

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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CASE No. 264 of 2018

In the matter of
Petition of Maharashtra State Electricity Distribution Co. Ltd to Review certain issues
in the Commission's Order dated 12.07.2018 in Case No. 84 of 2015.

CORAM

Anand B. Kulkarni, Chairperson
I. M. Bohari, Member
Mukesh Khullar, Member

Maharashtra State Distribution Company Ltd (MSEDCL) Petitioner

V/s

Jawahar Shetkari Sahakari Sakhar Karkhana Ltd. (JSSSKL) ... Respondent

Appearance

Petitioner Shri Paresh Bhagwat

Respondent Shri M.G. Joshi

Date: 2 November, 2018

Order

Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) filed a Review Petition on 6 July, 2018 under Section94 (1) (f)of the Electricity Act (EA), 2003 seeking review on certain issues of the Commission's Order dated 12.07.2018 in Case No. 84 of 2015

2. MSEDCL's main prayers are as follows:

“....

- a)
- b) *Clarify the treatment to be given to the contracts entered by MSEDCL based on order dated 15.11.2017 issued in Case No. 155 of 2017.*
- c) *Clarify the treatment to be given for post expiry of EPA with Group-I, II & IV wind projects where commission has not determined any tariff.*
- d) *Fixing the ceiling tariff of Rs. 0.75 per unit for Wind Projects and allow first right for refusal to MSEDCL in case of post expiry of wind EPA or else allow MSEDCL to fix the ceiling rate for Competitive Bidding.*
- e) *MSEDCL humbly request to the commission as what treatment is to be given to this short term wind power procurement whose PPA are already executed or LOIs are already issued.*
- f) *Not to keep variable cost fixed for Bagasse & Biomass based projects that have completed their EPA's of 13 years and allow MSEDCL to decide a ceiling tariff based on market algorithm.*
- g)

3. The issues raised by MSEDCL and its claims for review of the impugned Order are to be assessed considering the limited scope of review specified in Regulation 85(a) of the MERC (Conduct of Business) Regulations, 2004, which reads as follows:

“85.(a) any person aggrieved by a direction, decision or order of the Commission, from which (i) no appeal has been preferred or (ii) from which no appeal is allowed, may, upon the discovery of new and important matter or evidence which, after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when the direction, decision or order was passed or on account of some mistake or error apparent from the face of the record or for any other sufficient reasons, may apply for a review of such order, within forty five (45) days of the date of the direction, decision or order, as the case may be, to the Commission.”

4. MSEDCL in the Review Petition has stated that:

4.1. Respondent JSSSKL's bagasse based co-generation plant has successfully executed the EPA with Maharashtra State Electricity Distribution Company Limited (MSEDCL) for a capacity of 12 MW with tenure of 13 years.

4.2. MSEDCL has stated that, in the impugned Order the Commission has failed to address following concern:

- a. The impugned Order does not mention the treatment to be given to Group- II, Wind Projects and only lays emphasis on Group- III, Wind Projects.
- b. While on one hand, ceiling tariff for Wind projects have been determined and locked, ceiling tariff for Biomass and Bagasse would only be fixed for fixed component, and this would be added in the variable cost component as per the Generic tariff order issued by the Commission time to time, which would lead to increase of purchase cost.
- c. The Commission vide order dated 12.06.2018 issued in Case No. 122 of 2018 has allowed purchase of wind power to the quantum of 250 MW with a ceiling rate of Rs. 2.52 per unit. Hence, it may be clarified as to the treatment to be given to such contracted capacity.
- d. The Commission has determined ceiling tariff of Rs. 0.75 per unit for group-III wind generators which may be very less and wind generators may not be inclined to participate in the bidding procedure as the Commission has not mandated these generators(after post expiry of PPA) to offer such power to MSEDCL. Hence these wind generators may opt for open access as they are getting rates more than determined ceiling rate of Rs 0.75 p.u., thus MSEDCL may lose the opportunity to buy cheaper wind power to fulfil its RPO.
- e. MSEDCL humbly requests the Commission as to what treatment is to be given to the short term wind power procurement at Rs. 2.52 per unit rate (allowed by the Commission vide order 155 of 2017 dated 15.11.2017) whose PPA are already executed or LOI's are already issued.

4.3. The impugned Order lays down a roadmap to be followed for procurement of power from Group-III Wind Projects but does not mention anything w.r.t the treatment and procurement procedure to be followed for purchase of power from Group-I, II & IV Wind Projects.

4.4. The impugned Order recognizes that Wind Project have single part tariff and Biomass and Bagasse have two part tariff. However, the said order only fixes the ceiling tariff of fixed cost w.r.t Biomass and Bagasse projects which is only one part of the tariff and lets the other part of the tariff i.e. variable cost to be added up to the ceiling tariff

which would increase the cost of power purchase from such projects.

