



**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**  
4<sup>th</sup> Floor, Singareni Bhavan, Red Hills, Hyderabad 500 004

MONDAY DAY, THE 10<sup>th</sup> DAY OF FEBRUARY  
TWO THOUSAND TWENTY

*Present:*

**Sri Justice C.V. Nagarjuna Reddy, Chairman**  
**Dr. P. Raghu, Member**  
**Sri P. Rama Mohan, Member**

O.P.No.75 of 2019

*In the matter of*

**Determination of Variable Cost for the period from 01-04-2019 to 31-03-2024 in respect  
of the existing Biomass, Industrial Waste and Bagasse based plants**

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The Commission vide order dated 16-05-2014 in O.P. No. 32 of 2014, determined the indicative variable cost for Biomass, Industrial Waste and Bagasse projects for FY2014-15 to FY2018-19 with indicative fuel price escalation of 6% and actual fuel price escalation to be notified by the Commission before the start of each financial year starting from FY2015-16.

Accordingly, the Commission, vide SUO-MOTU orders dated 02-04-2015, 26-03-2016, 13-03-2017 and 15-03-2018 determined the Variable Cost for FY2015-16, FY2016-17, FY2017-18 & FY2018-19 respectively. The variable cost applicable for FY2018-19 is as given in the table below:

Financial Year	Biomass (Rs./Unit)	Bagasse (Rs./ Unit)	Industrial Waste (Rs./ Unit)
2018-19	4.81	3.07	4.81

As the tariff is to be fixed for the period from FY2019-20 to FY2023-24 and in the absence of any information being available in tweaking with the above tariff, the Commission proposed to continue the same variable cost approved for FY2018-19 for Biomass, Industrial

Waste and Bagasse projects, for future years i.e. from FY2019-20 to FY2023-24 and accordingly issued draft orders on 22-03-2019 to the above effect. In response to the Commission's proposal given in its draft order dated 22-03-2019, various stakeholders including existing Biomass and Bagasse based plants have filed their submissions and objections. After finally hearing (on 20-12-2019) Sri K. Gopal Chowdary and Sri Challa Gunaranjan, learned counsels for some of the objectors and Sri P. Shiva Rao, Standing Counsel for the DISCOMs and having considered all the written and oral submissions, the Commission passed the following:

### **ORDER**

The Commission has *SUO-MOTO* put up a draft order (Dt. 22-03-2019) on its website on 04-06-2019 in the matter of determination of Variable Cost for the period from FY2019-20 to FY 2023-24 inviting objections / suggestions in the above matter, with due justification supported by data and to be sent to the Commission on or before 15-04-2019. Simultaneously, the Commission has addressed letters to the (i) Principal Secretary to Government, GoAP, Energy, I&I Department (ii) Advisor for Power Sector, (iii) Chairman and Managing Director /Transmission Corporation of Andhra Pradesh Limited (APTRANSCO), (iv) Chairman and Managing Director / Eastern Power Distribution Company of A.P.Limited (APEPDCL), (v) Chairman and Managing Director / Southern Power Distribution Company of A.P.Limited (APSPDCL), (vi) Chief Executive Officer / AP Solar Power Corporation Ltd., (vii) Vice Chairman & Managing Director/ New and Renewable Energy Development Corporation of Andhra Pradesh (NREDCAP) and (viii) Chief Executive Officer / Managing Director, APSEEDCO, in the above matter seeking their views.

