

# Ensuring Supplies of Grain Ethanol



Meeting with OMC's - 27<sup>th</sup> Nov 2023  
BPCL Sewree Campus, Mumbai

# Participants from GEMA



1. Ms. Arushi Jain,  
JMD - Gulshan Polyols (850 KLD; MP & Assam); Jt. Secretary - GEMA
2. Mr. Pranav Sharma  
MD - Baidyanath Biofuels Pvt Ltd (250 KLD; MH); Vice President - GEMA
3. Mr. Rana Karan Pratap Singh  
Director - RSL Distilleries Pvt Ltd (1200 KLD; Punjab, HR & UP); Member - GEMA
4. Mr. Anish Arora  
Head - Biofeuls & Logistics, India Glycols Ltd (700 KLD; UK & UP); Member - GEMA
5. Mr. Lokesh Mittal  
MD - MG Petroleum Pvt Ltd (215 KLD; HR); Member - GEMA
6. Mr. Ramesh Kumar  
Director - GEMA

# Introduction



- We are the representatives of Grain Ethanol Manufacturer's Association (GEMA) voicing the grievances & hardships of dedicated ethanol plants (DEPs). Please note that these DEPs have been set up by various entrepreneurs all across the country to contribute to the dream project of Govt. of India to fulfil E-20 EBPP by 2025-26. We would also like to mention that all DEPs are licensed by Ministry of Environment & Forest (MOEF) to produce grain ethanol only as they are not allowed to produce any other alternative products.

# Commitment to Grain-DEP's



- In order to promote these DEPs, Govt. has offered ISS & LTOAs for 10 years further supporting that supply of feedstock will be provided at fixed/subsidized rates. Consequent upon the discontinuance of feedstock supply at fixed rate, the open market prices of other feedstock like DFG & Maize went skyrocketing & uncontrollable resulting to the pressure on costing of grain ethanol produced by DEPs. Looking at the feedstock position OMCs have been very kind to revise the price by providing interim relief for supply in remaining Q4 of ESY' 22-23.

# Commitment of Grain-DEP's



- Having confidence that DEPs would be viably protected by MOPNG & OMCs, all DEPS who have come into production, overwhelmingly participated in the Tender for ESY'23-24 committing to supply 290+ Crore Liters despite of the fact that earlier announced procurement price is not sufficient to make the industry viable & sustainable.

# Current Situation

- At various point of times, GEMA has submitted the Cost Sheet to OMCs based on current open feedstock pricing & its availability but unfortunately no corrective action has been taken. The present condition is that DEPs are left without handhold by the procurers. Hence an earnest request to kindly take immediate action & do the needful on pricing to save the grain ethanol manufacturing units.



# Compulsion of Grain-DEP's



- We would like to highlight that after announcing the interim relief by OMCs, approximately 25+Crore liter Maize/DFG based Ethanol was supplied by DEPs during Q4 of ESY'22-23, which was not on account of viable price but purely under threat for being labelled as NPAs from Banks/Financial Institutions for not running the units.

# Current Situation



- Incidentally, the Maize/DFG based ethanol producing units are not in good health at present due to its high procurement cost and are bleeding now, and are under threat of shutting down operations if no relief from Government is received soon.
- Presently announced price is not sufficient to honor the commitment of loan repayments to Banks/Financers.



# Costing Presented by NAFED



## TENTATIVE COSTING FOR ETHANOL:

Tentative Costing for Ethanol made from Maize	
1.1 Raw Maize (Rs./Qtl)	2490.31
1.2 Transport to Unit	70.00
Cost	2560.31
Recovery (Ltr/Qtl)	38.50
1.3 Cost Raw Material (Per Ltr) (=Cost/Recovery)	66.50
Conversion Cost (Rs./Ltr Ethanol)	22.20
Subtotal	88.70
Benefit of DDGS	-9.50
Rate of Ethanol (Rs./Ltr) from Maize	79.20