- 4.5. That allowing variable cost based on generic tariff which is fixed every year by the Commission to be added up with the ceiling tariff/rate discovered through competitive bidding would lead to increase in overall cost of power purchase of MSEDCL.
- 4.6. As per the Generic RE tariff order for FY-2018-19 the tariff for bagasse based co generation is Rs. 4.83 p.u. (F.C. Rs. 0.66 p.u. + V.C. 4.17 p.u.).
- 4.7. Further to this MSEDCL has conducted the competitive bidding for procurement of Bagasse based cogeneration power for 300MW (200MW +100MW) and has discovered maximum rate of Rs. 4.99 per unit. Further as per the PPA successful bidders has agreed for 50 : 50 proportion of Fixed & Variable cost in the quoted tariff. Thus considering the variable cost of Rs. 2.50 & Fixed cost of 0.66 the total tariff comes to be Rs.3.16 per unit.
- 4.8. Moreover Govt. of Maharashtra vide letter dated 13.07.2018 has directed MSEDCL to procure additional 200MW Bagasse based cogeneration power at a ceiling rate of Rs. 4.00 per unit. Considering the rates in all above three cases rate determined in the impugned order by the Commission for Bagasse based cogeneration is unviable to buyer.
- 4.9. Moreover, variable cost should not be fixed for Bagasse & Biomass based projects that have completed their EPA's of 13 years and it should be left open to MSEDCL to decide a ceiling tariff based on market algorithm after which transparent competitive bidding shall reveal the final rates, which the Commission could allow under Section 63 of Electricity Act, 2003.
- 4.10. That the Commission was pleased to fix the ceiling tariff of Rs. 0.75 p.u. for Group-III wind projects, but has not made it compulsory for the wind generators to sell such power from these projects to MSEDCL. Wind generators may not be inclined to participate in the bidding procedure and may opt for open access whereby MSEDCL loses the opportunity to buy cheaper wind power to fulfil its RPO.
- 4.11. While it may be true that all these projects that have completed 13 years have serviced their debts, however fixing such lower ceiling rate for competitive bidding to them and keeping option of selling open access would demotivate such projects to sell their power to MSEDCL which in turn would lead to procurement of costlier power.

- 4.12. That the useful life of such projects whose EPAs have expired is 20 years. Hence for the remaining 7 years at the end of 13 years period of EPA, a methodology should be devised for allowing MSEDCL to purchase such power at such cost which is beneficial to all stakeholders by giving MSEDCL the first right of refusal.
- 4.13. The Commission vide order in Case no. 155 of 2017 has allowed MSEDCL, rates agreed between MSEDCL and the concerned wind generators (i.e. post expiry of EPA) and has also allowed to consider this power in meeting out RPO. Accordingly, MSEDCL has developed a web based portal from 01.01.2018 through which wind generator shall apply on-line for the sale of power to MSEDCL on short term basis, 30 days in advance of the period for which it desires to sale power. The wind energy shall be purchased only if the period of short term sale is for minimum 3 months and maximum 12 months. As per MERC order dated 15.11.2017 in case no. 155 of 2017, MSEDCL is purchasing this wind energy @ Rs. 2.25/- per unit for group I and @ Rs. 2.52/- per unit Group II, III and IV through MoU route.
- 4.14. Till date, total 103 Nos. PPAs for 107.48 MW capacities are executed. LOIs are issued to 21 No. of wind generators for the 39.78 MW capacity but PPA is not executed yet in view of the MERC order dated 12.07.2018. Further, 15 Nos. of wind generators have applied on web portal for short term sale to MSEDCL which are under process.
- 4.15. MSEDCL humbly request to the commission as to what treatment is to be given to this short term wind power procurement whose PPAs are already executed or LOIs are already issued.
5. Jawahar Shetkari Sahakari Sakhar Karkhana Ltd. in its submission dated 1 October has submitted Para wise reply to the MSEDCL's Petition as follows:
- 5.1 The Commission has taken a view that Tariff for the Bagasse based Projects shall be decided by competitive bidding. The tariff structure shall be of two parts (Variable cost + Fixed cost). Bidding needs to be conducted for discovering only Fixed Cost. Variable cost shall be applicable as decided by the Commission in its suo-motu Generic Tariff Order determined annually. Being apex Regulatory Body within State of Maharashtra, the Commission has taken balanced approach considering interests of all stakeholders viz. Generator, Licensee and Consumers and also considering RPO obligations of Licensees. View taken by MSEDCL that by this approach purchase cost would increase is incorrect.

- 5.2 It is correct to say that through competitive bidding for procurement of Bagasse based co-generation power for 300MW MSEDCL has discovered maximum rate of Rs. 4.99 per unit. However it is also pointed out to the Commission that MSEDCL has not conducted separate bidding to discover variable cost and fixed cost. Therefore, MSEDCL's stand of consideration of 50:50 proportion of fixed cost and variable cost in rate (Rs. 4.99 per unit) discovered in competitive bidding is incorrect, illogical and illegal as this stand of MSEDCL is not supported by any legal provision or legal framework.
- 5.3 MSEDCL's submission of rate determined by the Commission for Bagasse based project is unviable to buyer is incorrect. Such type of thinking is narrow consideration of regulatory regime. As stated earlier, the Commission has considered interest of all stakeholders including RPO obligations of Licensees and determined the rates. Sustainability of Bagasse based projects will contribute to meeting the non-solar RPO obligations of Licensee.
- 5.4 Respondent agrees with the Petitioner on the direction of Commission for competitive bidding for Bagasse based projects whose 13 years EPA has completed and would abide by further directions of Commission in this regard.
- 5.5 It has already exported power to MSEDCL for FY 2014-15 (First year of post expiry of 13 years EPA), FY 2015-16(Second year of post expiry of 13 years EPA) FY 2016-17(Third year of post expiry of 13 years EPA) FY 2017-18(Fourth year of post expiry of 13 years EPA).
- 5.6 As per Daily Order dated 3 December 2015 in Case No. 84 of 2015, it has received payment as per Average power purchase cost of MSEDCL as an interim arrangement. It has not recovered even Fuel cost for the said period.