2. Thereafter, by letter dt. 04-04-2019 Commission addressed individual letters to 26 nos., Biomass / Bagasse / Industrial waste, Power Generators (as per the list furnished by the utilities), enclosing the draft order referred to above and seeking their views on the same. Thereafter, the matter was posted for public hearing on 29-06-2019, during which the following were present:

- a. Sri P. Shiva Rao, learned Standing Counsel for the utilities
- b. Sri Deepak Chowdary, learned counsel representing Sri Challa Gunaranjan, learned counsel for (i) M/s. SNJ Sugars and Products Limited (ii) M/s. CKR

Associates (iii) M/s. KCP Sugar and Industries Corporation Limited & (iv) M/s. Navabharat Ventures Limited

- c. Sri T.Krishna Kishore representing M/s. Sri Venkata Sridevi Power LLP
- d. Sri Lalam Raja Babu representing M/s. The Etikoppaka Co-operative Agricultural & Industrial Society Limited
- e. Sri Venkata Ramana Raju, Office Manager representing M/s. The Chodavaram Co-operative Sugars Limited
- f. Sri N. Janardhan, Manager representing Biomass Energy Developers Association

3. Written submissions were also filed on the draft order and the proposal contained therein by the following Biomass / Bagasse Power Generators:

- a. M/s. SNJ Sugars and Products Limited.
- b. M/s. Sree Venkata Sreedevi Power LLP.
- c. M/s. CRK Associates, Challa Gunaranjan.
- d. M/s. KCP Sugar and Industries Corporation Ltd.,
- e. M/s. Nava Bharat Ventures Limited.
- f. The Etikoppaka Co-operative Agricultural & Industrial Society Ltd.,
- g. The Chodavaram Co-Operative Sugars Limited.
- h. M/s. South Indian Sugar Mills Association, Andhra Pradesh.

The summary of the written submissions is noted below.

4. Biomass Developers / Generators: In the letter dt. 13-04-2019, it was claimed that the proposal to continue the variable cost of financial year 2018-19 for the next four years is against documented facts that the price of biomass fuel, cost of labour (handling) and the cost of transportation (the three parameters in the determination of fuel price escalation) increase almost every year. The Commission is requested to consider the following options:

- a. Provide 6% escalation rate over the base price of FY2018-19, as considered by the Commission to obtain the indicative variable costs in O.P. No. 32 of 2014.

- b. Provide normative escalation of 5% per annum for fuel cost as mentioned in regulation 44 (Fuel Cost) of CERC Terms and Conditions for Tariff determination from Renewable Energy Sources Regulations, 2017.
- c. Similar to what was done in 2014-15, undertake an exercise to determine the biomass fuel prices prevalent in the State for 2019-20 and consider it as the base fuel price for computation of variable cost for the period FY2020-21 to FY2023-24. This will address the variation between actual /prevalent biomass fuel prices and the computed fuel prices.
- d. Follow the option included by CERC via amendment to Regulation 44 to the 2012 Renewable Energy Tariff Regulations “Alternatively, biomass fuel price shall be decided annually by the appropriate Regulatory Commission through an independent survey which could be carried out by constituting a State level committee consisting of representatives of State Nodal Agency, State Government, Distribution Licensees, Biomass Power Producers Association and any other organization”.
- e. In the last 4 years due to multiple reasons the biomass fuel prices have escalated substantially, the prevalent market price being in the range of Rs.3600 to Rs.4000 /MT (copies of a few invoices are enclosed) as against the price determined by the Commission in its study report. Even considering the price of Rs.3600 / MT as the prevalent market price of ricehusk, the earlier order in O.P. No. 32 of 2014 considered the rate of Rs.2800/ MT for the FY2014-15, and accordingly, the price escalation is 28.6% where as in comparison, the variable cost of Rs.4.81 per unit for FY2018-19 represents only 12% increase over the variable cost of Rs.4.28 per unit for FY 2014-15. Hence, it is suggested that the Commission may take a fresh study to determine the relevant biomass fuel prices to decide the matter under consideration. In the same vein, it was represented that the proposal to continue the variable cost of 2018-19 for the next 4 years is extremely harmful to the biomass power industry which is already in dire straits and it was requested that the Commission may take a holistic view to ensure that the prices fixed reflect the biomass fuel prices in the State of Andhra Pradesh.