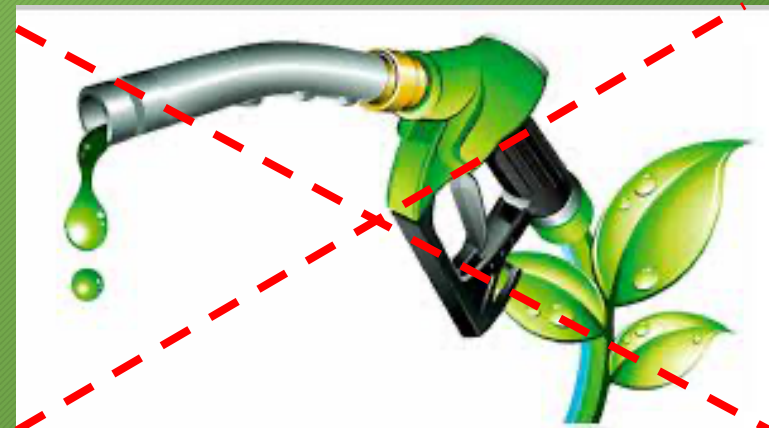
### Key Observations:

- Landed Cost at Ethanol Plant Rs. 2560.31 / quintal
- Contribution of DDGS Rs.9.50 / Ltr of Ethanol
- Rate of Ethanol Rs. 79.20/ Ltr

# Concern



- In such circumstances, we are concerned as to how the grain DEPs would be in a position to supply committed 290+Cr liters during the ESY'23-24.



# Solution Required

- Presently DEPs are running with the hope that OMCs would protect/promote them and look at the costing of DEPs and give a fair revision on procurement price.
- The wise act of OMCs to look at the costing & revise the procurement price would enable the DEPs to honor their commitments for supporting Govt. on its bio-fuel policy.



# Assured Grain supply - FCI / NAFED



- In order to bring the stability in feedstock (DFG & Maize) prices from open market, we humbly request that **40% of the total grain requirement** be allotted to DEPs at fixed price, which was the original plan of Govt.
- Further, it may please be noted that only FCI supplies can cool the price in open market and any consequent increase in their issue price will automatically affect the procurement price for rice.
- However, as per Market report FCI is suffering with humungous stock of rice this year and they don't have any outlet to consume. Hence, Ethanol is the best & most viable source to utilize this excess stock of rice with FCI.
- GOI, through DFPD was giving huge subsidy @ Rs.15/Kg approximately by way of providing surplus rice at highly subsidized rates. If it is calculated in terms of ethanol production it comes to around Rs.40/liter.
- Whereas now the ethanol industry needs a delta of only Rs.11/- over the declared price of Rs.66/- from maize and Rs.64/- from rice, resulting in huge saving for the Government.

# Assured Supply of Grain in Remote States



- Due to the vigorous promotion done by MOPNG to set up grain DEPs all across the country, some of our members have set up their units in the **remote States** like North-East, Tamil Nadu and Jammu & Kashmir, on the basis of assurance that they would be supplied with FCI rice at fixed price for their capacities.
- Incidentally, at present these States do not produce sufficient grains to cater to the requirements of these units and they have to transport it from other states, which will make them unviable. No doubt, in due course of three to four years, the grain crop will be developed by the efforts of all concerned Agencies. Till then, they need a special assistance of grain supply at fixed price continuously.

# Pricing Reference



- The Price mechanism of grain ethanol should be treated differently than that of sugar cane-based ethanol.
- In case of sugar cane-based ethanol their feedstock price i.e. sugarcane is fixed for the entire season in the beginning itself, whereas the grain market prices vary from hour-to-hour & day-to-day basis.
- In case of sugar cane-based ethanol units, they have the option either to produce sugar or produce ethanol, whichever is more viable/profitable to them,
- Whereas, in the case of grain-DEPs they have no option but to produce ethanol and only ethanol for supplies to OMCs.

# Dynamic Market Linked Pricing Mechanism



- It is therefore humbly submitted that grain ethanol prices should be worked out and **revised on quarterly basis**, based on the prevalent open market price & its availability of DFG/Maize by appointing/adopting a **Third-Party Agency** ASAP to assess the same keeping in view the forecasting for the year.
- GEMA has already submitted to OMCs the concept note/formulae on above **dynamic market linked pricing**, like it is being done in other industries by Govt. i.e. fertilizers, medicines, oil, etc.

