>TANGEDCO suggests that the Commission may revert to recovery of full Fixed charge and payment of incentive based on the Plant Load Factor (PLF) instead of its availability. Further, allowing 50% fixed charges even in cases where the plant availability factor is zero may be withdrawn for the reason given in the CERC Order dated January 4, 2000 in Petition No. 2/1999 etc. The recovery of fixed charges shall be at the pro-rata basis namely zero for 0% PLF and 100% for specified PLF (say 85% PLF) as decided by the Commission.</p> <p>The arrangement of fuel is the commercial risk of the generator. This has been confirmed by the order of CERC in Review Petition no.13/2000 etc. As such no special consideration is required to be given in the event of procuring</p>

		alternative fuel during shortage condition.
<b>E) Private Sector (Generators/Transcos./Distribution Cos)</b>		
E.1	BSES Rajdhani Power Ltd.	The generation asset should be utilized in the best possible manner with least burden on the consumer. Each plant should be benchmarked on the basis of actual performance in past three years and then escalate its performance level on year to year basis based on its performance in the previous year.
E.2	Jaiprakash Power Ventures Ltd.	The existing norms of annual plant availability may be continued. Even in case of shortage of fuel, normative availability of the plant should remain unchanged.
E.3	BSES Yamuna Power Limited	Fixed cost should be apportioned based on allotted capacity. This will ensure that there is no loss to the CGU even when no single unit is sold. Variable cost is anyway a pass through, so CGU are not making a financial gain on the same.
E.4	Association of Power Producers (APP)	<ul style="list-style-type: none"> <li>Under no coal scarcity scenario, the Normative Availability could be maintained at existing 85%. However, in the event of fuel shortages, the normative availability should be aligned with the coal quantities guaranteed under the FSAs, which currently is only 90% of 85% of availability (works out to 76.5%). Notwithstanding this, the Commission may also take cognisance of the fact that actual supply is even lesser at about 80% of 76.5% (which is 61%).</li> <li>The shortage of fuel supply may sometimes lead to reduced declaration of capacity by the generating stations in order to ensure minimal continuous generation to mitigate the occasional shortfall in fuel supply. Raising the bar of the availability norms would restrict the Generating Companies to recover the Annual Fixed Charges if they fail to meet the availability targets on account of fuel shortage which is beyond their control. The Commission may adopt the concept of “Deemed Availability” and compute the Monthly Availability as per the following formula:  <i>PAFM</i>  <math display="block">= \frac{(TotalDeclaredCapacity\ in\ Mwh + (Loss\ in\ Declared\ Capacity)}{InstalledCapacity \times 24 \times (1 - Normative\ AuxCon)}</math> </li> <li>The loss in declared capacity corresponds to the reduced Declared Capacity (“DC”) due to shortfall in coal stock below the critical stock level. As per the CEA convention, the Coal Stock below 7 days has been considered as the Critical Stock. The derivation of the Loss in Declared Capacity has been shown in the following methodology:</li> </ul>

Computation of Loss in Declared Capacity due to Fuel Shortage		
Particulars	UoM	Value
Capacity	MW	525
Normative Aux Consumption	%	6.5%
Scheduled DC	MW	491
Heat Rate	Kcal/Kwh	2425
GCV of Coal (Let)	Kcal/Kg	3800
Coal Requirement for 100% PLF for 1 day	MT	8041
Critical Stock = Stock of 7 days	MT	56286
Actual Stock (Let)	MT	40000
Shortfall/day	MT	5714
Difference in Coal Requirement	MT	2327
Loss in Generation Potential	MW	152
<b>Loss in DC due to Fuel Shortage</b>	<b>MW</b>	<b>142</b>
<p>This will nullify the effect of Force Majeure situations like in case of Fuel Shortage and ensure the recovery of full Fixed Charges by the Generating Companies to that extent. The Commission may continue with the existing norm for availability with the above modification to address the issue of lower Availability in case of fuel shortage.</p> <ul style="list-style-type: none"> <li>• Further, in view of the supply shortfall from CIL and reluctance of Discoms to approve procurement of imported coal or in the event of plant not being despatched by Load Despatch Centres, the generation station should be allowed to recover full fixed charges.</li> <li>• For CFBC technology based power plants, normative availability should be generally less than the PF technology based power plants because majority of the plant in India on CFBC technology are operating at very low PLF.</li> </ul>		
E.5	Rudraksh Energy	<ul style="list-style-type: none"> <li>• Norms for plant availability should be based on the actual figures for the last five years. However, saving in cost due to better performance should be shared with beneficiary.</li> </ul>
E.6	Torrent Power	<ul style="list-style-type: none"> <li>• Under no fuel scarcity scenario, the normative availability could be maintained at existing 85%. However, in the event of fuel shortages the normative availability should be aligned with the fuel quantities guaranteed by the Government of India, which currently in case of gas based plants is only 70%. Notwithstanding this, the Commission is requested to take cognizance of the fact that actual supply from RIL is nil.</li> <li>• Further, in view of the supply shortfall from RIL and other domestic Gas supply sources and the reluctance of Discoms to approve procurement of alternative fuel, the same should not impact the treatment of Normative Plant</li> </ul>