In its final Order dated 12th July, 2018 in Case No. 84 of 2015 in Para 13(c) the Commission has given ruling as follows-

"..... On the other hand annual variable cost for Biomass and Bagasse based projects are already determined in the Generic Tariff Order, which could be made applicable to those projects under the present case, thereby mitigating the fuel related risks of such projects and making the Regulatory process easy to implement."

- 5.7 In view of this Respondent has filed a Petition in MERC (Case No. 225 of 2018) for clarification of tariff related issues of energy already supplied by Respondent.

5.8 Awarding proper tariff for renewable projects has dual benefits to MSEDCL of meeting RPO obligations and low risk of purchasing costlier power.

5.9 Additional submissions by JSSSKL:

- a) As soon as the said Order dated 12 July, 2018 is passed, JSSSKL, vide letter Ref.No.Ele/4672/2018-19 dated 4th August, 2018 addressed to Chief Engineer (Power Purchase) MSEDCL, has already given undertaking that JSSSKL will participate in competitive bidding for FY 2018-19 for the projects whose 13 years EPA are expired and JSSSKL will execute EPA with MSEDCL (for fifth year of post expiry of 13 years EPA period) at rate derived in the forthcoming tendering process or with maximum ceiling rate whichever is lower.
- b) Thereafter, JSSSKL received a letter dated 23 August, 2018 by mail from Chief Engineer (Power Purchase) in which he intimated by referring to Para No. 13(g) of the Commission's final Order dated 12 July, 2018 in Case No. 84 of 2015, about termination of interim arrangement made as per Daily Order dated 3 December, 2015.
- c) In reply to the said letter, JSSSKL vide letter Ref. No.Ele./5477/2018-19 dated 27 August, 2018 has intimated to Chief Engineer (Power Purchase) about Commission's ruling about no change of seven years period of EPA and pointed out that the Commission has given ruling only on tariff determination and its procedure.
- d) Considering that sugar cane crushing season is going to start shortly that is from middle of October 2018, till the completion of bidding procedure, JSSSKL has further requested to MSEDCL to make an interim arrangement for procurement of energy for FY 2018-19 and issue proper directions to concerned officials of MSEDCL and reiterated that JSSSKL will be bound by undertaking given to MSEDCL and also bound by directives of the Commission that may be given in clarification Application (in Case No. 225 of 2018) filed by JSSSKL on 6 August 2018.
- e) Till date MSEDCL has not given reply to us about any intimation regarding arrangement for procurement of power for FY 2018-19. In view of this Commission's directions to MSEDCL for procurement of power for FY 2018-19 is required.

5.10 As submitted in Para No 5.14 it seeks urgent directions to MSEDCL regarding procurement of power from it for FY 2018-19, further seeks tariff related directions for the said period.

5.11 Submissions in support of directions sought by JSSSKL:

- a) JSSSKL has followed rulings of the Commission in Final Order dated 11 November, 2014 in Case No. 127 of 2014 (Petition filed by JSSSKL) and as per directions given by Commission has accepted counter offer of MSEDCL regarding tariff for seven years and communicated acceptance of the said counter offer to MSEDCL.
- b) For seeking approval for the said mutually agreed tariff for seven years, JSSSKL has filed Case No. 84 of 2015 and as per interim directions given by the Commission by Daily Order dated 3 December 2015 in Case No. 84 of 2015, JSSSKL vide letter dated 10 December, 2015 accepted terms and conditions mentioned in the aforesaid Daily Order of the Commission. The JSSSKL also accepted that after the public hearing, the necessary EPA between JSSSKL and MSEDCL will be binding on both the parties as per the final directions given by the Commission with any suggestions, amendments in EPA. Based on directions of the Commission, the Applicant and the MSEDCL on 23 January 2017, executed an EPA for term of seven years.
- c) By final Order dated 12 July 2018 in Case No. 84 of 2015, the Commission has not changed tenure of seven years of EPA. It has given ruling on tariff determination.
- d) JSSSKL has already given undertaking to MSEDCL that JSSSKL will participate in competitive bidding for FY 2018-19 for the projects whose 13 years EPA are expired and JSSSKL will execute EPA with MSEDCL (for fifth year of post expiry of 13 years EPA period) at rate derived in the forthcoming tendering process or with maximum ceiling rate whichever is lower.
- e) Earlier, while procuring 200 MW Bagasse based co-generation power, MSEDCL has taken such undertaking from Generators and had procured power before bidding procedure is completed.
- f) JSSSKL would suffer irreparable injury if MSEDCL did not procure power for FY 2018-19 on the other hand after procuring power of Respondent, MSEDCL will not suffer any type of injury. Thus balance of convenience is in favour of JSSSKL.
- g) Considering the present Peculiar situation faced by JSSSKL, JSSSKL prays to the Commission as follows:-
 - i. To issue urgent proper interim directions to MSEDCL to procure power of JSSSKL for FY 2018- 19 and issue Daily Order accordingly.
 - ii. To declare interim tariff for power to be supplied by JSSSKL to MSEDCL for FY 2018-19.

