



Electricity

AEML/CERC/Draft Tariff Regulations FY 2024-25 to FY 2028-29/01

February 20, 2024

By e-mail

The Secretary,
Central Electricity Regulatory Commission,
3rd & 4th Floor, Chanderlok Building,
36, Janpath,
New Delhi 110001

Dear Sir,

Sub: Comments/ suggestions of Adani Electricity Mumbai Limited (AEML) on Draft Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024

Ref:

- a) File No. L-1/268/2022/CERC dated 04.01.2024
- b) No. L-1/236/2022/CERC dated 30.01.2024

Vide reference 1 above, the Hon'ble Commission had sought comments/ suggestions/ objections on the Draft Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 on or before February 10, 2024.

Vide reference 2 above, the Hon'ble Commission has extended the date of furnishing the comments/ suggestions till 20.02.2024.

In accordance with the above, AEML is herewith submitting its comments/ suggestions on the Draft Tariff Regulations for kind consideration of the Hon'ble Commission.

Thanking You,
Yours faithfully,

Vivek G Mishra
Additional Vice President; Business-Regulatory,
Adani Electricity Mumbai Ltd.

Encl: As above

e-mail to: secy@cercind.gov.in; tariff-reg@cercind.gov.in

Comments on Draft CERC (Terms and Conditions of Tariff) Regulations, 2024

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1.	<p>3 (13) Change in Law' means the occurrence of any of the following events: (b) adoption, amendment, modification, repeal or re-enactment of any existing Indian law; </p>	-	<p>While as per definition of Change in law, any change in existing Indian law is to be considered as Change in law, the Central Commission has, in the past, not allowed the impact of Goods and Services Tax (GST) separately as additional O&M expenses to the regulated utilities under Change in Law. The rationale provided by the Central Commission (as observed from various Tariff Orders of NTPC) is that the Commission while approving the norms of O&M expenses has considered the taxes as part of O&M expenses while working out the norms and therefore the same has already been factored in. Further, the escalation rates considered while framing O&M expense norms is after accounting for the variations during the past years, which takes care of any variation in taxes also.</p> <p>In the Draft Tariff Regulations, 2024, the Commission has determined norms for O&M expenses for generation stations and transmission Licensees considering the normalized O&M expenses for the period FY 2018-19 to FY 2022-23. Therefore, while the currently applicable taxes, duties, etc. will get factored in the normalized base expenses, any changes in taxes subsequently will need to be provided for separately as "change in law".</p> <p>It should be noted that the reasoning given by the Commission earlier that escalation rates account</p>

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			<p>for variations in taxes is not correct as evident from the from the Frequently Asked Questions on Revision of Wholesale Price Index released by the Ministry of Commerce and Industry Department of Industrial Policy and Promotion Office of Economic Advisor dated 12.05.2017. The relevant extract of the said FAQ is reproduced as under:</p> <p><i>“Q16. Why is the indirect tax not been included in the compilation of WPI in the new series?”</i></p> <p><i>Ans. A significant change in the new series of WPI has been the exclusion of indirect taxes while compiling indices of manufactured products. The Working Group for revision of WPI had recommended that taxes should not figure in this measure so that price signals emerging from production side of the economy are not influenced by the fiscal policy.</i></p> <ul style="list-style-type: none"> • <i>Excluding indirect taxes brings the new series of WPI conceptually closer to the concept of output Producer Price Index (PPI). PPI reflects the change in average prices that producers get. This is also in keeping with the international best practices.</i> • <i>The exclusion of indirect taxes would also ensure the continuity and compatibility of</i>

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			<p><i>new WPI series as and when Goods and Services Tax (GST) is introduced.</i></p> <p><i>WPI is used as a deflator for nominal macroeconomic aggregates like GDP and Index of Industrial Production (IIP). Since the nominal estimates of GVA for different sectors are computed at basic price exclusive of taxes on products taxes, excluding indirect taxes from WPI makes it a compatible and appropriate deflator."</i></p> <p>The copy of FAQ document is attached as Annexure 1. Therefore the escalation rates considered for framing norms for the period FY 2024-29 are not expected to take care of any change in GST/ taxes that may happen in future and that is likely to impact the O&M expense of utilities in future. Hence any change in GST rates/ tax rates in future should be considered as Change in Law and the impact of the same should be allowed separately to the Utilities, subject to prudence check by the Commission.</p>
2.	3 (67) 'Reference Rate of Interest' means the one year marginal cost of funds based lending rate (MCLR) of the State Bank of India (SBI) issued from time to time plus 325 basis points	-	The Commission has changed the rate for allowing interest on working capital (loWC) from Bank rate (SBI MCLR plus 350 basis points) to Reference Rate of Interest (SBI MCLR plus 325 basis points). There is no justification for reducing the rate of interest by 25 basis points in the Explanatory Memorandum published by the Commission. It is

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			<p>submitted that the rate allowed for calculation of interest should be reflective of actual rates available in the market for power sector entities with good financial standing/ ratings. In recent years, the cost of borrowing from banks/ financial institutions have increased considerably. Therefore, any reset of interest rate should be made after analyzing the actual rate of interest of short terms loans availed by power sector utilities. It is pertinent to mention here that in 2019 Tariff Regulations, the Central Commission has specified the rate of interest for working capital as SBI MCLR plus 350 Basis points, which would have been determined based on market conditions and availability of short term loans to Utilities at that time. There has been no change or improvement in availability of short term loans at lower interest rates for Utilities in the market in these five years. Hence the interest rate for working capital should not be reduced in 2024 Tariff Regulations.</p>
3.			
4.	<p>9 (5) In case the generating company or the transmission licensee files the application as per the timeline specified in sub-clause (1) to (4) of this Regulation, carrying cost shall be allowed from the date of commercial operation of the project:</p>	<p>Proposed: In case the generating company or the transmission licensee files the application as per the timeline specified in sub-clause (1) to (4) of this Regulation, carrying cost shall be allowed to the generating company or the transmission</p>	<ul style="list-style-type: none"> - The non-filing of application for tariff determination will adversely affect the revenues of the generating company. Hence, the generating company will not intentionally delay the application for tariff determination. - However, application for tariff determination may be delayed due to factors not under control

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	<p>Provided that in case the generating company or the transmission licensee delays in filing of application as per the timeline specified in sub-clause (1) to (4) of this Regulation, carrying cost shall be allowed to the generating company or the transmission licensee from the date of filing of the application as per Regulation 10(7) and 10(8) of these regulations.</p>	<p><u>licensee</u> from the date of commercial operation of the project:</p> <p>Provided that in case the generating company or the transmission licensee delays in filing of application as per the timeline specified in sub-clause (1) to (4) of this Regulation, carrying cost shall be allowed to the generating company or the transmission licensee from the date of filing of the application as per Regulation 10(7) and 10(8) of these regulations.</p>	<p>of the generating company. Accordingly, even in case of delay in filing application for tariff determination, the carrying cost should be allowed from the COD.</p> <p>- Without prejudice to the contention above, it is submitted here that 90 days period is anyway available to the Utility for filing of Petition for determination of tariff after CoD of the project. In case the Utility delays in filing of Petition, the carrying cost for delay over and above 90 days may only be disallowed for the Utility and not for the entire period from CoD of the project to the date of filing of Petition.</p>
5.			
6.	<p>10. Determination of tariff Proviso to 10 (3):</p> <p>Provided that in case the final tariff determined by the Commission is lower than the interim tariff by more than 10%, the generating company or transmission licensee shall return the excess amount recovered from the beneficiaries or long term customers, as the case may be with simple interest at 1.20</p>	<p>Proviso may be deleted</p>	<p>-The interest rate in this proviso is in conflict with Regulation 10(7). The situation of a generating station / unit or transmission system / element's final tariff being lower than interim tariff is already covered in Regulation 10(7) (which deals with both situations of lower or higher). However, Regulation 10(7) provides interest rate of 1 yr. SBI MCLR plus 100 bp, whereas this proviso provides the interest rate as 1.20 times 1 yr. SBI MCLR plus 100 bp.</p>

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	<p>times of the rate worked out on the basis of 1 year SBI MCLR plus 100 basis points prevailing as on 1st April of the financial year in which such excess recovery was made.</p>		<p>Accordingly, it is suggested that this proviso may be deleted as both cases – final tariff being lower than interim or being higher than interim – are covered in Regulation 10(7).</p> <p>Alternatively, Regulation 10(7) should be aligned with the provision in Regulation 10(3) i.e. the provision of 1.2 times the SBI MCLR plus 100 b.p. to also be made applicable for additional recovery in case of final tariff being higher than the interim tariff.</p>
7.	<p>19 (5) For Projects acquired through NCLT proceedings, the following shall be considered while approving Capital Cost for determination of tariff:</p> <p>(a) For projects already under operation, historical GFA of the project acquired or the acquisition value paid by the generating company, whichever is lower;</p> <p>(b) For considering the historical GFA for the purpose of Sub-Clause (a) above, the same shall be the capital cost approved by the</p>	<p>19 (5) For Projects acquired through NCLT proceedings, the following shall be considered while approving Capital Cost for determination of tariff:</p> <p>(a) For projects already under operation, historical GFA of the project acquired or the acquisition value paid by the generating company, whichever is lower;</p> <p>(b) For considering the historical GFA for the purpose of Sub-Clause (a) above, the same shall be the capital cost approved by the appropriate commission till the date of acquisition;</p>	<ul style="list-style-type: none"> • It may be noted that the projects which undergo NCLT process are unviable loss-making projects and therefore the recovery of tariff is inadequate to compensate for the expenses and earn a reasonable level of return. • While bidding for stressed assets, the acquirer considers several factors including cost to be incurred for completion of the facilities, standardization of the schemes as per the industry practice, etc. and any unforeseen factors, basis which the acquisition value is arrived. Accordingly, the procurer would acquire the asset at a discount to the existing price in order to make the stressed asset financially viable.