# Dynamic Market Linked Pricing Mechanism



## OMCs need a pricing mechanism for price of DFG / broken rice Proposed Solution:

- Appoint an independent pricing agency by OMCs. Some of the potential agency for consideration can be big four consulting firms - KPMG, PwC, EY, Deloitte or CACP under Ministry of Agriculture, GOI.
- So appointed agency, to determine price of DFG quarterly.
- The mechanism of price determination will be done by collecting (in confidence) reference CA-certified DFG purchase invoices for 2 weeks prior to the end of quarter from designated sample pool of grain ethanol manufacturers pan-India. The appointed agency will aggregate data from participants and determine the ongoing price.
- OMC can enforce that Ethanol producers share their purchase invoices with the pricing agency in a timely manner.
- The mechanism for calculating price of DFG / Broken Rice by the agency should be formula based and made public.
- Derived grain ethanol price for the quarter should be announced before the ensuing quarter, while it may remain same or increase or decrease.

# Dynamic Market Linked Pricing Mechanism



OMC to apply the determined DFG price to conversion formula to establish quarterly grain ethanol procurement price



Appointed agency shall determine the ongoing price and share with OMC pricing committee



Pan-India Grain Ethanol producers to provide broken rice price invoice 2 weeks prior to end of quarter in confidence to appointed agency

## Advantages of the mechanism:

1. It will be transparent independent assessment of the true price of input for Grain Ethanol manufacturers.
2. This mechanism can be extended to include other coarse grains.
3. It can also be applied to determine average cost of fuel for Pan-India Ethanol producers.

# FCI Based Costing



## Surplus FCI Rice Ethanol Costing Rs./Ltr - November, '2023

ASSUMPTIONS:	
DFG Rice - Rs./kg	20.5
Ethanol Yield on Rice - Liter/ kg	0.450
DDGS rate - Rs./kg	30.00
DDGS Yield - kg/kg rice	0.14
Coal rate - Rs./kg	8
Coal to Steam ratio	4.00
Cost of steam - Rs./kg	2.00
Required Steam - KG/Ltr	4.00

COSTING - Rs./Liter	1 Ltr of Ethanol
<b>Grain Cost</b>	<b>46</b>
Steam	8.00
External Power	0.50
Chemicals consumed	1.50
Stores, R&M	1.50
Water @ 26.4/ m3	0.19
Salary & Admin	1.80
Freight difference on supplies	1.00
<b>Material Cost of production</b>	<b>60.05</b>
(-) DDGS	9.33
(-) CO2	NA
<b>Operating Cost of Ethanol</b>	<b>50.71</b>
(+) Interest on Investment	1.50
(+) Depreciation	2.00
<b>Final Cost of Ethanol / Liter</b>	<b>54.21</b>
OMC Purchase price 2023-24	58.50
Delta - Profit - Loss / Ltre	4.29

This is sustainable supply costing.

Grain - DEP's were set up in remote states on assured supply with some sustainable margins to cover additional costs of transport and manpower.

Covers fluctuations in Fuel costs.

Covers fluctuations in DDGS contribution.

Gives negotiation power to grain buyer.

# DFG Based Costing

## DFG (Broken Rice) Ethanol Costing Rs./Ltr - November, '2023

ASSUMPTIONS:	
DFG Rice - Rs./kg	27
Ethanol Yield on Rice - Liter/ kg	0.425
DDGS rate - Rs./kg	30.00
DDGS Yield - kg/kg rice	0.16
Coal rate - Rs./kg	8
Coal to Steam ratio	4.00
Cost of steam - Rs./kg	2.00
Required Steam - KG/Ltr	4.00

COSTING - Rs./Liter	1 Ltr of Ethanol
<b>Grain Cost</b>	<b>64</b>
Steam	8.00
External Power	0.50
Chemicals consumed	1.50
Stores, R&M	1.50
Water @ 26.4/ m3	0.19
Salary & Admin	1.80
Freight difference on supplies	1.00
<b>Material Cost of production</b>	<b>78.02</b>
(-) DDGS	11.29
(-) CO2	NA
<b>Operating Cost of Ethanol</b>	<b>66.73</b>
(+) Interest on Investment	1.50
(+) Depreciation	2.00
<b>Final Cost of Ethanol / Liter</b>	<b>70.23</b>
OMC Purchase price 2023-24	64.00
Delta - Profit - Loss / Ltre	<b>(6.23)</b>

This is unviable pricing point.

DFG price will be un-controllable without support assured rice supply.

This does not give room for fuel inflation.

It does not cover impact of over supply of DDGS.