- iii. To consider the submission made by JSSSKL in a positive manner while deciding the Review Petition.
 - iv. To pass any other order / relief as the Commission may deem fit and proper in the facts and circumstances of the Case and in the interest of justice.
 - v. Condone any error / omission and to give opportunity to rectify the same.
 - vi. To permit JSSSKL to make further submissions, addition and alteration to this Written Statement as may be necessary from time to time.
6. Cogeneration Association of India in its submission dated 3 October, 2018 has stated as follows:
- 6.1. JSSSKL was the first and pioneering Sugar Co-gen Power plant commissioned in the State of Maharashtra in the year 2002, after facing lot of difficulties regarding the delays in completing the transmission line work by MSEDCL, signing of PPA and evacuation of exportable Power to the grid.
 - 6.2. The sugar factories in Maharashtra thereafter graduated to Co-gen Power plants step by step and today, more than 133 sugar factories (installed capacity of about 2623 MW & exportable surplus Power of about 1600 MW, including the recently approved two Phase competitive bidding), are supplying exportable surplus to MSEDCL grid, with additional balance notified capacity of about 400 MW exportable surplus to be allowed to be implemented by the sugar factories in the State, as per the GoM's Resolution of 2008 & 2015, at preferential tariff to be determined by the Commission, as per the provisions of the Electricity Act, 2003.
 - 6.3. The exportable surplus from sugar Cogen plants is mainly fed to the MSEDCL grid during the peak period of October to March every year and has immensely benefited to MSEDCL over the last 16 years, as a base load decentralized Power. These projects give highest renewable power to the grid per rupee of invested capital, compared to any other renewables, with 60-65 percent PLF.
 - 6.4. The Commission also supported these projects by determining appropriate generic tariff every year, over the last several years.
 - 6.5. It is only during last 2-3 years, on the totally wrong submissions about their completion of the notified capacity, MSEDCL has declined to purchase Power from these 17 projects thus rendering ready to Commission projects NPAs, mainly due to their own problems and citing that no demand situation due to no industrial & economic growth. MSEDCL signed the PPAs recently of these affected 17 projects,

after the forced competitive bidding, unjustifiably approved by the Commission as well

- 6.6. It fully substantiates all the claims made by JSSKL in their clarification application dated August 06, 2018 on the MERC final Order dated July 12, 2018 (case 84 of 2015) and the relief clauses sought there under. It also substantiates all the written statement by JSSKL on the MSEDCL review petition; vide their letter dated October 3, 2018.
- 6.7. It also does not subscribe to the MSEDCL submission of 50:50 apportionment of fixed & variable costs to JSSKL tariff, as accepted by the 17 projects promoters, through the forced competitive bidding recently concluded by MSEDCL/MERC.
- 6.8. The Commission has appropriately ordered in the final order dated July 12, 2018 in Case of JSSKL that the competitive bidding for all such PPA term completed projects, will be only for the fixed cost component & variable cost will be as determined by the Commission for the respective year.
- 6.9. In the tariff order dated August 19, 2018, the Commission has appropriately determined the fixed cost of Rs 0.66/kWh specifically for PPA term completed projects like JSSKL & variable cost of Rs 4 17/kWh for the year 2018-19.
- 6.10. These parameters only have to be considered by MSEDCL for tariff determination, as ordered by the Commission and duly accepted by JSSKL.
- 6.11. MSEDCL is wrongly trying to mix the decisions of the various orders of the Commission, to its advantage and this must be disallowed by the Commission.
- 6.12. The proposed hearing scheduled by the Commission on October 6, 2018 and subsequent clarification order in case of JSSKL are of prime importance, to all such projects which will complete the 13 year PPA terms in the time to come
- 6.13. The Commission's quick response in scheduling this hearing immediately is highly appreciated, as the crushing season FY 2018-19 is expected to start by mid October, 2018.
- 6.14. CAI has requested to issue Orders for interim tariff to JSSKL for season 2018-19 and Order MSEDCL to undertake competitive bidding only for the fixed cost component immediately & determine the tariff, based on the guidelines set forth by the tariff orders of the Commission dated July 12, 2018 & dated August 19, 2018.

7. At the hearing held on 4 October, 2018, MSEDCL reiterated its submission of the review Petition.

8. L&T Infrastructure Financial Company Ltd (LTIFCL) in its submission dated 5 October has stated as follows:

8.1. MSEDCL has submitted a Petition on 07.09.2018 requesting the Commission to review the impugned Order. Two of the prayers in this review petition include:

c. Clarify the treatment to be given for post expiry of EPA with Group-I, II & IV wind projects where commission has not determined any tariff.

d. Fixing the ceiling tariff of Rs. 0.75 per unit for Wind Projects and allow first right for refusal to MSEDCL in case of post expiry of wind EPA or else allow MSEDCL to fix the ceiling rate for Competitive Bidding.

8.2. The Commission's Order in this Case could have implications on similar cases post expiry of EPA in future as well. Thus, in the capacity of one of the long standing lenders to Wind Power sector in India, its comments/ representation in this Case are being submitted.

8.3. The Commission in the impugned Order, has prescribed a market linked electricity procurement mechanism, i.e. reverse auction with a ceiling tariff, for procurement of power from wind (Group-III- Commissioned prior to notification of RE Tariff Regulations, 2010) projects by Distribution Licensees, beyond the EPA period of 13 years. The Commission has also set a ceiling tariff of Rs. 0.75 per unit for wind (Group-III) projects, whose initial EPA have expired or is due for expiry.

For Group III projects-

a. LTIFCL agrees with the Commission's view that tariffs discovered through transparent competitive procurement process/ reverse auctions would be beneficial for the end consumers. However, a ceiling tariff of Rs.0.75/kwh for wind projects will not provide any incentive for wind generators and they may prefer to sell this clean power in open market rather than entering into EPA with Discom, thereby denying consumers in the State the access to cheap and clean power.