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	<p>appropriate commission till the date of acquisition; Provided that in the absence of any prior approved cost of an Appropriate Commission, the Commission shall consider the same on the basis of audited accounts subject to prudence check; Provided further, that in case additional capital expenditure is required post acquisition of an already operational project, the same shall be considered under the provisions of Chapter 7 of these Regulations; (c) In case any under construction project is acquired which is yet to achieve commercial operation, the acquisition value or the actual audited cost incurred till the date of acquisition, whichever is lower, shall be considered. and; (d) any additional capital expenditure incurred post acquisition of such project up to the date of commercial operation of the project in line with the investment approval of the Board of Directors of the generating</p>	<p>Provided that in the absence of any prior approved cost of an Appropriate Commission, the Commission shall consider the same on the basis of audited accounts subject to prudence check; Provided further, that in case additional capital expenditure is required post acquisition of an already operational project, the same shall be considered under the provisions of Chapter 7 of these Regulations; (c) In case any under construction project is acquired which is yet to achieve commercial operation, the acquisition value or the actual audited cost incurred till the date of acquisition, whichever is lower, shall be considered. and; (d) any additional capital expenditure incurred post acquisition of such project up to the date of commercial operation of the project in line with the investment approval of the Board of Directors of the generating company or the transmission licensees shall also be considered</p>	<ul style="list-style-type: none"> Moreover, the Hon'ble APTEL, vide judgment dated 27.09.2019 in Appeal No. 183 of 2019, in case of <i>Renascent Power Ventures Pvt. Ltd. vs UPERC, UPPCL, SBI and others</i> held that "<i>The change in the PPA tariff, which being the fundamental basis for arriving at the bid amount by the bidders, any subsequent reduction in the PPA tariff, post conclusion of the bid process by lenders of the project, would amount to change in the fundamental basis of the bid.</i>" As evident from the aforementioned judgment by Hon'ble APTEL also, the clause proposed to be inserted in respect of projects acquired through NCLT would be in violation of the settled law considering the said APTEL judgment has attained finality. <p>- Therefore, considering the lower of historical GFA of the project acquired or the acquisition value paid by the generating company for purpose of tariff determination will not only prevent the servicing of legitimate costs by the generator but also the same is not in public interest as it shall lead to stranding of stressed assets. Accordingly, it is strongly suggested that tariff of projects acquired through NCLT should continue to be computed based on the historical GFA only.</p>

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	<p>company or the transmission licensees shall also be considered on a case to case basis subject to prudence check. Provided that post commercial operation, any additional capital expenditure shall be allowed under the provisions of Chapter 7 of these Regulations.</p>	<p>on a case to case basis subject to prudence check. Provided that post commercial operation, any additional capital expenditure shall be allowed under the provisions of Chapter 7 of these Regulations.</p>	
8.	<p>21 (5) If the delay in achieving the COD is attributable either in entirety or in part to the generating company or the transmission licensee or its contractor or supplier or agency, in such cases, IDC and IEDC due to such delay may be disallowed after prudence check either in entirety or on pro-rata basis corresponding to the period of delay not condoned vis-à-vis total implementation period and the liquidated damages, if any, recovered from the contractor or supplier or agency shall be retained by the generating company or the transmission licensee, in the same proportion of delay not condoned vis-à-vis total implementation period.</p>		<p>- Delay in grant of approval/ clearances by Statutory Authorities are beyond the control of the generator/licensees and accordingly needs to be fully condoned. In any case, disallowance of 10% of IDC due to delay in grant of approval/ clearances by Statutory Authorities should not be a norm and the Commission should allow/ disallow IDC due to delay based on prudence check on case to case basis.</p>

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	<p>[Note: For e.g.: In case a project was scheduled to be completed in 48 months and is actually completed in 60 months. Out of 12 months of time overrun, if only 6 months of time overrun is condoned, the allowable IDC and IEDC shall be computed by considering the total IDC and IEDC incurred for 60 months and allowed in the proportion of 54 months over 60 month period.]</p> <p>Provided that in case of activities like obtaining forest clearance, NHAI Clearance, approval of Railways, and acquisition of government land, where delay is on account of delay in approval of concerned authority, in such cases maximum condonation shall be allowed up to 90% of the delay associated with obtaining such approvals or clearances.</p>	<p>Provided that in case of activities like obtaining forest clearance, NHAI Clearance, approval of Railways, and acquisition of government land, where delay is on account of delay in approval of concerned authority, in such cases maximum condonation shall be allowed up to 90% of the delay associated with obtaining such approvals or clearances.</p>	
9.	<p>28. Special Allowance for Coal-based /Lignite fired Thermal Generating station (1) In the case of coal-based/ lignite fired thermal generating</p>		<p>It is submitted that Renovation and Modernization is carried out by generating companies at the fag end of their useful life and hence in 2019 Tariff Regulations, Special Allowance was linked only to Renovation and</p>

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	<p>stations, the generating company, instead of availing renovation and modernization (R&M), may opt to avail of a 'special allowance' in accordance with the norms specified in this Regulation, as compensation for meeting the requirement of expenses towards any additional capital expenditure covered in Regulation 24, 25, 26 and 27 except for capital expenditure arising out of change in law, award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law, and force majeure after completion of 25 years from the date of Commercial operation of the generating station or a unit thereof and in such an event, an upward revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the Special Allowance shall be included in the annual fixed cost:</p> <p>(2) The Special Allowance admissible to a generating station</p>		<p>Modernization. However, in Draft 2024 Regulations, Special Allowance has been linked to additional capitalization required under Regulation 24, 25, 26 also (Addnl. capitalization within original scope and up to cut-off date, Addnl. capitalization within original scope and after cut-off date and Addnl. capitalization beyond scope respectively). It is submitted that the special allowance should be allowed only as replacement of capitalization required against Renovation and Modernization only and not against additional capitalization required up to cut-off date/ after cut-off date (within original scope) and beyond scope. Therefore, the provision for Special Allowance should be kept in line with the 2019 Tariff Regulations.</p>

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	shall be @ Rs 10.75 lakh per MW per year for the control period.		
10.	<p>30. Return on Equity</p> <p>30 (2) Return on equity for existing project shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-river hydro generating station and at the base rate of 16.50% for storage type hydro generating stations, pumped storage hydro generating stations and run-of-river generating station with pondage;</p> <p>(3) Return on equity for new project achieving COD on or after 01.04.2024 shall be computed at the base rate of 15.00% for the transmission system, including the communication system, at the base rate of 15.50% for Thermal Generating Station and run-of-river hydro generating station and at the base rate of 17.00% for storage type hydro generating stations, pumped storage hydro generating stations and run-of-</p>		<p>The Govt. of India has set ambitious targets to meet the rising power demand through substantial Renewable power generation to achieve its net zero target by the year 2070. Most of such RE generation would occur in RE rich states however, it would be consumed across the entire country. Consequently, a robust, reliable and efficient evacuation network would be required to evacuate such huge quantum of RE generation to transmit it from the source to the load. This would therefore necessitate substantial investment in the sector and any move to reduce the rate of RoE from the existing 15.5% would dampen the investor spirit and prevent the sector from garnering the much needed investment to meet not only the demand for power but also the climate change initiatives of the Gol.</p> <p>In view of the above, it is submitted that there is strong case to increase the rate of RoE from the existing 15.5% for the new projects and in any case the same should not be reduced below 15.5% but retained at existing level of 15.5% even for new projects.</p> <p>Similarly, the capex towards Emission Control System required to be undertaken by the generators to meet the revised emission control</p>