5. Bagasse Power Generating Units (Co-Generation):

- (I) South Indian Sugar Mills Association, AP: In their letter dt. 08-04-2019, represented that:

- a. Andhra Pradesh is the 6<sup>th</sup> largest sugar producing state in the country with an installed capacity to crush 90,000 MT of sugar cane per day. There are 18 manufacturing units in the private sector and 7 in the co-operative sector with a potential to generate 675 MW. However, only 12 units in the private sector and 2 in the co-operative sector have co generative facility aggregating to 154.30 MW.
- b. With regard to the proposals of the Commission made in the draft order, it is claimed that the Commission had adopted bagasse cost of Rs.1743.6 per MT for FY 2018-19 as against the market value of Rs. 2950 per MT. (Though, it is mentioned that invoice copy is attached, no such invoice is found attached).

(i) The Commission had issued a comprehensive order in O.P. No. 32 of 2014 in the matter of determination of Variable cost for the period from 01-04-2014 to 31-03-2019. This order has preferred to determine the fuel price escalation as per the fuel price indexation mechanism specified in the CERC RE Tariff Regulations and indicative fuel price escalation taken was 6%.

(ii) The wholesale price index (WPI) has grown by 11.2%, which shall be considered in fuel price escalation. Every year Central Government had been increasing sugar cane price by which bagasse price will increase.

(iii) CERC had also taken fuel price escalation of 5% in its FY:2019-20 generalised tariff order dated. 19-03-2019.

(iv) The Commission is requested to consider real market value of Bagasse or at least to consider 11.2% of fuel price escalation on 2018-19 APERC adopted Bagasse rate and revise the same every year from the FY2019-20.

(II) Navabharath Ventures Limited and KCP Sugars & Industries Corporation Limited:

In their letters dt. 15-04-2019 & 10-04-2019 respectively, they have made submissions which are generally identical (to the extent it relates to fuel cost of bagasse) to the ones filed by South Indian Sugar Mills Association, AP mentioned above. All of them

requested the Commission to determine the variable cost for bagasse cogeneration plants with due regard to ground realities and their submissions as above.

(III) SNJ Sugars and Products Limited:

The Commission vide its order dt.16-05-2014 in O.P. No. 32 of 2014, determined the indicative variable cost for Biomass, Bagasse and Industrial Waste projects for the financial year 2014-15 to 2018-19 (i.e. from 01-04-2014 to 31-03-2019) with indicative fuel price escalation of 6% and actual fuel price escalation to be notified by the Commission before the start of each financial year starting from FY2015-16.

The Commission issued orders determining the variable cost for the FY 2015-16 to 2018-19 without issue of notice and the unit price was reduced from Rs. 3.44 per unit for FY 2017-18 to Rs. 3.07 per unit for FY 2018-19.

They have a 20 MW cogeneration plant and over the years its cane procurement cost has increased from Rs.2394.54 per MT to Rs. 2950.00 per MT from FY 2014-15 to 2018-19 and bagasse prices have increased from Rs.1450 per MT to Rs. 3018 per MT from FY 2015-16 to 2018-19 due to demand from paper and plywood making industries. That the power charges for the industry are increasing from year to year as also line and Bay maintenance charges to the developers. The Cogeneration plants can work for 180 days but actually are working for 150 days. They are suffering due to high raw material cost, high cost of production and poor sugar prices. Hence, the Commission is requested to fix the variable cost for FY 2018-19 at Rs.3.44 with a minimum escalation of 8% per annum for FY 2019-20 to FY 2023-24 and also to revise the variable cost in O.P.No.32 of 2014 dated 16.05.2014 for FY2015-16 to FY2018-19.

(IV) Co-operative Sugar Factories:

The Chodavaram Co-operative Sugars Limited and the Etikoppaka Co-operative Agricultural & Industrial Society Limited, in their submissions dated.13-04-2019, 24-06-2019 and 26-06-2019 traced the history of their sugar units and cogeneration plants and the Power Purchase Agreement(s) entered into with the DISCOM and claimed that the tariff presently being paid by the AP Discoms for their bagasse based cogeneration plants is very less and not viable, as compared to tariff being paid to other non-conventional energy stakeholders. It was claimed that they have to pay Rs.0.25 per unit on captive consumption from cogeneration plants towards electricity duty, which is a huge financial burden. Further,

the cost of all inputs towards maintenance and repairs of boilers of the generation plants is increasing every year. The Chodavaram unit claimed that they purchase bagasse from other private parties and taking into consideration all the input costs including fuel cost, the cost of generation per unit works out to Rs.5.20 per unit and hence the Commission may determine variable cost at Rs.5.20 per unit to the bagasse cogeneration plants to enable them to sustain as a cooperative sugar factory. The Etikoppaka Unit claimed that the production of the bagasse has come down due to different reasons and to compensate the deficit they have to procure the same from other factories at rates varying from Rs.1400 to Rs. 1850 per MT. They also claimed that their power generation cost has increased over the years and it is now Rs.6.50 per unit. Being a small agro based industry providing livelihood to so many socio-economic backward people the present rate being paid per unit may be increased to sustain sugar industry and as cogeneration is the main source of additional income or at least pay the rate on par with biomass / industrial waste plants or continue the existing rate.

6. Pursuant to the various written submissions and objections filed by biomass / bagasse based generation plants and South Indian Sugar Mills Association, the APDISOCMs have filed the written submissions on 31-08-2019, the gist of which is as under:

a. APERC arrived at the variable cost in respect of Biomass & Industrial Waste projects as Rs.4.81 per unit and Bagasse Projects as Rs.3.07 per unit by considering the Actual Fuel Price of Rs.3196.4 /MT and Rs.1743.6/MT respectively in its order dated 15-03-2018 for the FY 2018-19. The Commission proposed to continue the same rates for FY 2019-20 to FY 2023-24.

b. The escalated fuel price in respect of Biomass & Industrial Waste projects and Bagasse projects for FY 2019-20 at the rate of 6% will be Rs.3388/ MT (1.06xRs.3196.4/MT for FY 2018-19) and Rs.1848/MT (1.06x Rs.1743.6/MT for FY 2018-19) respectively. However, the fuel price as adopted by CERC in its order dated 19-03-2019 for FY 2019-20 in respect of Biomass and Bagasse projects are Rs.3167.72/MT and Rs.1788.43/MT respectively. As the CERC determined fuel prices are less than that proposed by the Commission, CERC Fuel prices may be adopted.

7. In reply Sri K. Gopal Chowdary, learned Counsel representing Sree Venkata Sreedevi Power LLP has agreed with the DISCOM's view that the variable cost cannot be uniform for

all the 5 years and that it should be determined year on year based upon fuel price applicable for that year. He has however not agreed with the DISCOM's view that the CERC determined fuel price for Biomass projects for FY 2019-20 is justified on facts of the case, on the ground that the methodology of the CERC is not properly understood and applied.

He has argued that as per the CERC Regulation, 2012 applicable for the FY2012-17, the fuel price for each year is to be determined according to the indexation formula mentioned therein and on that basis CERC determined the biomass fuel price at Rs.2807.74 / MT for FY 2016-17. In the CERC Regulation, 2017 applicable upto FY 2019-20, the fuel price methodology was changed and 5% annual escalation was allowed from year on year. In order to arrive at the fuel price for the first year, i.e. 2017-18, the CERC applied the indexation formula to the fuel price for 2016-17 and arrived at Rs.2873.22 per MT for FY 2017-18. Thereafter that was escalated by 5% year on year for subsequent years. That was how the biomass fuel price of Rs.3167.73 per MT was arrived at for FY 2019-20.

He has further argued that the erstwhile APERC, while passing order dated 16-05-2014 in O.P. No. 32 of 2014 has determined the biomass fuel price for FY 2014-15 independent of CERC Regulation of 2012, and adopted CERC fuel price indexation formula for determination of fuel price year on year for determining the variable cost for each year. On that basis, this Commission determined the fuel price for FY 2018-19 at Rs. 3196 / MT. By properly applying the CERC methodology, transitioning from 2012 to 2017 Regulation, biomass fuel price for FY 2019-20 is to be computed, by applying the price indexation formula for the fuel price determined for FY2018-19, as already adopted by the Commission in O.P. No. 32 of 2014. Accordingly, biomass fuel base price for FY2019-20 comes to Rs.3423.63 per MT. The same price may be adopted, or such other amount following the same methodology and escalated at 5% every year as per CERC Regulation, 2017 upto FY 2023-24.