		Availability and consequently Project Developers should be able to recover the full Fixed Cost based on technical availability of the plant.
<b>F) Other Organizations/Institutions/Banks/Investors</b>		
F.1	Federation of Indian Chambers of Commerce and Industry (FICCI)	<p>The existing normative annual plant availability of 85% may be reduced and fixed in commensurate with the agreed Annual Contracted Quantity under FSA guaranteed by Coal India Limited. Whenever plant is available to run with alternative fuel irrespective of whether beneficiary has given consent for usage of alternative fuel or not, this time period and capacity declaration shall be considered for calculation of normative availability.</p> <p>Deemed availability should be introduced in case of non-approval of alternate coal procurement.</p> <p>For CFBC technology based power plants, normative availability should be generally less than the PF technology based power plants because majority of the plant in India on CFBC technology are operating at very low PLF.</p>
<b>G) Individual /Public Group/Any others</b>		
G.1	Shri R. B. Sharma	The existing norm of 85% for normative annual plant availability is reasonable for recovery of fixed charge with incentivized for higher availability. There is no reason even for old units for reduction of normative annual plant availability and the old generating stations should also follow the norms of 85% of normative annual plant availability.
G.2	Shri Arun Kumar Dutta	<p>The generating companies starting operations without proper linkage cannot be provided any concession, nor can such inefficiency be passed onto the consumer. Those private generators who came through tariff bidding process must supply at the same rate and arrange fuel from whatever sources available. The Central Generating Stations have normally a coal linkage and hence no such contingency is envisaged. However in all cases the Commission may render all help to the generator to remove bottleneck at all levels.</p> <p>Under no circumstances the consumer should suffer for mismanagement by the generators. Since coal mine blocks have been allotted free to the various companies for setting up thermal power plant, the clearance by all authorities like environmental and forest, pollution etc. has to be arranged by respective companies. The Commission may help them as facilitator for early commissioning of the plant and the mine. Coal from one block cannot be transferred to other block/power station and each power station shall work independently with uniform norms and incentive for efficiency. Companies with huge coal deposit of more than 1000 MT must release all such coal blocks. All companies that have been allotted coal block must be able to mine at least 5%</p>



		<p>of deposit failing which extra coal block shall be withdrawn. In exceptional case, coal can be borrowed from different blocks on banking arrangement for a short period, with specific permission from CERC but no transportation charges can be put to Tariff. Fuel linkage/coal linkage cannot be rendered at the cost of consumer. Necessary arrangement for coal/fuel linkage shall rest with the company.</p> <p>Further, Normative annual plant availability must be kept above 90%. Operation with imported fuel must be ruled out, but only on exceptional case for short duration but the extra cost shall be on company's account.</p>
G.4	Shri Shanti Prasad	<p>If there is fuel shortage not enabling a generating station to achieve normative availability, then loss of availability may be added to determine fixed charges (and not incentive). However, it will be difficult to determine such norm due to reduction in stock of fuel generating station because the reduction in stock of fuel generating station reduces generation and there is difficulty in establishing the quantum of loss of availability.</p> <p>Another aspect is that with consideration of such deemed availability a generating company will become complacent and will not endeavor to procure fuel from alternative sources. In considerations to these, normative availability may not be reduced but deemed availability may be considered where it is affected by</p> <ul style="list-style-type: none"> <li>(i) Specific instruction by RLDC or SLDC or beneficiary (ies) or</li> <li>(ii) Where beneficiary decline to purchase electricity from available alternate/imported fuel at a price determined by FPA or where due to force majeure stock of fuel is exhausted.</li> </ul>