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	<p>river generating station with pondage;</p> <p>Provided that return on equity in respect of additional capitalization beyond the original scope, including additional capitalization on account of the emission control system, Change in Law, and Force Majeure shall be computed at the base rate of one-year marginal cost of lending rate (MCLR) of the State Bank of India plus 350 basis points as on 1st April of the year, subject to a ceiling of 14%;</p> <p>Provided further that:</p> <p>i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Free Governor Mode Operation (FGMO), data telemetry, communication system up to load</p>		<p>norms notified by the MOEF&CC on 07.12.2015 is a change in law event. However, nature of this change in law is different from the other change in law events affecting the generators during the operation period such as domestic coal shortfall, changes in taxes & duties etc. as such changes in law can be funded through short term loans / working capital considering that such cost needs to be funded only for the period from date of occurrence to date of regulatory approval. However, capex towards ECS needs to be funded through long term loans as well as long term equity infusion neither of which were envisaged at the time of original investment / bid.</p> <p>It is also pertinent to note that the risks of equity investment in the additional capitalization after COD are far higher for the existing generating plants as the original OEM of BTG package will not take any responsibility for deterioration of plant performance and the entire risk of system integration is completely on the original developer.</p> <p>It is also a settled position that since equity is risk-capital, the cost of equity is higher than cost of debt. Accordingly, allowing RoE at the rate equivalent to MCLR_+ 350 bps is unjustified and unfair to the generators. Furthermore, lenders would not extend debt funding to ECS projects in</p>

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	<p>dispatch centre or protection system based on the report submitted by the respective RLDC;</p> <p>ii. in case of an existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, the rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;</p> <p>iii. in the case of a thermal generating station: a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate as specified under Regulation 45(9) of IEGC Regulations, 2023. b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate specified under Regulation 45(9) of IEGC Regulations, 2023, subject to the</p>		<p>case a rate of RoE lower than the existing 15.5% is allowed. Accordingly, there is a strong case in favour of allowing RoE at 15.5% to the generators towards meeting cost of installation of ECS.</p> <p>As regards the ramp rate, it is submitted that the Ramp rate is determined by NLDC in terms of the following formula: <i>Actual Ramp Rate = (Actual ex bus Avg Gent – Actual ex bus Avg Gent-1) / 15 Minutes,</i> Where = t is the time block.</p> <p>With this formula, even if the generator has achieved the ramp rate in one block, but has not achieved ramp in its previous block, it is not likely to achieve the required ramp rate to be eligible for addnl. RoE. The inherent flaw in the above ramp rate formula is that even through the generator has achieved ramp over 5 or 10 minute period (in one time block or over two blocks), the ramp rate is calculated by taking the difference in average generation of two time blocks and dividing the same by 15 minutes. There is a requirement of simplifying the ramp rate formula, which can be as under:</p> <p><i>Ramp rate = absolute Load Ramp / Time Required for ramp (MW/Minute)</i> A sample calculation is attached as Annexure 2. Further, in the NLDC formula, there are a number</p>

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	ceiling of additional rate of return on equity of 1.00%:		<p>of conditions to be met by the generator in order to be eligible for addnl. RoE, such as the no. of time blocks where the scheduled ramp rate for the generator is more than 1% should be more than 720 in a year. The net injection schedule is prepared by the RLDCs based on the requirement of beneficiaries and therefore the no. of time blocks where the scheduled ramp rates are more than 1% is not under the control of generator. Therefore applying such conditions to the generator while assessing the eligibility for addnl. RoE is unfair, because regardless of number of times a generator is directed to be ramped up or down in a year, each time it does that, it helps the system and hence should be entitled for additional RoE.</p> <p>Further the base load generating stations having lower energy charges and are at the bottom of MoD, shall run at constant loads on round the clock basis and they shall not be subjected to ramp up and ramp down by the RLDCs. So, in any case they will not be eligible for addnl. RoE. Hence there is a requirement of holistic review of entire methodology for calculation of ramp rate and determination of addnl. RoE formulated by NDLC.</p>
11.	<p>31. Tax on Return on Equity 31 (1) The rate of return on equity as allowed by the Commission under Regulation 30 of these</p>	-	In case of Companies, Income Tax is not paid for individual projects or plants, but it is paid for the Company as a whole (e.g. NTPC), whereas tariff is determined separately for each generating

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	<p>regulations shall be grossed up with the effective tax rate of the respective financial year. The effective tax rate shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the concerned generating company or the transmission licensee by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon.</p> <p>Provided that in case a generating company or transmission licensee is paying Minimum Alternate Tax (MAT) under Section 115JB of the Income Tax Act, 1961, the effective tax rate shall be the MAT rate, including surcharge and cess;</p> <p>Provided further that in case a generating company or transmission licensee has opted</p>		<p>station / unit. Therefore, in such cases, the profit in one generating station seen on a stand-alone basis could be offset by losses in another, resulting in zero net Book Profit and hence no Income Tax liability at all. However, the beneficiaries of different stations are different, which means that the benefit in Income Tax due to losses in one station and one set of beneficiaries are utilized to reduce the Income Tax liability of other station with other set of beneficiaries. This is actually a case of cross-subsidisation from one set of beneficiaries to another. In this regard, the Hon'ble ATE in a catena of Judgments has stated that consumers / beneficiaries of a regulated business should remain in a water tight compartment and any benefit of other non-regulated business of the company should not be ploughed back to reduce the tax liability of the regulated business. The relevant Judgment of the ATE in Judgment in Appeal no. 104 of 2012 is reproduced below:</p> <p><i>"The converse of the Tribunal's direction that under no circumstances, the consumers of the licensee should be made to bear the Income Tax accrued in other businesses of the licensee is also true i.e. under no circumstances the consumers of the licensee should be benefitted from the permissible deductions in the form of accelerated depreciation and from Tax</i></p>

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	<p>for Section 115BAA, the effective tax rate shall be tax rate including surcharge and cess as specified under Section 115BAA of the Income Tax Act, 1961.</p>		<p><i>holidays given to other businesses (unregulated by MERC) of the utility. That is the only way to treat the regulated and other business unregulated in water tight compartments."</i></p> <p>However, it is seen from the various Tariff Orders of projects of Central Utilities that the effective tax rate considered for grossing up the RoE is the rate at which income tax is paid by the Utility as a whole (usually the MAT rate). This implies that the tax benefits of other non-regulated businesses of the Utilities might have been used for the benefit of regulated business. The converse of this is also possible, i.e. the tax incidence of other non-regulated businesses of the Utilities may have been passed on in the regulated businesses of the Utilities and are borne by the beneficiaries. In order to correct this anomaly, each project / station whose tariff is determined individually should be treated as a separate regulated entity for the purpose of working out its Income Tax liability, based on its stand-alone profit / loss and consequent effective income tax rate. This will reflect the correct cost causation on individual set of beneficiaries.</p>
12.	<p>32. Interest on loan capital: 32 (6) In the case of New Project(s), the rate of interest</p>	<p>32 (6) In the case of New Project(s), the rate of interest shall be the weighted average rate</p>	<p>A new generating station or transmission system could also be part of a generating company or transmission licensee which may have actual cost</p>

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	<p>shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio of the generating company or the transmission licensee, as the case may be;</p> <p>Provided further that if the generating station or the transmission system, as the case may be, does not have any actual loan, then the rate of interest for a loan shall be considered as 1-year MCLR of the State Bank of India as applicable as on April 01, of the relevant financial year.</p>	<p>of interest calculated on the basis of the actual loan portfolio of the generating company or the transmission licensee, as the case may be;</p> <p>Provided further that if the generating station or the transmission system, as the case may be, does not have any actual loan, then the weighted average rate of interest of the loan portfolio of the generating company or the transmission licensee as a whole shall be considered.</p> <p>Provided further that if the generating company station or the transmission licensee system, as the case may be, as a whole also does not have any actual loan, then the rate of interest for a loan shall be considered as 1-year MCLR of the State Bank of India as applicable as on April 01, of the relevant financial year.</p>	<p>of debt as a whole. The proviso suggested covers the said possibility. It is submitted here that generating companies or transmission licensees may implement the project by incorporating an SPV. The company or Licensee may not raise loans against the SPV and may finance the project based on the financials of the parent company. Therefore in case the project does not have actual loans, the weighted average loan portfolio of the parent company (company as a whole) should be considered. In any case, banks financial institutions do not provide loans at SBI MCLR rate. Hence allowing interest on normative loans for projects not having actual loans at SBI MCLR rate is unfair for the generating company or transmission licensee. In this regard, it is to be noted that the second proviso for ECS is also considering the possibility of generating company as a whole.</p>
13.	<p>33. Depreciation 33 (6) Depreciation for New Projects shall be calculated</p>		<p>Depreciation is the component of tariff corresponding to the normative loan repayment and the rate for the same is fixed considering a</p>