8. During the course of hearing, as per the directions of the Commission, the Officers of the Commission have verified the computation of biomass fuel price arrived by Sri K. Gopal Chowdary and found that by applying fuel price indexation formula to the fuel price determined by the Commission earlier for FY 2018-19 of Rs. 3196 per MT, the fuel price for FY 2019-20 would be Rs.3401.7 per MT. Such computation has been found to be in order by Sri K. Gopal Chowdary also.

9. Sri K. Gopal Chowdary has filed the computation of variable cost from FY 2012-13 to FY2019-20 in support of his earlier submissions.

10. At the time of final hearing, Sri P. Shiva Rao, learned counsel for the APDISCOMs has argued the case and filed written submissions as under:

(a) CERC Regulation issued on dt. 06-02-2012 in respect of the fuel cost for biomass and bagasse based projects for FY 2012-13 and subsequent years which should be arrived at either by applying escalation factor of 5% or based on fuel price indexation mechanism at the option of the developer.

(b) The Commission in its order date.16-05-2014 (O.P. No. 32 of 2014) has adopted the fuel cost indexation mechanism and determined the fuel cost from FY 2014-15 to FY 2018-19 accordingly.

(c) CERC in its subsequent RE Regulation 2017 date.17-04-2017, applicable for three (3) years has notified the fuel price for FY 2017-18 and indicated that the fuel price for subsequent years will be arrived at by applying normative escalation factor of 5% per year.

(d) It is observed that the fuel prices determined during the earlier period by APERC was very much on higher side when compared to the fuel prices allowed by CERC for the State of AP and particularly during the FY: 2014-15 to FY 2018-19 it has caused unjustified burden on APDISCOMs and consequently on end consumers. The fuel prices determined by CERC and APERC are tabulated below:

Financial year	Biomass		Bagasse	
	Fuel Cost Rs. Per tonne		Fuel Cost Rs. per MT	
	APERC	CERC	APERC	CERC
2014-15	2843	2751.2	1551	1553.27
2015-16	3056	2940.3	1667	1660.04
2016-17	2902.6	2807.74	1583.3	1585.19
2017-18	2930.3	2873.22	1598.4	1622.16
2018-19	3196.4	3016.88	1743.6	1703.27

(e) Pursuant to its Renewable Energy tariff Regulation 2017, the CERC in its order dated: 19-03-2019 has determined the tariff for Biomass and Bagasse Projects for

FY2019-20 by considering the fuel cost for the state of AP as Rs.3167.72/ MT and Rs.1788.43/MT respectively.

(f) The Hon'ble Supreme Court in a case between APTRANSCO Vs Sai Renewable Power Pvt Limited & others in Civil Appeal No 2926 of 2009 vide order dated: 08-07-2010 at para no. 52 (C) held as follows:

*52 (c) Commission shall also re-examine that in addition to the above or in the alternative, whether it would be in the larger interest of the public and the State, to permit sale of generated electricity to third parties, if otherwise feasible.*

(g) Further, the Commission in I.A. No. 22 of 2013 in RP No. 84 of 2003 in O.P. No. 1075 of 2000 held that if the Commission considers that if consumers interest is of primary concern, and in the process of such pursuit it may be desirable to allow the NCE developers for open access, in case the DISCOMs finds that the present tariff determined by Hon'ble APTEL orders is unjustified.

(h) The APDISCOMs are facing severe financial crisis and unable to pay the monthly power purchase bills which are pending to the tune of Rs.20,000 crores.