- b. The wind tariffs for Group III projects are notified vide the Order dated 24.11.2003 in Case No. 17(3), 3, 4 & 5 of 2002. These tariffs for 13 year EPA period are calculated based on the assumption that the projects would operate at 20% CUF and entire loan repayment would be done in 11th year. However, with the lending experience to some of the wind power projects in Maharashtra, LTIFCL has witnessed that various project parameters (such as project cost, debt portion, CUF, receivable cycle etc.) envisaged during financial closure or mentioned by the Commission in tariff orders are not achieved in operational projects. In such cases, the loan term could be higher/extended post refinancing of the projects. The details of wind power project portfolio of LTIFCL are provided as below:

Name of the project	MW	CUF envisaged	Actual average CUF since COD	Debt portion	Loan Tenor in year	Project Cost in Rs Cr/MW	O&M Cost in Rs Lac/MW (FY 18)	Receivables in Month
Panama Satara	71	22%	22%	62%	16	7.5	12	12
Panama Godavari	80	21%	20%	62%	13	8.3	11.6	12
NSL Jath	30	21%	15%	81%	15	6.4	9	11.5
NSL Satara	35	22%	22%	80%	15	6.7	11	11.5
Renew Jath	85	23%	23%	74%	18	7.2	12.4	13
Bothe	200	24%	26%	68%	18	7	10.5	12

It can be observed from this portfolio that-

- The project cost is in the range of Rs.6.4-8.3 Crore/MW
 - The debt portion in some cases is more than 70%.
 - The loan tenor in some wind power projects can be as high as 18 years
 - The average O&M cost is about Rs.11 Lakh/MW
 - The receivable months are considerably high at around 12 months
 - While CUF of majority of projects is around the same level as considered by the Commission (22% for Zone-1 projects), the CUF in case of NSL Jath is considerably low at 15%.
- c. Due to this, some wind power projects may not be able to repay the entire loan amount within 13 year EPA tenor and would need higher tariffs to support the debt servicing requirement.
- d. If such projects are stalled due to absence of PPA at feasible tariffs, this would

also result in an economic loss, considering large capital has been invested in such projects. There would also be a large-scale employment loss if the projects become non-operational.

- e. Any ceiling tariff, if at all to be determined, may not be limited to cover only the operating cost Rs.0.75/kwh. The ceiling tariff may be equivalent to the weighted average variable cost of power procurement for the Discom in the relevant financial year, as determined by the Commission in its Tariff Order. As per MERC Mid-Term Review Order dated 12.09.2018 for MSEDCL in Case No. 195 of 2017, the approved weighted average variable cost for power purchase from thermal stations is Rs 1.98/kwh for FY 2018-19.
- f. Thus, any power purchase at the tariff equivalent to or less than Rs.1.98/kwh would not put any adverse impact on the average power purchase cost (APPC) of the Discom and in fact enable it to meet non-solar RPO without any additional expense. Hence, in order to strike a balance between all key stakeholders, the Commission may either remove the ceiling in reverse auction based competitive bidding or put a ceiling equivalent to weighted average of variable cost.

For Group IV projects

- a. The levelized tariff in case of Group IV projects (Commissioned post notification of RE Tariff Regulations, 2010) is determined based on project life of 25 years. This approach is different as compared to the tariff determined for Group III projects, in which tariff was escalated by Rs.0.15/kwh each year. Thus, the methodology approved in the impugned Order for determining wind power tariff post expiry of 13 year EPA may not be applied as it is on Group-IV projects.
- b. The project cost considered for the tariff calculation by the Commission (Order in Case No. 100 of 2014 dated 07.07.2014) was Rs.5.85 Crore/MW. However, the actual project cost witnessed for such projects is in the range of Rs.6.4-8.3 Cr/MW. This has led to higher debt component and higher loan tenor as compared to 10 years assumed. Moreover, the O&M expense considered was around Rs.10 Lakhs/MW for FY18, whereas in actual, this cost is around Rs.11 Lakhs/MW in most of the projects, Even the receivables period in some wind projects has reached 12 months as compared to 2 months assumed, thereby increasing interest on working capital.
- c. Thus, as mentioned the loan tenor of number of wind power projects is higher than 13 years due to lower operating cash flows. As the tariff was levelized considering 25

years period, the developers should ideally get the same tariff beyond EPA period of 13 years in order to repay the outstanding debt at the end of 13th year. If the ceiling tariff is calculated based only on operating cost, lenders may not be able to recover the outstanding loans.

- d. However, in order to discover competitive tariffs, Discom may consider conducting reverse auction without any ceiling tariff; or a ceiling tariff equivalent to the existing levelized tariff of the project. Alternatively, ceiling tariff could be lower of existing levelised tariff and weighted average variable cost of power purchase for the discom (for the corresponding year). This would ensure that none of the key stakeholders are adversely impacted.

8.4. With reference to the points discussed above, following are the request :

For Group III projects-

1. In order to strike a balance between consumers and developers/ lenders, reverse auction process would be the most suitable option for wind power procurement by Distribution Licensees, beyond the EPA period of 13 years. However, removal of ceiling tariff would enable this mechanism to be more market driven.
2. The ceiling tariff, if at all to be determined, may not be limited to cover only the operating cost (Rs.0.75/kwh). The ceiling tariff may be equivalent to the weighted average variable cost of power procurement for the Discom in the relevant financial year, as determined by the Commission in its Tariff Order.