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	<p>annually based on the Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system: Provided that the remaining depreciable value as on 31st March of the year closing after a period of 15 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets. Provided further that in the case of a new hydro generating stations, the generating company, with the consent of the beneficiaries, may charge depreciation at a rate lower than that specified in Appendix II to these Regulations to reduce front loading of tariff.</p>		<p>loan repayment tenure of 12 years. However, for new projects, the same is now proposed to be changed considering a loan repayment tenure of 15 years. However, in reality, the generator / licensee shall have to repay the actual loan over a shorter duration of 10-12 years, as 15-year loan tenure is simply not available. Consequently, it will be unable to service the debt considering a lower normative depreciation proposed to be allowed pushing the project towards financial stress and eventual insolvency.</p> <p>In view of the above, it is submitted that depreciation rate for new projects should also be aligned with that of the existing projects to keep the new projects solvent. In case the Hon'ble Commission intends to continue with this provision for new projects, then the concept of Advance Against Depreciation (AAD) should be introduced back in Tariff Regulations.</p>
14.	33 (12) In case the date of operation of the emission control system is subsequent to the date of completion of the useful life of generating station commercial operation of the generating station or unit thereof,	In case the date of operation of the emission control system is subsequent to the date of completion of the useful life of generating station commercial operation of the generating station or unit thereof,	<ul style="list-style-type: none"> - Many power generators are already stressed in the country due to inability to fulfill debt obligations. - Non-recovery of depreciation value of emission control system during the term of the PPA would lead to the generators defaulting on loans due to lack of power offtake guarantee and ultimately

Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions
	depreciation of ECS shall be computed annually from the date of operation of such emission control system based on the straight line method, with a salvage value of 10% and recovered over ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher.	depreciation of ECS shall be computed annually from the date of operation of such emission control system based on the straight line method, with a salvage value of 10% and recovered over ten years or a period mutually agreed remaining term of PPA by the generating company and the beneficiaries, whichever is higher.	more plants would be pushed towards insolvency. - Accordingly, depreciation of emission control system should be allowed to be recovered during the balance term of the PPA to ensure adequate funds towards meeting debt obligations for emission control system.
15.	36. Operation and Maintenance Expenses: (1) Thermal Generating Station: Normative Operation and Maintenance expenses of thermal generating stations shall be as follows:		In view of the requirement of RE integration in the grid, flexible operation of thermal power stations is necessary. However, flexible operation leads to higher rate of deterioration of plant's components, The impact on the life of components increases with increase in number of flexible operation instances and also with number of start-stops the unit undergoes in a year. As a result, the operation and maintenance costs are significantly higher in units operated on a daily or weekly start-stop basis. Based on CEA Report "Flexibilization of coal fired power plants" the increase in annual O&M cost has been considered as 9%, 14% and 20% of O&M Cost at 50%, 45%, 40% loading respectively. Also, for unit loading from 55% to 85% during flexible operations with frequent ramp up & downs, additional

Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions
			<p>compensation in O&M cost should be provided. The increase in O&M cost should be allowed based on plant actual low load operation and could be calculated based on CEAs compensation methodology for operating below 55% load and should be included under change in law provisions of PPA to the generators.</p>
16.	<p>36 Operation and Maintenance Expenses 36 (1) (7) Any additional O&M expenses incurred by the generating company or transmission licensee due to any change in law or Force Majeure event shall be considered at the time of truing up of tariff. Provided that such impact shall be allowed only in case the overall impact of such change in law event in a year is more than 5% of normative O&M expenses allowed for the year.</p>	<p>36 (1) (7) Any additional O&M expenses incurred by the generating company or transmission licensee due to any change in law or Force Majeure event shall be considered at the time of truing up of tariff. Provided that such impact shall be allowed only in case the overall impact of such change in law event in a year is more than 5% of normative O&M expenses allowed for the year.</p>	<p>Worldwide, the regulatory practice is such where uncontrollable events are 100% pass through. There is no reason to bring ceilings or caps of any other condition to pass through the impact of any event held to be uncontrollable. This will unnecessarily impact the returns of the business and its solvency. The Commission, in any case, will carry out the prudence check of any such claims and then only the impact will be crystallised.</p>
17.	<p>36 (3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system: ...</p>	-	<p>Reduction in Normative O&M Expenses for sub-station bays and HVDC stations will result in adverse impact on licensees due to aging of assets. Accordingly, the Normative O&M Expenses for substation bays and HVDC stations for FY 2024-25 should at least cover escalation of 5.89% over Normative O&M expenses of FY 2023-24.</p>

Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions
18.	<p>37. Input Price of coal and lignite for energy charges (from integrated mine)</p> <p>37(4) In case of excess or short recovery of input price under Clauses (2) or (3) of this Regulation, the generating company shall refund the excess amount or recover the shortfall amount, as the case may be, with simple interest at the rate equal to 1-year SBI MCLR plus 100 basis points prevailing as on 1st April of the respective year of the tariff period, in six equal monthly instalments.</p> <p>Provided that such interest shall be payable till the date of issuance of the Order and no interest shall be allowed or levied during the period of six-monthly instalments.</p> <p>Provided that in case there is a delay in filing the Petition for determination of input price as per the timelines specified under Regulation 9 of these regulations, no carrying cost shall be allowed</p>	<p>Provided that in case there is a delay in filing the Petition for determination of input price as per the timelines specified under Regulation 9 of these regulations, no carrying cost shall be allowed to the generating company or the mining company for such delay</p>	<p>- The delay in filing of application for input price determination will adversely affect the revenues of the generating company. Hence, the generating company will not intentionally delay the application for input price determination.</p> <p>- However, application for input price determination may be delayed due to factors not under control of the generating company.</p>

Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions								
	to the generating company or the mining company for such delay and in such cases the carrying cost at the simple interest rate of 1-year SBI MCLR plus 100 bps shall be allowed from the date of filing of the Petition.	and in such cases the carrying cost at the simple interest rate of 1-year SBI MCLR plus 100 bps shall be allowed from the date of filing of the Petition. <u>commercial operation of the integrated mine.</u>	Accordingly, in case of delay in filing application for input price determination, the carrying cost should be allowed from the commercial operation of the integrated mine.								
19.	<p>59. Transit and Handling Losses: For coal and lignite, the transit and handling losses shall be as per the following norms: -</p> <table border="1" data-bbox="289 743 760 1312"> <thead> <tr> <th data-bbox="289 743 525 854">Thermal Generating Station</th> <th data-bbox="525 743 760 854">Transit and Handling Loss(%)</th> </tr> </thead> <tbody> <tr> <td data-bbox="289 854 525 889">Pit head</td> <td data-bbox="525 854 760 889">0.20%</td> </tr> <tr> <td data-bbox="289 889 525 964">Non-pit head - Rail</td> <td data-bbox="525 889 760 964">0.80%</td> </tr> <tr> <td data-bbox="289 964 525 1312">Non-pit head multi-modal transportation (using two or more than two mode of transport involving multiple trans-shipments)</td> <td data-bbox="525 964 760 1312">1.00%</td> </tr> </tbody> </table> <p>Provided that in the case of pit-head stations, if coal or lignite is procured from sources other</p>	Thermal Generating Station	Transit and Handling Loss(%)	Pit head	0.20%	Non-pit head - Rail	0.80%	Non-pit head multi-modal transportation (using two or more than two mode of transport involving multiple trans-shipments)	1.00%		
Thermal Generating Station	Transit and Handling Loss(%)										
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Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions
	<p>than the pit-head mines which is transported to the station through rail, transit and handling losses applicable for non-pit head stations shall apply; Provided further that in case of imported coal, the transit and handling losses applicable for pit-head station shall apply.</p>	<p>Provided further that in case of imported coal, without involving inland transportation, the transit and handling losses applicable for pit-head station shall apply: Provided further that in case of imported coal, involving in land rail or road transport, the transit and handling losses applicable for Non-pit head station shall apply:</p>	<p>There can be situations where imported coal is received by the Utility at a distant port and then coal is transported to the generating station through railways/ road. Such type of stations are akin to of pit-head stations procuring coal from sources other than the pit-head mines which is transported to the station through rail/road. For such stations, transit and handling losses applicable for Non-pit head stations should apply.</p>
20.	<p>60. Gross Calorific Value of Primary Fuel: (1) The gross calorific value for computation of energy charges as per Regulation 64 of these regulations shall be done in accordance with 'GCV as Received'; Provided that the generating station shall have third party sampling done at the billing end and the receiving end through an agency certified by the Ministry of</p>	<p>60. Gross Calorific Value of Primary Fuel: (1) The gross calorific value for computation of energy charges as per Regulation 64 of these regulations shall be done in accordance with 'GCV as Received'; Provided that the generating station shall have third party sampling done at the billing end and the receiving end through an agency certified by the Ministry of</p>	<p>-The actual values of GCV loss between As Billed GCV and As Received GCV for the generating companies should be analyzed and accordingly the GCV loss should be prescribed. Because of moisture correction, the difference between As Billed (equilibrated basis) and As Billed (ARB) varies between 300 – 350 kCal/kg. Hence the GCV loss in transit should at least be 350 kCal/kg for Pit-head based generating stations or generating stations with Integrated mine and 650 kCal/kg for Non-Pit Head based generating stations. The regulation provides 300 kcal/kg normative loss in GCV between as As Billed and As Received GCV in</p>

Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions
	<p>Coal and ensure recovery of compensation as per Fuel Supply Agreement(s) and pass on the benefits of the same to the beneficiaries of the generating station;</p> <p>Provided further that in the absence of any third party sampling through an agency certified by the Ministry of Coal, the GCV shall be considered on the basis of 'as billed' by the Supplier less:</p> <p>i. Actual loss in calorific value of coal between as billed by the supplier and as received at the generating station, subject to maximum loss in calorific value of 300 kCal/kg for Pit-head based generating stations or generating stations with Integrated mine and 600 kCal/kg for Non-Pit Head based generating stations.</p> <p>No loss in calorific value between 'GCV as billed' and 'GCV as received' is admissible for generating stations procuring coal from Integrated mines or through the import of coal.</p>	<p>Coal and ensure recovery of compensation as per Fuel Supply Agreement(s) and pass on the benefits of the same to the beneficiaries of the generating station;</p> <p>Provided further that in the absence of any third party sampling through an agency certified by the Ministry of Coal, the GCV shall be considered on the basis of 'as billed' by the Supplier less:</p> <p>i. Actual loss in calorific value of coal between as billed by the supplier and as received at the generating station, subject to maximum loss in calorific value of 300 350 kCal/kg for Pit-head based generating stations or generating stations with Integrated mine and 600 650 kCal/kg for Non-Pit Head based generating stations.</p> <p>No loss in calorific value between 'GCV as billed' and 'GCV as received' is admissible for generating stations procuring coal from Integrated mines or through the import of coal, except in cases where inland transportation is</p>	<p>case of pit head generating stations and 600 kcal/kg in case of non-pit-head generating stations. This means that the difference of 300 kcal/kg between these type of stations is actually being allowed for GCV loss in transit (due to transportation in case of non-pit-head power plants). Now, in case of Imported Coal also, there could be a situation where inland rail/ road transportation might be involved after coal landing at a port. Therefore, GCV loss in transit could be there in case of such imported coal, where the same is transported inland to the power plant location. For such cases, the Regulation must provide for a normative GCV loss in transit, subject to a maximum of 300 kcal/kg.</p>

Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions
		<p>required for transporting imported coal to the generating station, in which case a loss in calorific value of 350 kcal/kg shall be allowed in case of such imported coal also.</p>	
21.	<p>70 (C) Gross Station Heat Rate:</p> <p>(a) Existing Thermal Generating Stations achieving COD before 1.4.2009</p> <p>200/210/250 MW Sets - 2,400kCal/kWh</p> <p>500 MW Sets (Sub-critical) - 2,375kCal/kWh</p> <p>Note 1: The normative gross station heat rate above is exclusive of the compensation specified as per the Grid Code. The generating company shall, based on the unit loading factor, consider the compensation in addition to the normative gross heat rate above.</p>	-	<p>For thermal generating stations with COD before 1.4.2009:</p> <p>As seen from the Explanatory Memorandum, the actual SHR of maximum central generating stations is higher than normative SHR, as per 2019 Tariff Regulations in the last 5 years. The Commission has stated that this is due to backing down of generating stations because of RE integration. However, separate compensation mechanism as per Grid Code for part load operations will likely compensate the generators for higher SHR. Therefore the Commission has proposed SHR of 2400 kcal/kg for 200 MW series units (compared to 2430 kcal/kg in 2019 Tariff Regulations) and 2375 kcal/kg for 500 MW units (compared to 2390 kcal/kg in 2019 Tariff Regulations). It is submitted that the current performance of generating stations is inferior even compared to the SHR as per 2019 Regulations. Therefore, any tightening of SHR norm beyond the SHR specified in 2019 Tariff Regulations will only degrade the financial performance of the Utilities. Hence the SHR</p>

Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions												
	<p>(b) Thermal Generating Stations achieving COD on or after 1.4.2009:</p> <p>(i) For Coal-based and lignite-fired Thermal Generating Stations: For 200/210/250 MW Sets.: 1.05 X Design Heat Rate (kCal/kWh) For 500 MW Sets and above: 1.04 X Design Heat Rate (kCal/kWh)</p> <p>..... Provided units based on a dry cooling system, the maximum turbine cycle heat rate shall be considered as per the actual design or 6% higher than the values given in the table above, whichever is lower</p>		<p>norms should be kept at the same level as that of 2019 Tariff Regulations.</p> <p>For thermal generating stations with COD after 1.4.2009:</p> <p>It is submitted that the power plant equipment once designed based on the prevalent regulations at the point in time does not undergo a change during the operation period hence there is no rationale to vary the margin over and above the design heat rate in successive Control Period. Moreover, with increased RE penetration, the actual PLFs of thermal plants are reducing substantially as compared to the normative levels and coupled with flexible operation leads to further degradation of operational parameters. In view of above, the margin over design heat rate should be retained as per the existing 2019 Tariff Regulations.</p> <p>Further, as per CEA recommendations vide file no. CEA-TH-17-13/1/2019-TETD division dated 19th Dec-2023, unit Heat rate degradation as shown in table below, due to part load (flexible operations) needs to be considered over and above to the normative heat rate.</p> <table border="1" data-bbox="1289 1192 1869 1421"> <thead> <tr> <th colspan="4">Unit Heat Rate % Degradation due to part load operation</th> </tr> <tr> <th>SR No</th> <th>Unit Loading %</th> <th>Sub-Critical Unit</th> <th>Super-Critical unit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>85-100</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Unit Heat Rate % Degradation due to part load operation				SR No	Unit Loading %	Sub-Critical Unit	Super-Critical unit	1	85-100	0	0
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Sr. No.	Draft CERC Tariff Regulations, 2024	Proposed changes in Draft	AEML Comments / suggestions												
			2	80- <85	2.1	1.8									
			3	75- <80	3	2.5									
			4	70- <75	4	3.3									
			5	65- <70	5.1	4.1									
			6	60- <65	6.1	4.9									
			7	55- <60	7.6	6									
			8	50- <55	9.35	7.7									
			9	45- <50	11.9	10.7									
			10	40- <45	14.2	13.2									
			Further, the compensation should be calculated block wise since the loss incurred in a block cannot be recovered. Also the compensation for impact of high moisture of imported coal in heat rate may be considered.												
22.	<p>70 (E) Auxiliary Energy Consumption:</p> <p>(a) For Coal-based generating stations:</p> <p>200 MW series - 8.50%</p> <p>300 MW and above Steam driven boiler feed pumps - 5.25% Electrically driven boiler feed pumps - 8.00%</p>	-	<p>It is submitted that as per CEA recommendations vide file no. CEA-TH-17-13/1/2019-TETD division dated 19th Dec-2023, auxiliary energy consumption degradation, as shown in table below, due to part load (flexible operations) needs to be considered over and above to the normative auxiliary energy consumption.</p> <table border="1" data-bbox="1289 1214 1801 1424"> <thead> <tr> <th colspan="3" data-bbox="1289 1214 1801 1321">% Degradation in Auxiliary power consumption due to part load operation</th> </tr> <tr> <th data-bbox="1289 1321 1444 1424">SR No</th> <th data-bbox="1444 1321 1604 1424">Unit Loading %</th> <th data-bbox="1604 1321 1801 1424">% degradation</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>				% Degradation in Auxiliary power consumption due to part load operation			SR No	Unit Loading %	% degradation			
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1	85-100	0																					
2	80- <85	0.5																					
3	70- <80	1.1																					
5	60- <70	1.8																					
7	50- <60	2.5																					
10	40- <50	3.2																					
23.	70 (D) Secondary Fuel oil consumption	-	<p data-bbox="1289 854 1982 1195">It is submitted that as per CEA recommendations vide file no. CEA-TH-17-13/1/2019-TETD division dated 19th Dec-2023, additional specific oil consumption of 0.2 ml/KWh should be provided for units operating in 40-55% average loading as oil support may be needed for safe plant operations at such low load operations. Further, Startup cost to be added after predefined number of start-up to compensate for its impact on SOC, SHR and APC.</p>																				

Ministry of Commerce and Industry
Department of Industrial Policy and Promotion
Office of Economic Adviser

RELEASE OF NEW SERIES OF WHOLESALE PRICE INDEX

12th May, 2017

Frequently Asked Questions on Revision of Wholesale Price Index (Base 2011-12)

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**Frequently Asked Questions (FAQs) on new series of Wholesale
Price Index (Base: 2011-12=100)**

Q1. What is Wholesale Price Index?

Ans. Wholesale Price Index (WPI) measures the average change in the prices of commodities for bulk sale at the level of early stage of transactions. The index basket of the WPI covers commodities falling under the three Major Groups namely Primary Articles, Fuel and Power and Manufactured products. The prices tracked are ex- factory price for manufactured products, agri-market (mandi) price for agricultural commodities and ex-mines prices for minerals. Weights given to each commodity covered in the WPI basket is based on the value of production adjusted for net imports. WPI basket does not cover services.

Q2. What is the purpose of revision of WPI series?