(i) As the fuel price adopted by CERC is less than the escalated Fuel Price of the APERC during FY:2014-15 to FY:2018-19, and due to that APDISCOMs have incurred heavy burden, and considering their said precarious financial position, the APDISCOMs request the Commission to adopt Fuel Price of Rs.3167.72/MT for Biomass & Industrial Waste and Rs.1788.43/MT for Bagasse Power Projects inline with CERC values and to arrive at the Variable Cost as Rs.4.77 per unit and Rs.3.14 per unit respectively, for FY 2019-20.

(j) Further, the Commission may arrive at the actual fuel price and actual Variable Cost year on year for the financial years starting from FY2020-21 to FY 2023-24, as was done earlier.

10. We have gone through the submissions, views and objections of the various stakeholders and the counsel for some of the objectors and the APDISCOMs on the proposal of the Commission dt.23-03-2019 for determination of variable cost for biomass, bagasse and industrial waste projects for the period from FY2019-20 to FY 2023-24.

11. **Biomass & Industrial Waste based Plants:** We find that, in respect of biomass based plants, the dispute / difference of opinion between APDISCOMs and the developers is

only in respect of determination of base fuel cost (consequent variable cost) for FY2019-20. There is no dispute with regard to determination of fuel cost year on year after FY2019-20; i.e., from FY2020-21 upto FY 2023-24 which has to be escalated at 5% every year as per CERC Regulation, 2017 dt.17-04-2017 on the base fuel cost, as distinct from the proposal made in the draft order to continue the same fuel cost through out the control period from FY2019-20 to FY2023-24.

12. In the light of the rival contentions of biomass developers and the APDISCOMs on the determination of fuel cost for FY 2019-20 the Commission needs to consider the following:

- (i) Whether the fuel price arrived at Rs.3196.4 per MT for FY2018-19, following the indexation mechanism adopted by the Commission for FY2015-16 to FY2018-19 as per its order in O.P. No. 32 of 2014 date.16-05-2014, should be modified to arrive at the fuel price for FY2019-20?

Or

- (ii) Whether adopt fuel price for biomass and industrial waste power projects at Rs.3167.72 / MT as determined by the CERC in its order date.19-03-2019 for the State of Andhra Pradesh as per its Regulation, 2017 for RE projects as requested / claimed by APDISCOMs?

13. Now let us examine each of the above alternatives as under:

**Re: (i) & (ii)** The main contention of Sri K. Gopal Chowdary, learned counsel is that CERC while issuing Regulation 2017 for RE projects followed its earlier regulation of 2012 and indexation fuel mechanism, but has not considered APERC determined fuel cost for FY2014-15, which was arrived at by an independent study by the Commission. On the other hand the DISCOMs argue that the purchase of power from biomass based plants entails high cost for the DISCOMs and hence the CERC determined fuel price as per its Regulation, 2017 being lesser, may be adopted for FY2019-20. We shall now examine these claims:

- (a) The APERC has independently determined the fuel cost for FY2014-15, and for subsequent years it followed the CERC suggestion of applying fuel indexation mechanism. What APERC determined is only for the control period FY2014-15

to FY2018-19 and hence the same cannot be extended automatically to subsequent control period in a routine manner.

(b) While issuing 2017 RE Regulation, CERC has considered all the relevant aspects, given opportunity to all the stakeholders to present their case, and determined the fuel cost State-wise. It is also necessary to highlight the fact that as per CERC Regulation 2017, it has determined the capital cost and fuel cost for each year and in its order dt. 19-03-2019 for FY2019-20 it has determined the fuel cost for all the States by a well analysed and reasoned order. No objections appeared to have been made in respect of Biomass based plants, as there was mention of only objections filed in respect of Bagasse based power plants in the CERC order dated 19.03.2019. In the same order there was clear mention of some orders of the State Commissions. Therefore, there is no basis to presume that CERC has not considered the fuel cost determined by APERC or other State Commissions in notifying 2017 Regulation for RE projects or its subsequent orders issued based on that Regulation.