For Group IV projects-

1. As the Group IV projects were provided with Levelized tariff which is calculated for 25 years period, ideally these projects should be able to get the same levelized tariff beyond EPA period of 13 years, so as to enable them for repayment of outstanding debt.
2. Alternatively, discom could conduct reverse auctions without any ceiling tariff for such projects post 13 year EPA expiry, in order to bring competitiveness in power procurement and benefit end consumers.
3. The ceiling tariff, if at all to be determined, may be equivalent to the lower of-
 - a. The existing levelized tariff of the project, and

- b. Weighted average variable cost of power procurement for the Discern in the relevant financial year, as determined by the Commission in its Tariff Order.

Commission's Analysis and Ruling

9. The Commission had considered all the issues raised by MSEDCL in the impugned Order. However, MSEDCL in this Review Petition has contended that following issues were not addressed by the Commission:

- a. The impugned Order does not mention the treatment to be given to Group-I, II and IV Wind Projects and only lays emphasis on Group- III, Wind Projects.
- b. Wind projects have single part tariff wherein Biomass and Bagasse has two part tariff. While on one hand, ceiling tariff for Wind projects have been determined and locked, ceiling tariff for Biomass and Bagasse would only be fixed for fixed component, and this would be added in the variable cost component as per the Generic tariff order issued by the Commission from time to time, which would lead to increase of purchase cost.
- c. The Commission vide order dated 12.06.2018 issued in Case No. 122 of 2018 has allowed purchase of wind power to the quantum of 250 MW with a ceiling rate of Rs. 2.52 per unit. Hence, it may be clarified as to the treatment to be given to such contracted capacity.
- d. The Commission has determined ceiling tariff of Rs. 0.75 per unit for group-III wind generators which may be very less and wind generators may not be inclined to participate in the bidding procedure as the Commission has not mandated these generators(after post expiry of PPA) to offer such power to MSEDCL. Hence these wind generators may opt for open access as they are getting rates more than determined ceiling rate of Rs 0.75 p.u., thus MSEDCL may lose the opportunity to buy cheaper wind power to fulfill its RPO.
- e. MSEDCL humbly requests the Commission as to what treatment is to be given to the short term wind power procurement at Rs. 2.52 per unit rate (allowed by the Commission vide order 155 of 2017 dated 15.11.2017) whose PPA are already executed or LOI's are already issued.

10. The Commission has evaluated MSEDCL's review points as raised under the present Petition as follows;

10.1 Review point No.1 The impugned Order does not mention the treatment to be given to Group- I,II and IV Wind Projects and only lays emphasis on Group-III, Wind Projects.

- a) The impugned Order lays down a roadmap to be followed for procurement of power from Group-III Wind Projects, as Group-I which were commissioned before December,1999 and Group -II between December,1999 upto March, 2003 whose PPA had expired with the beneficiary long back and would have already entered into some off take arrangement by now. Similarly, PPA of Group IV projects would only expire in FY 2023 Hence the Commission in the impugned Order has dealt with the issue related to Group –III wind Projects which were commissioned after April 2003
- b) In the light of the above, the Commission has consciously dealt with the issue related to Group –III wind Projects in which the Commission finds no error apparent, oversight or other ground on this aspect of the impugned Order that would satisfy the requirements of Regulation of the Conduct of Business Regulations governing review.

10.2 Review point No.2 Wind projects have single part tariff wherein Biomass and Bagasse has two part tariff. While on one hand, ceiling tariff for Wind projects have been determined and locked, ceiling tariff for Biomass and Bagasse would only be fixed for fixed component, and this would be added in the variable cost component as per the Generic tariff order issued by the Commission from time to time, which would lead to increase of purchase cost.

- a) The Commission in the impugned Order has categorically addressed the issue related to the two part Tariff.

“Tariff structure for Bidding: While wind power projects only have Fixed Cost to be recovered, Biomass and Bagasse based projects have ‘Fixed’ as well as ‘Variable’ cost/ Fuel cost component to be recovered. Hence, wind power projects have a single part tariff structure and Biomass and Bagasse based Projects have two part tariff structure. In the present case, for selection of Wind power projects (Group-III), single part based tariff could be adopted. As far as Biomass and Bagasse projects are concerned, the Commission in its suo-motu generic tariff determines variable cost on annual basis, which are applicable for new projects coming up in the respective years as well as for existing projects for that year. For instance, in the latest generic tariff Order issued in Case No. 33 of

2017 for FY 2017-18, the variable cost applicable for new and existing Biomass project was determined as Rs. 5.04 per unit for FY 2017-18. Similarly, the variable cost applicable for new and existing Bagasse project was determined as Rs. 3.98 per unit for FY 2017-18. The Commission observes that certain objections were received during the public consultation raising the concern of frequent variation in the variable cost due to multiple factors and chances of projects approaching the Commission for pass through of such variations under 'change in law' or similar provisions, whereby projects seek revision in the variable cost already discovered through bidding. It is felt that such revision and treatment on a project specific basis is going to make the Regulatory process cumbersome. On the other hand, annual variable cost for Biomass and Bagasse based projects are already determined in the Generic Tariff Order, which could be made applicable to those projects under the present case, thereby mitigating the fuel related risks of such projects and making the Regulatory process easy to implement. However, the projects could still compete in terms of Fixed Cost under the competitive process to be held for their selection. In this context, following tariff structure is decided for wind, biomass and bagasse projects.

- (i) Wind Power Projects (Group-III) – Single Part Bidding
- (ii) Biomass and Bagasse based Power Projects – Single Part Bidding.