Ans. On account of the structural changes over time in the economy, products and their specification are changing even faster. Under the fixed basket approach the base year is changed at regular intervals. Simultaneously index basket weights and source agencies are also updated to keep the index series representative. So far, six revisions have taken place introducing the new base year, viz. 1952-53, 1961-62, 1970-71, 1981-82, 1993-94 and 2004-05. The current revision is the seventh since its regular introduction. The current revision of WPI is based on the recommendations of Working Group constituted under the chairmanship of Late Dr. Saumitra Chaudhuri, Ex Member, erstwhile Planning Commission which submitted its report in March 2014.

Q3. What are the new features of Wholesale Price Index with base 2011-12?

Ans. In the new WPI series significant improvement in concept, coverage and methodology has been made. In the revised WPI basket, the number of items has been increased from **676** to **697**. Efforts have been made to

enhance the number of quotations from **5482** to **8331**. The increase in number of quotations has been done across the major groups to ensure comprehensive coverage and representativeness. New definition of wholesale price index does not include taxes in order to remove impact of fiscal policy. This also brings new WPI series closer to Producer Price Index and is in consonance with the global practices. The item level indices are being compiled based on statistically robust Geometric mean as compared to Arithmetic mean used in the WPI 2004-05 series. Further for the first time a **Technical Review Committee** has been set up to recommend appropriate methodological intervention to continuously improve coverage, quality and timeliness of the WPI. The new series also present separate '**WPI Food Index**' which along with CPI Food Price Index published by CSO would help monitor the food inflation effectively.

Q4. What are the changes in weights, number of items and quotations at the major group level between WPI (2011-12) and WPI (2004-05)?

Ans. Due to changes in the structure of the economy overtime, the weights of various groups/sub-groups and items also changes to reflect their relative importance. The revised weights in the new WPI basket reflect the structure of the economy in the base year i.e. 2011-12. In the revised WPI basket the weight of Primary Articles group has increased from 20.1 per cent to 22.6 per cent, whereas the weight of Fuel and Power group has declined from 14.9 per cent to 13.2 per cent. The weight of Manufactured products has declined marginally from 64.9 per cent to 64.2 per cent. Following table shows the comparison of weights, number of products and number of quotations between 2004-05 and 2011-12 series.

Table 1

Major Group/ Group	Weights		No. of Items		No. of Quotations	
	2004-05	2011-12	2004-05	2011-12	2004-05	2011-12
ALL COMMODITIES	100.00	100.00	676	697	5482	8331
PRIMARY ARTICLES	20.12	22.62	102	117	579	983
FUEL&POWER	14.91	13.15	19	16	72	442
MANUFACTURED PRODUCTS	64.97	64.23	555	564	4831	6906

Q5. What is the basis of assignment of weights in WPI (base 2011-12)?

Ans. The weight of an item in the revised WPI basket is based on the net traded value of the item in the base year i.e. 2011-12. The net traded value is the value of output of the item in the year 2011-12 adjusted for net imports. Thus, net traded value represents the total transactions of each product in the economy during the base year. However the weight assigned to crude petroleum is based on the value of domestic production only as crude petroleum is not directly traded in the market and its derivatives (petroleum products) are assigned due weight based on net traded value.

Q6. What is the reason behind a significant increase of about 2.5% in the weight of Primary Articles in the WPI (2011-12)?

Ans. The weight of the Primary Article has increased from 20.1 % in WPI (2004-05) to 22.6% in WPI (2011-12). This increase is primarily attributed to the increase in the weight of “Crude Petroleum” from 0.90% in 2004-05 series to 1.94% in 2011-12 series and addition of one new item “Natural gas” with 0.46% weight. It may be noted that the average price of crude oil (Indian basket) was at peak in 2011-12.

Q7. What is the reason behind a decrease in weight of Fuel & Power group in the WPI (2011-12)?

Ans. The decline in the weight of Fuel & Power from 14.9% in 2004-05 to 13.1% reflects the Group's relative importance in the overall WPI basket.

Q8. Why has the weight of Manufactured Product group decreased?

Ans. The weight of manufactured products has marginally decreased from **64.9%** in WPI (2004-05) to **64.2%** in WPI (2011-12). There has however been a rearrangement of weights across the 22 (2-digit) groups in the new series (2011-12) vis-à-vis current series (2004-05). The 12 (2-digit) groups in 2004-05 now correspond to 22 (2-digit) groups in 2011-12.

- In the 2004-05 series, Manufacture of textiles had a weight of **7.33%**. This has now been bifurcated into 2 sub-groups in 2011-12 namely Manufacture of Textiles and Manufacture of Wearing Apparel. The combined weight of these groups is **5.69%** in 2011-12 series. The decrease in this Group's weight is due to some items which were earlier classified under textile such as *polyester staple fibre, viscose staple fibre, viscose staple fibre and acrylic fibre* have now been put under the chemical group given their widespread applicability, not restricted to textile sector.
- In 2004-05 series all Chemicals, Chemical product, Pharmaceuticals and Medicinal items were categorized under the Chemicals & Chemical Products group. However, in the new series a new 2 digit group titled Manufacture of Pharmaceuticals, Medicinal, and Chemical & Botanical products has been introduced. Accordingly, the weight of Chemicals & Chemical Products in 2004-05 series (**12.02%**) has been split into 2 new groups namely, Manufacture of Chemicals & Chemical Products and Manufacture of Pharmaceuticals, Medicinal, Chemical & Botanical products. The combined weight of both the Groups is **8.46%** in WPI

(2011-12) series. The fall in the combined weight is mainly due to deletion of certain items from the group like *Acid (Inorganic), Alumina & Aluminium Salt, Sodium Salt, Titanium Dioxide etc.*

Q9. Why are the weights of major groups in WPI at variance with their share in GDP?

Ans. The Wholesale Price Index (WPI) is an index covering prices of products/commodities only pertaining to four sectors comprising agriculture, mining, manufacturing and electricity. The other sectors of GDP, in particular, services sector are not covered under WPI. The share of these four sectors in GDP at current prices in 2011-12 was 41.4%. The weighting diagram of WPI is not drawn on the basis of gross value added which is a concept followed in GDP. The WPI weights are derived on the basis of turnover or value of output adjusted for net imports. The ratio of gross value added to value of output differs significantly in the sectors covered under WPI.

Q10. What is the change in the coverage of items in WPI (base 2011-12)?

Ans. In the revised WPI basket, total of 199 new items have been added and 146 items have been deleted. In all 498 items are common between the 2004 - 05 and 2011-12 series. The details of number of items and price quotations have been provided in the table in the next page.

Table 2

Major Groups/Groups	Weight		No. of Items					No. of Quotations	
	2004-05	2011-12	2004-05	2011-12	Common	Dropped/ Revised	New added/ revised	2004-05	2011-12
All Commodities	100.00	100.00	676	697	498(85.78 %)*	146 (11.97%) #	199 (14.22%)*	5482	8331
Primary Articles	20.12	22.62	102	117	92	9	25	579	983
Fuel and Power	14.91	13.15	19	16	15	2	1	72	442
Manufactured Products	64.97	64.23	555	564	391	135	173	4831	6906

* Weight of the items corresponds to 2011-12 series. # Weight of the items corresponds to 2004-05 series

Q11. What are the major changes in the item basket of the Primary Articles?

Ans. Following table illustrates the changes in the item basket of Primary Articles.

Table 3

PRIMARY ARTICLES	New Items Added in WPI (2011-12) item basket	Items deleted from WPI (2004-05) item basket
(A). FOOD ARTICLES	Peas/Chawali , Rajma added under pulses	-
	Radish, Carrot, Cucumber, Pointed gourd, Bitter gourd, Bottle gourd, Beans, Pumpkin Drumstick under Vegetables	-
	Mosambi (Sweet Orange), Pomegranate, Amla, Jackfruit, Pear Almond, and Walnut under Fruits	-
	Tamarind under Condiment and Spices	-
	Betel Leaves under Other Food Articles	-
(B).NON-FOOD ARTICLES	Industrial wood under Other Non-Food Articles	Logs & Timber from Other Non-Food Articles

(C). MINERALS	Copper Concentrate and Lead Concentrate under Metallic Minerals	Copper Ore, Gypsum from Metallic Minerals
	Garnet under Other Minerals	Kaolin, Dolomite, Magnesite, Barytes, Steatite, Graphite from Other Minerals
(D).CRUDE PETROLEUM & NATURAL GAS	Natural Gas	-

- The seasonality chart of the Fruits and Vegetables Sub Group under the Food Articles has been updated in the new series. Prices of seasonal fruits and vegetables will be available for longer period. For example, tomato price index will now be available around the year as against eight months in the current series of WPI (base 2004-05). Cauliflower was earlier available only for six months but now it will be available for eight month in year.

Q12. What are the major changes in the item basket of Fuel & Power?

Ans. The Fuel and Power group has been updated with significant changes made in number of items and price quotations. To compile Non-Coking Coal index, price quotations have been trifurcated into the following categories as separate items based on grades, to take into account the wide variation in the prices of different grades benchmarked on the basis of Gross Calorific Value (GCV).