(c) As each control period is independent, we need to approach the issue in a holistic manner. It is relevant to mention in this context that even as per APERC order dt.16-05-2014 in O.P. 32 of 2014 the fuel cost has come down for FY2015-16 and FY2016-17, though, it has increased again in FY 2017-18. Thus, it can be seen that the fuel cost varies from year to year depending on various factors including demand and supply. CERC in its RE regulation in 2012 has observed that fuel price for subsequent years shall be arrived at by increase of 5% every year or by adopting fuel price indexation mechanism at the option of the developer. The fuel price indexation mechanism was adopted by APERC in its order in O.P. No. 32 of 2014. This has the effect of either upward or downward revision of fuel cost for subsequent years as mentioned above. Now, CERC in its 2017 RE Regulation has prescribed 5% escalation increase every year for the fuel cost determined for FY2019-20. Hence, the CERC Regulation, 2017 which has taken into consideration all relevant aspects should be preferred and followed as it is realistic, and fair, besides being pragmatic and correct.

(d) In support of its contention that the Biomass fuel rates have increased from Rs.2800/MT in 2014-15 to Rs.3600/MT to Rs.4000/MT, during intervening

period, Sree Venkata Sreedevi Power LLP has filed copies of a few purchase invoices. However, they relate to FY2017-18 and 2018-19 (October 2017, November and December, 2018 only) and they do not represent a significant and representative sample for determining the fuel cost for the FY2019-20 under consideration as it is a small sample for specific period and the price varies quite frequently depending on the demand and supply and from year to year each year/each season and such business risks are necessarily to be borne by the developer.

(e) The DISCOMs have contended that they have paid higher fuel cost and corresponding higher unit price for the power for the period from FY2014-15 to FY 2018-19 compared to CERC determined fuel cost upto FY2018-19 (please see table in para 10(d) above). They also contended that they are in huge financial crisis with large number of bills pending for payment and accumulated financial liabilities and hence they cannot afford to pay higher tariff claimed by the developer, as the increase in fuel cost translates into higher unit price which ranges approximately from Rs.6.37 to Rs.7.01 for FY2019-20 based on the developers' claim and year of operation of the project. DISCOM's contention that the developers are free to sell the power to third parties is a relevant factor as the biomass power tariff is considerably high compared to tariff from other conventional and renewable energy sources and cannot be brushed aside.

(f) TNERC has in its order dt.28-03-2018 have also followed the Central Electricity Regulatory Commission's RE Regulation, 2017 in its order passed for FY 2018-19 determining fuel cost for RE projects including biomass and bagasse projects.

(g) The DISCOM's contention that the biomass based generator can go for open access, if they seek higher tariff, cannot be readily accepted as there are subsisting Power Purchase Agreements between the parties. (The decisions cited and relied upon by the DISCOMs do not help in its case). However, by mutual agreement, the parties are free to rescinded the existing PPAs in the event, the developers find that the tariff determined by this Commission is not commercially viable and they intend to sell power in open market by availing open access.

Based on the above detailed analysis, the Commission concludes that the CERC determine fuel price of Rs.3167.72 / MT for biomass based plants is correct and needs to be adopted for computing variable cost for FY 2019-20. By doing so the variable cost comes out to Rs.4.77 per unit for FY2019-20. This fuel cost shall be escalated by 5% every year from FY 2020-21 to FY 2023-24.

14. The above fuel cost and variable cost determined for FY 2019-20 and subsequent years will equally apply for the Industrial Waste based power plants as they are treated on par.

15. **Bagasse Based plants:** The contentions raised by various stakeholders have been highlighted in para 5 above. Sri Challa Gunarajan, Counsel for some of the generators has requested that the same approach / method followed in the case of biomass plants may be followed for bagasse based plants as well. It tantamounts to seeking indexation of FY2018-19 fuel price determined by the Commission to arrive at the fuel cost for FY2019-20 as claimed by the biomass based plants and thereafter applying escalation of the fuel cost by 5% each year as per CERC Regulation, 2017 for RE projects.

The DISCOMs on the other hand have requested to adopt CERC determined fuel cost for bagasse plants which is Rs.1788.43 / MT for FY 2019-20 as per its Regulation, 2017. Thus, the issue is broadly the same as in the case of biomass based projects discussed above.