(In case of Biomass and Bagasse plants for discovering Fixed Cost only and Variable Cost to be same as that determined under the annual generic RE tariff Order)

- b) The Commission through its Generic tariff Order determines annual variable cost for Biomass and Bagasse based projects which are applicable for new projects coming up in the respective years as well as for existing projects for that year. However, Commission has also approved competitive bidding process for discovering market rate of tariff for new bagasse based plants with ceiling limit fixed at Rs. 4 per unit by its order in Case no. 263 of 2018 dated 16 October, 2018. No demarcation has been made for such projects with respect to fixed and the variable costs. If the tariff inclusive of variable cost is to be discovered through competitive bids, there is apparent error in the impugned order by providing a linkage of variable cost with the commission determined generic rate fixed every year. It is undisputed fact that currently only one bagasse plant exists whose EPA has expired and it is selling the generated energy to MSEDCL at APPC on the interim order of the Commission for the past four years as per the below mentioned rates:

Year	Rate in Rs
FY 2014-15	3.59
FY 2015-16	3.46
FY 2016-17	3.35
FY 2017-18	3.54

- c) It is further seen from the pleadings of MSEDCL that by mutual agreement the fixed and variable costs have been divided in equal proportion for the 17 new projects which were selected through competitive bids for tariff of Rs. 4.99 per unit.
- d) MSEDCL in its Petition has also requested that variable cost should not be fixed for Bagasse & Biomass based projects that have completed their EPA's of 13 years and it should be left open to MSEDCL to decide a ceiling tariff based on market algorithm after which transparent competitive bidding shall reveal the final rates, which the Commission shall either allow under Section 63 of EA. MSEDCL has neither substantiated its stand for considering 50:50 proportion of Fixed & Variable cost in the quoted tariff nor submitted any basis or logic behind its request to the Commission for not fixing variable cost for Bagasse & Biomass based projects and keep open for it to decide a ceiling tariff based on market algorithm. The Commission can not accept the request of MSEDCL. To provide higher variable cost as per the impugned order would be at variance with the Commission approved rates discovered through market process. Further, based on previous RE Tariff Orders, as approved from time to time, the Commission observes that the ratio of fixed cost and variable cost for Bagasse based co-generation projects is usually in the ratio of 35:65 respectively. On this basis, the variable cost would be around Rs. 3.24/unit.
- e) It is also seen that there was a draft agreement between MSEDCL and JSSSKL in which variable cost of 3.81 was provided for each of the 7 years of the proposed EPA. This agreement though not approved by Commission has the basic ingredients on which both parties had agreed.
- f) The Commission has mandated competitive bidding at the end of public consultation in an effort to leave it to market forces to determine the right tariff rather than fixing it administratively. Ceiling limit of Rs 0.66/ unit has been fixed by Commission. However such fixed cost could come out to be lower depending on the efficiency gains in operations and management which a competitive plant could share with the MSEDCL. Currently, APPC is being paid by MSEDCL for the past four years. Further, the issue is how would the market rate be discovered when there is only one

bidder.

- g) Based on above discussion, the following options could be worked out for fixing the tariff of Bagasse based co-generation projects which have completed their EPA period and still have some useful life left:

Parameters	Energy Procurement at Approved APPC for FY 2018-19	Variable Cost as per 65% of Rs. 4.99/unit (as per Commission's Observation) and Fixed cost as approved in Order No. 84 of 2015	Variable Cost as per draft agreement between MSEDCL and JSSSKL and Fixed Cost as approved in Order No. 84 of 2015 Commission's Observation) and Fixed cost as approved in Order No. 84 of 2015	Variable Cost as per MERC RE Tariff Order 2018-19 and Fixed Cost as approved in Order No. 84 of 2015 Commission's Observation) and Fixed cost as approved in Order No. 84 of 2015
	Option –I	Option –II	Option –III	Option –IV
Variable Cost	3.98	3.24	3.81	4.17
O&M Expenses		0.66	0.66	0.66
IoWC				
Total		3.90	4.47	4.83

- h) The Commission underscores that Bagasse is a by-product of sugarcane crushing while manufacturing sugar. Usage of Bagasse for generation of electricity can be view as an opportunity cost and can be used for paper making.
- i) Based on above analysis and considering the difficulty of MSEDCL and JSSSKL, the Commission allows Rs. 3.98/unit for FY 2018-19 as rate for procurement of energy from these Bagasse based co-generation projects which have completed their EPAs of 13 years and still have some useful life left, as this rate of Rs. 3.98/unit is equally comparable to the ceiling limit of Rs. 4/unit as provided in the Commission's Order dated 16 October, 2018 in Case No. 263 of 2018. MSEDCL may consider to procure this power at the rate allowed by the Commission. JSSSKL may approach separately for determination of rate for FY 2019-20.

10.3 Review Point No.3, 4 and 5

- a. The Commission in the Order dated 12 July, 2018 in Case No. 122 of 2018 had categorically addressed the issue of Ceiling Rate of 2.52/unit. Relevant extract of the Order is reproduced below:

“....