- Non-Coking Coal G1 to G6 [GCV exceeding 5500 Kcal/kg.]
- Non-Coking Coal G7 to G14 [GCV 3100 Kcal/kg to 5500 Kcal/kg]
- Non-Coking Coal G15 to G17 [GCV < 3100 Kcal/kg.]

Similarly, improvement has been made by compiling electricity price index based on prices prevailing at bulk transactions level. Under 2004-05 series, price of electricity for WPI was measured based on retail tariff applicable

to usage in different sectors such as agriculture, industry, domestic, commercial, and railways. This was not capturing the price of electricity at point of bulk sale. In the new series, monthly average rate of sale of power of 49 selected generating stations from Central, State and private sectors covering Hydro and Thermal sectors to distributors has been used as relevant price of electricity. The changes in the items under the Fuel and Power group are given in Table 4.

Table 4

II FUEL & POWER	New Items Added in WPI (2011-12) item basket	Items deleted from WPI (2004-05) item basket
(A). COAL	-	Coke
(B). MINERAL OILS	Petroleum Coke	Light Diesel Oil
(C) ELECTRICITY	Electricity	Electricity (Domestic) Electricity (Commercial) Electricity (Agricultural) Electricity (Railways Traction) Electricity (Industry)

Q13. What are the major changes in the item basket of the Manufactured Products?

Ans. A reclassification of the following Manufactured Products groups at 2-digit level has been done following National Industrial Classification (NIC) 2008 in the WPI (Base 2011-12) series.

Table 5

S. No.	WPI (Base 2004-05)	WPI (Base 2011-12)
1	Manufacture of Food Products	1. Manufacture of Food Products
2	Manufacture of Beverage, tobacco and tobacco	2. Manufacture of Beverages 3. Manufacture of Tobacco
3	Manufacture of Textiles	4. Manufacture of Textiles 5. Manufacture of Wearing Apparel
4	Manufacture of Leather and Leather Products	6. Manufacture of Leather and Leather Related Products
5	Manufacture of Wood & Wood Product	7. Manufacture of Wood and of Product of Wood and Cork
6	Manufacture of Paper and paper products	8. Manufacture of Paper and paper Products 9. Manufacture of Printing and Reproduction of Recorded Media
7	Manufacture of Chemical and chemical products	10. Manufacture of Chemicals and Chemical Products 11. Manufacture of Pharmaceuticals, Medicinal Chemical and Botanical Products
8	Manufacture of Rubber and Plastic Product	12. Manufacture of Rubber and Plastic Products
9	Manufacture of Non-Metallic Mineral Products	13. Manufacture of Other Non-Metallic Mineral Products
10	Manufacture of Basic metal , alloys and metal products	14. Manufacture of Basic Metals 15. Manufacture of Fabricated Metal Products, except Machinery and Equipment

11	Manufacture of Machinery and machine tools	16. Manufacture of Computer, Electronic and Optical Products 17. Manufacture of Electrical Equipment 18. Manufacture of Machinery and Equipment
12	Manufacture of Transport equipment & parts	19. Manufacture of Motor Vehicles, Trailers and Semi-Trailers 20. Manufacture of Other Transport Equipment
	-	21. Manufacture of Furniture 22. Other Manufacturing

Q14. What is the reason behind a substantial increase in the number of quotations for Fuel & Power in the new series of WPI?

Ans. The number of quotations for Fuel & Power has increased from **72** in WPI (2004-05) to **442** in WPI (2011-12) as per the details given below:

Coal: In new series, pithead run of mine notified prices for both regulated and unregulated sectors from all mines and for all grades is being used. This change has increased the number of quotations for coal from **20** in current series to **127** in new series.

- **Electricity:** There is a change in the definition of prices for computation of price index for electricity from considering use based retail prices in the WPI (2004-05) to using average rate of sale of power of selected generating stations in the new series WPI (2011-12).

There is a substantial increase in number of quotations from **5** in 2004-05 series to **49** in new series covering Hydro and Thermal (coal and gas) based power plants.

- **Mineral Oil:** Number of quotations under mineral oil has increased from 47 in current series to 266 in new series due to increased coverage of refineries and varieties.

Q15. What is the change in the method of compilation of item level indices in WPI (Base 2011-12)?

Ans. In the new WPI series (2011-12), elementary price index (i.e. at the item level) has been computed using the geometric mean of the price relatives, which is statistically robust, as opposed to the practice of taking arithmetic mean of price relatives in 2004-05 series. The formula geometric mean is used for calculation of elementary indices by CSO in its CPI series. The change is also in tune with the international best practices. Prior to independence, the WPI was computed using Geometric Mean. The weighted arithmetic mean was adopted in preference to weighted geometric mean since independence with increase in number of commodities and consequent computational complexities.

Q16. Why is the indirect tax not been included in the compilation of WPI in the new series?

Ans. A significant change in the new series of WPI has been the exclusion of indirect taxes while compiling indices of manufactured products. The Working Group for revision of WPI had recommended that taxes should not figure in this measure so that price signals emerging from production side of the economy are not influenced by the fiscal policy.

- Excluding indirect taxes brings the new series of WPI conceptually closer to the concept of output Producer Price Index (PPI). PPI reflects the

change in average prices that producers get. This is also in keeping with the international best practices.

- The exclusion of indirect taxes would also ensure the continuity and compatibility of new WPI series as and when Goods and Services Tax (GST) is introduced.
- WPI is used as a deflator for nominal macroeconomic aggregates like GDP and Index of Industrial Production (IIP). Since the nominal estimates of GVA for different sectors are computed at basic price exclusive of taxes on products taxes, excluding indirect taxes from WPI makes it a compatible and appropriate deflator.

Q17. How does the inflation estimates based on the new series of WPI (2011-12) compare with the WPI (2004-05)?

Ans. The inflation for “All Commodities” in the new series of WPI (2011-12) is in general lower than 2004-05 series due to shift to latest base year. The minor variation in rate of inflation estimates can be attributed to the changes in weighting structure, increase in number of quotations, inclusion of new items and exclusion of obsolete items, exclusion of indirect taxes and use of geometric mean instead of arithmetic mean in the new series.

The slight variation in the trend of inflation estimates of Fuel and Power Group based on the two series are due to significant increase in number of quotations in the new series, taking electricity prices at bulk transaction level rather than at retail level, variation in item level weights etc. the steep rise in inflation estimates of Fuel and Power Group from January 2017 onwards has been due to spurt in global crude oil prices in comparison to the corresponding months of 2016 and revision of coking coal prices in January 2017 after a long period.

The inflation estimates of Manufactured Products Group under the new series by and large are closely aligned to the 2004-05 series. The marginal variation in the month to month inflation estimates can be attributed due to the exclusion of indirect taxes, reclassification of product groups at 2-digit level and variation in weights in textiles, chemicals and basic metals.

Q18. What explains the divergence between WPI and CPI?

Ans. WPI reflects the change in average prices for bulk sale of commodities at the first stage of transaction while CPI reflects the average change in prices at retail level paid by the consumer. Major difference is the underlying data used for the derivation of weights of the items retained in the two index baskets. The weights of the WPI are based on production values whereas the weights of the CPI basket are based on the average household expenditure taken from the Consumer expenditure survey conducted in the base year. The prices used for compilation of WPI are collected at ex-factory level for manufactured products, at ex-mine level for mineral products and mandi level for agricultural products. In contrast, retail prices applicable to consumers and collected from various markets are used to compile CPI.

- The reasons for the divergence between the two indices can also be partly attributed to the difference in the weight of food group in the two baskets. CPI Food group has a weight of 39.1 per cent as compared to the combined weight of 24.4 per cent (Food articles and Manufactured Food products) in WPI basket. Similarly weights of the major petroleum products such as petroleum and HSD also vary significantly.
- The CPI basket consists of services like housing, education, medical care, recreation etc. which are not part of WPI basket. A significant proportion of WPI item basket represents manufacturing inputs and intermediate goods like minerals, basic metals, machinery etc. whose prices are

influenced by global factors but these are not directly consumed by the households and are not part of the CPI item basket. Thus even significant price rise or decline in items included in WPI basket need not necessarily translate into CPI in the short run. The rise or fall in prices at wholesale level spills over to the retail level after a lag.

- Similarly, the movement in prices of non-tradable items included in the CPI basket widens the gap between WPI and CPI. The relative price trends of tradable vis-a-vis non-tradable is an important explanatory factor for divergence in the two indices in the short term.

Q19. What is the significance of new “WPI Food Index” in WPI (Base 2011-12) series and how it has been estimated?

Ans. The WPI Food index is compiled by taking the aggregate of WPI for Food Products under Manufacture Products and Food Articles under Primary Article using weighted arithmetic mean. Indices for Food Articles and Food Products were being released separately in WPI (2004-05) as well. The combined index number of WPI Food indices together with the Consumer Food Price Index published by CSO, would help monitor the food inflation effectively.