16. We have considered the various submissions filed and claims made by the bagasse based plants. However, we find that they cannot be accepted for the following reasons:

- a. CERC has considered all the relevant factors and determined the fuel cost for each State based on its 2017 Regulation for FY2019-20 with 5% escalation every year upto FY2023-24. The present control period is FY2019-20 to FY 2023-24 and hence the earlier determination of fuel cost by APERC in its order dt. 16-05-2014 in O.P. No. 32 of 2014 cannot be automatically extended to the next control period.
- b. In its order dt. 19-03-2019, CERC has clearly observed that only one objector, ie, SISMA has filed objections to revise upwards the bagasse fuel cost for Tamilnadu State. The CERC analysed the objections and suggestions received and took the view that bagasse being a by product which is generally used by the cogeneration plants is available with in the premises of sugar mills, and

there is no transportation cost incurred in its procurement. CERC also considered the data on the cost of bagasse for FY 2019-20 and found that bagasse cost and data for one month does not substantiate that the fuel price is valid for the full year. It was mentioned that there are suggestions from others that extending support for reduction of the price as bagasse is a by product in cane processing and its associated cost is already included in the cost of sugar. Hence, CERC did not accept the claim for upward revision of bagasse price. It has determined Rs.1788.43 / MT as bagasse price for FY2019-20 for Andhra Pradesh and a marginally higher price for Tamilnadu based on all the relevant factors.

- c. The analysis of CERC discussed above, equally applies in the context of the present claims of the bagasse based plants who are before the commission seeking determination of bagasse fuel cost higher than that determined for FY2018-19 at Rs.1743.6 / MT and the corresponding unit price of power of Rs.3.07. As mentioned earlier, the bagasse cogeneration plants have filed a few invoices for FY2017-18 and 2018-19 where the cost per MT was shown @ Rs.1425 to Rs.2025. An occasional increase in price cannot be the yardstick for determining the fuel cost for the whole year, more so as substantial part of bagasse is from its own sugar plants. Further, the price determined by the CERC at Rs.1788.43 / MT for FY 2019-20 is higher than average market price mentioned above and thus can be clearly adopted as fuel cost for FY2019-20. Hence, we accept the claim of APDISCOMs and adopt this amount as the fuel cost for FY2019-20 and escalate the same by 5% every year upto FY2023-24 as per CERC Regulations, 2017.

Adopting the fuel price at Rs.1788.43 / MT for bagasse for FY2019-20 the unit price of power will be Rs.3.14 per unit.

17. To conclude, based on the detailed analysis and reasons given above, the Commission modifies the proposal made in the draft order and accordingly the fuel price of bagasse is determined at Rs.3176.72 / MT for FY2019-20. The same applies for Industrial based plants as well. The fuel cost for bagasse based plants is determined at Rs.1788.43 / MT for FY 2019-20. The same will be escalated at 5% every year upto FY2023-24 as per CERC Regulation 2017, which we have accepted as correct and adopted in this order. This applies

to all the above three categories of RE power plants. Accordingly, the tariff payable to biomass based projects (and Industrial Waste projects) and bagasse based cogeneration projects for the period from FY2019-20 to FY2023-24 is determined as given in the table below:

	<b>FY2019-20</b>	<b>FY2020-21</b>	<b>FY2021-22</b>	<b>FY2022-23</b>	<b>FY2023-24</b>
Biomass / Industrial Waste (Rs./Unit)	4.77	5.01	5.26	5.52	5.80
Bagasse (Rs./Unit)	3.14	3.30	3.47	3.64	3.82

The matter under consideration is decided accordingly as above.

This order is corrected and signed on this the 10<sup>th</sup> day of February, 2020

**Sd/-**  
**P. Rama Mohan**  
**Member**

**Sd/-**  
**C.V.Nagarjuna Reddy**  
**Chairman**

**Sd/-**  
**Dr. P. Raghu**  
**Member**