9. *The Commission notes that MoP vide its Notification dated 8 December, 2017 has notified Long Term Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Power Projects for capacity of 5 MW and above, under the provisions of Section 63 of the EA, 2003. As per the provision mentioned at clause no. 5.1 (b) of these MoP guidelines, the procurer shall inform the initiation of bidding process to the Appropriate Commission. Accordingly, MSEDCL has approached the Commission through the instant Petition seeking approval for the deviation in its Standard Bidding Document i.e RfS as compared to these MoP guidelines dated 8 December, 2017.*

12. *As regards MSEDCL's proposed Ceiling Tariff of Rs. 2.52 per unit the Commission notes that in the past the Commission in its Order dated 10 December, 2008 in Case No. 58 of 2008, ruled that the tariff on ad-interim basis for wind energy injection into the Grid by Wind Energy developers under Group-II category post expiry of their respective EPAs, shall be Rs 2.52 per unit.*

Moreover, the Commission also notes that clause 6.2 of MoP guidelines dated 08 December, 2017, for Tariff Based Competitive Bidding Process for procurement of Power from Grid Connected Wind Power projects, stipulates that;

“6.2.....The Procurer may specify a benchmark tariff and in that case bidder has to quote tariff not more than the benchmark tariff”.

In view of foregoing the Commission accepts proposed Ceiling Tariff of Rs. 2.52 per unit as proposed by MSEDCL and the accords its approval to it for initiation of competitive bidding process for Long Term procurement of 250 MW Wind power with that rate.”

b. MSEDCL in its Petition for approval for procurement of 250 MW wind power through competitive bidding sought deviation with the ceiling rate of Rs 2.52/unit, based on its own due diligence. Subsequent to competitive bidding, MSEDCL had approached the Commission for adoption of Tariff in Case No. 252 of 2018. The Commission had accorded approval for Tariff discovered through competitive bidding. However for the similar wind projects whose EPA has expired commission by impugned order has fixed 0.75 rupees per unit as the ceiling rate while calling for the competitive bids as against 2.52 rupees approved as aforementioned. There is error apparent in not considering the approval granted by Commission in the Case no. 252 of 2018. The Commission notes the detailed submissions made by LTIFCL wherein it is argued that to cover the cases where owing to higher initial capital cost,

higher operating costs, higher working capital requirement and lower CUF achieved than the ones assumed by the Commission while fixing generic tariff, there is likelihood of spill over of repayment of loans to the lenders for the period exceeding EPA of 13 years. Recovery of such amount would not be possible if the low ceiling rate of 0.75 rupees is prescribed. It is suggested by LTIFCL that to protect the buyer from any increase in average pooled procurement price, the ceiling limit should be kept at weighted average variable cost of the thermal plants supplying power to MSEDCL. This cost as determined by Commission in MTR Case No. 195 of 2017 come out to be 1.98 rupees per unit.

- c. MSEDCL has also submit that it has developed a web based portal from 01.01.2018 through which wind generator shall apply on-line for the sale of power to MSEDCL on short term basis, 30 days in advance of the period for which it desires to sale power. MSEDCL further stated that it is purchasing short term (3 to 12 months) wind energy @ Rs. 2.25/- per unit for group I and @ Rs. 2.52/- per unit Group II, III and IV through MoU route. However, in this petition it has sought approval for competitive bidding on Long term basis from wind energy. The Commission is of the view that MSEDCL shall continue to procure short term power on the above principle and for Long term procurement, the Commission has provided the methodology in the subsequent paragraph.
- d. The Commission in the Order dated 18 August, 2018 in Case No. 2014 of 2018 for Generic Tariff for Renewable Energy for FY 2018-19 had done the computations of the Generic Tariff for various Wind Generators as below:

Per Unit Cost of Generation	Wind Zone 1	Wind Zone-2	Wind Zone-3	Wind Zone 4
O&M	0.57	0.50	0.41	0.39
Depreciation	1.30	1.15	0.96	0.90
Interest on term Loan	0.95	0.84	0.70	0.65
Interest on working Capital	0.10	0.09	0.08	0.07
ROE	1.72	1.52	1.26	1.18
Total	4.65	4.09	3.41	3.19

- e. As the present Competitive bidding is only for those wind Generators, whose EPA are expired. Considering that the Loan component for those Generators is fully paid up, it will be appropriate to reduce the Depreciation and Interest of term Loan Component from the Levelised Tariff. Hence after removing these two components the per Unit cost of Generation will be as below:

Per Unit Cost of Generation	Wind Zone 1	Wind Zone-2	Wind Zone-3	Wind Zone 4
O&M	0.57	0.50	0.41	0.39
Interest on working Capital	0.10	0.09	0.08	0.07
ROE	1.72	1.52	1.26	1.18
Total	2.39	2.11	1.75	1.64

- f. The participation in the competitive bidding will be from all the Wind Zones. Hence for determining a single value for fixing the ceiling rate, the Commission has considered average of all the Wind Zones i.e. 1.97 p.u. as a ceiling limit for competitive bidding.
- g. Considering the reasons given above, Commission allows the review petition of MSEDCL on this point and modifies the ceiling rate of tariff for reverse auction to be Rs. 1.97 per unit which is the average per unit cost of Generation. Hence following Order:


ORDER

1. The Review Petition of MSEDCL is partly allowed
2. The Commission allows Rs. 3.98/unit for FY 2018-19 as rate for procurement of energy from JSSSKL's Bagasse based co-generation projects which have completed their EPAs of 13 years.
3. MSEDCL may consider to procure this power at the rate allowed by the Commission.
4. JSSSKL may approach separately for determination of rate for FY 2019-20.
5. For group 3 wind projects whose EPA has expired, procurement of energy by MSEDCL would be by calling competitive bids (with e-reverse auction) a ceiling tariff rate of Rs. 1.97 per unit.

Sd/-
(Mukesh Khullar)
Member

Sd/-
(I.M.Bohari)
Member

Sd/-
(Anand B. Kulkarni)
Chairperson


(Abhijit Deshpande)
Secretary