Q20. What are the main uses of WPI?

Ans. The main uses of WPI are the following:

- a) Provides estimates of inflation at the wholesale transactions level for the economy as a whole. This helps in timely intervention by the Government to check inflation, in particular inflation in essential commodities, before the price increase spills over to retail prices.

- b) WPI is used as deflator for many sectors of the economy for estimating GDP by CSO. It is also used to deflate nominal values of production in high frequency IIP.
- c) WPI is also used for indexation by users in business contracts.
- d) Global investors also track WPI as one of the key macro indicators for their investment decisions.

Q21. What is Producer Price Index (PPI)?

Ans. **Producer Price Index (PPI)** measures the average change in the price of goods and services either as they leave the place of production, called output PPI or as they enter the production process, called input PPI.

Q22. How is PPI different from WPI?

Ans. PPI is different from WPI on following grounds:

- WPI captures the price changes at the point of bulk transactions and may include some taxes levied and distribution costs up to the stage of wholesale transactions. PPI measures the average change in prices received by the producer and excludes indirect taxes.
- Weights of items in WPI are based on net traded value whereas in PPI weights are derived from Supply Use Table.
- PPI removes the multiple counting biases inherent in WPI. PPIs can be compiled separately for Out PPIs, Input PPIs and Export and Import PPIs. In build Stage of Processing indices can be compiles to avoid multiple counting.
- WPI does not cover services and whereas PPI includes services.

Q23. How is PPI different from Consumer Price Index (CPI)?

Ans. PPI is different from CPI on following grounds:

- PPI estimates the change in average prices that a producer receives while CPI measures the change in average prices that a consumer pays. The prices received by the producers differ from the prices paid by the consumers on account of various factors such as taxes, trade and transport margin, distribution cost etc..
- Weights of items in CPI are derived from Consumer Expenditure Surveys whereas for PPI it is calculated on the basis of Supply Use Table.
- CPI based inflation estimates are used as nominal anchor for Monetary Policy formulation in general, whereas PPI estimates are used as deflators and for indexation of contracts etc.

Q24. What is the composition and Terms of Reference of Technical Review Committee (TRC)?

Ans. Economies undergo structural changes over time. Products and their specification both in terms of quality and technology are changing even faster. This makes it increasingly difficult to obtain the price information of selected products for a fixed number of quotations over a longer period of time. Further an implicit disadvantage of Laspeyre's formula used for compiling the WPI is that the indices with fixed weighting diagram fail to capture the dynamic changes in product mix and structure of the economy over time. In order to address important technical issues such as substitution of source of data, change in specification of products and other data/methodological issues which require continuous process of review on a dynamic basis so that the new WPI series remains relevant during the life of the series, an institutional mechanism has been established through

creation of Technical Review Committee (TRC) chaired by Secretary, Department of Industrial Policy & Promotion.

The composition of TRC is as follows:

1.	Secretary, D/o Industrial Policy and Promotion (DIPP)	Chairman
2.	Secretary, M/o Statistics and Programme Implementation	Member
3.	Chief Economic Adviser, Ministry of Finance	Member
4.	Principal Economic Adviser, DIPP	Member
5.	Economic Adviser, DIPP	Member Secretary

The function of TRC will be as follows:

- Reviewing periodically the list of products in the item basket of WPI and suggesting methodology for inclusion of new important items in and exclusion of outdated items from the existing basket as and when warranted
- Reviewing periodically the panel of factories for compilation of WPI and suggest methodology for including new representative units that emerged after the roll out of the series in the existing panel, along with suggesting adjustment of the back series.
- The Committee will also consider cases of closed units during the currency of the base year and recommend the methodology for replacing such units by new ones.
- Reviewing periodically the items in the item basket that exhibit extraordinarily high increase/ decline in index during the currency of a fixed base year and propose normalization methodology.
- Suggest methodology for adjusting prices of items with frequently changing specification.
- Recommending appropriate methodological intervention to improve coverage, quality and timeliness of the WPI.

Q25. What are the Term of References of the Working Group for the revision of the current series of Wholesale Price Index?

Ans. The Terms of Reference of the Working Group are as follows:-

- To select the most appropriate Base Year for the preparation of a new official series of Index Numbers of Wholesale Price (WPI), Producers Price Index (PPI) and Business Service Price Index (BSPI) in India.
- To review commodity basket of the current series of WPI, PPI and BSPI and suggest additions/ deletions of commodities in the light of structural changes in the economy witnessed since 2004-05.
- To evolve a suitable system for allocation weight to the various commodities to be included in the WPI/ PPI/BSPI basket.
- To decide the computational methodology to be adopted for Monthly WPI/ PPI.
- To suggest methods for ensuring smooth flow of data and also to look into the possibility of having a single agency for collecting data for Wholesale Price Index (WPI) and Index of Industrial Production (IIP).
- To suggest any other improvements as may be necessary for enhancing the reliability of the official series of WPI/PPI/BSPI.

Q26. What Sub-Groups were formed under the Working Group for the revision of the Wholesale Price Index?

Ans. The following Sub Groups were formed under the Working Group for revision of Wholesale Price Index:

- I. The Subgroup on analytical, conceptual, and computerization related issues
- II. The Subgroup on Agricultural Commodities
- III. The Subgroup on Mining, Fuel and Power
- IV. The Subgroup on manufacturing items basket (organized and unorganized)
- V. The Subgroup on Producer Price Index

Annexure 1**Comparative statement on the weights of WPI (2004-05) and WPI (2011-12)**

Major Groups/Groups	2004-05	2011-12
All Commodities	100	100
Primary Articles	20.118	22.618
Food Articles	14.337	15.256
Non Food Articles	4.258	4.119
Minerals	0.623	0.833
Crude Petroleum & Natural Gas	0.900	2.410
Fuel and Power	14.91	13.152
Coal	2.094	2.138
Mineral Oils	9.364	7.950
Electricity	3.452	3.064
Manufactured Products	64.972	64.230
Manufacture of Food Products	9.974	9.122
Manufacture of Beverages	1.762	0.909
Manufacture of Tobacco Products		0.514
Manufacture of Textiles	7.326	4.881
Manufacture of Wearing Apparel		0.814
Manufacture of Leather and Leather Related Products	0.835	0.535
Manufacture of Wood and of Product of Wood and Cork	0.587	0.772
Manufacture of Paper and paper Products	2.034	1.113
Manufacture of Printing and Reproduction of Recorded Media		0.676
Manufacture of Chemicals and Chemical Products	12.018	6.465
Manufacture of Pharmaceuticals, Medicinal Chemical and Botanical Products		1.993
Manufacture of Rubber and Plastic Products	2.987	2.299

Major Groups/Groups	2004-05	2011-12
Manufacture of Other Non-Metallic Mineral Products	2.556	3.202
Manufacture of Basic Metals	10.748	9.646
Manufacture of Fabricated Metal Products, except Machinery and Equipment		3.155
Manufacture of Computer, Electronic and Optical Products	8.931	2.009
Manufacture of Electrical Equipment		2.930
Manufacture of Machinery and Equipment		4.789
Manufacture of Motor Vehicles, Trailers and Semi-Trailers	5.213	4.969
Manufacture of Other Transport Equipment		1.648
Manufacture of Furniture		0.727
Other Manufacturing		1.064

Annexure 2:

Ramp rate considering NLDC methodology:

Block	Actual Gen (MW)	Actual Ramp (MW)	Actual Ramp Rate (%)
	A	B = AG (T+1) - AG (T)	C = (B/15/227.50)
T	125		
T+1	216.83	91.83	2.69%
T+2	227.50	10.67	0.31%
Actual Av. Ramp Rate (AARR)			1.50%

Ramp rate considering BHEL methodology:

Block	Ramp time (Minutes)	Ramp (MW)	Ramp Rate (%)
	A	B	C = B/A/227.50
T	NIL	NIL	-
T+1	5 (From 00:05 Min to 00.00 Min of T+1 Block)	102.50 (227.50 - 125)	9.01%
T+2	NIL	NIL	-
Average (Since there was no ramp in T Block and T+2 Block, they have not been considered in Average)			9.01%

Assumptions:

1. Unit size = 250 MW
2. Net capacity after Aux consumption = 227.50 MW
3. Actual generation (assumed) by Thermal Units in T, T+1 and T+2 Blocks

Time block	Time	Station MW
Block T	11:46 to 12:00	125
Block T+1	12:01	150
	12:02	175
	12:03	200
	12:04	225
	12:05	227.5
	12:06	227.5
	12:07	227.5
	12:08	227.5
	12:09	227.5
	12:10	227.5
	12:11	227.5
	12:12	227.5
	12:13	227.5
	12:14	227.5
	12:15	227.5
	Av. MW	216.83
Block T+2	12:16 to 12:30	227.50

Ramp (MW/min)	Net Capacity (MW)
25	227.5

Conclusion:

Ramp rate as per NLDC methodology works out to be too low compared to BHEL methodology