# Maize Based Costing



## Maize Ethanol Costing Rs./Ltr - November, '2023

ASSUMPTIONS:	
*Maize @ MSP + Incidental - Rs./kg *	24.29
**Ethanol Yield on maize - Liter/kg	0.380
DDGS rate - Rs./kg	15.00
DDGS Yield - kg/kg maize	0.23
Coal rate - Rs./kg	8
Coal to Steam ratio	4.00
Cost of steam - Rs./kg	2.00
Required Steam - KG/Ltr	5.25

* COST OF MAIZE/KG	
MSP 2023-24	20.9
Mandi Tax @1.2%	0.25
Packing Cost	0.18
Mandi Handling	0.15
Aarthi Commission @1%	0.21
Godown/Storage Cost	0.5
Interest on Storage @10% for 3M	0.8
Freight & Cartage	1.3
Maize cost to Ethanol Plant	24.29

COSTING	1 Ltr of Ethanol
<b>Grain Cost</b>	<b>64</b>
Steam	10.50
External Power	0.50
Chemicals consumed	1.70
Stores, R&M	1.75
Water @ 26.4/ m3	0.26
Salary & Admin	2.00
Freight difference	1.00
<b>Material Cost of production</b>	<b>81.63</b>
(-) DDGS	9.08
(-) CO2	NA
<b>Operating Cost of Ethanol</b>	<b>72.55</b>
(+) Interest on Investment	1.50
(+) Depreciation	2.50
<b>Final Cost of Ethanol / Liter</b>	<b>76.55</b>
OMC Purchase price 2023-24	66.07
Delta - Profit - Loss / Ltr	(10.48)

**\*\*Note: over the experience of last three years of working on maize, the yield of 380 has not been achieved but it is expected that with efficiency coming in it might be achieved.**

This is unviable pricing point.

This does not factor in the actual cost of grain procurement.

This does not give room for fuel inflation.

It does not cover impact of over supply of DDGS and time to stabilize market conditions.

# Maize Trades from Misc. Mandis



कार्यालय कृषि उपज मंडी समिति छिंदवाडा  
जिला-छिंदवाडा  
दैनिक भाव  
दिनांक-20.11.2023

क्र	जिन्स का नाम	अनुमानित मात्रा (क्विंटल में)	न्यूनतम दर	उच्चतम दर	मॉडल दर
1	मूंग	04	7200	121111	8000
2	गेहूँ (लोकल)	2838	2390	3711	2711
3	सोयाबीन (पीला)	1266	4950	5230	5150
4	मक्का (पीला)	55772	1900	2141	2080
योग:-		59880			



कार्यालय कृषि उपज मंडी समिति छिंदवाडा  
जिला-छिंदवाडा  
दैनिक भाव  
दिनांक-22.11.2023

क्र	जिन्स का नाम	अनुमानित मात्रा (क्विंटल में)	न्यूनतम दर	उच्चतम दर	मॉडल दर
1	मक्का (पीला)	45536	1950	2160	2090
2	गेहूँ (लोकल)	2753	2547	3025	2931
3	सोयाबीन (पीला)	1213	4960	5193	5100
4	चना	11	5200	5725	5400
5	मूंग	01	7200	7200	7200
योग:		49514			



कार्यालय कृषि उपज मंडी समिति छिंदवाडा  
जिला-छिंदवाडा  
दैनिक भाव  
दिनांक-24.11.2023

क्र	जिन्स का नाम	अनुमानित मात्रा (क्विंटल में)	न्यूनतम दर	उच्चतम दर	मॉडल दर
1	मक्का (पीला)	28019	1860	2166	2100
2	गेहूँ (लोकल)	3255	2505	3185	2755
3	सोयाबीन (पीला)	739	4700	5134	5100
4	चना	15	5000	5401	5375
योग:					

नोट- दिनांक 27-11-2023 दिन सोमवार को गुरुनानक जयंती की शासकीय अवकाश होने से मंडी प्रांगण में क्रय-विक्रय का कार्य बंद रहेगा।


# Maize Trades from Misc. Mandis

कार्यालय कृषि उपज मंडी चौरई जिला छिंदवाड़ा दैनिक भाव दिनांक 20/11/2023				
क्र.	जिंस	न्यूनतम	उच्चतम	मॉडल
1	मक्का	1848	2135	2050
2	गेहूँ	2500	2550	2500

कृषि उपज मण्डी चौरई, जि० छिंदवाड़ा (म.प्र.) आवक भाव, गुरुवार 23 नवंबर 2023						
क्र.	जिंस	कृषक संख्या	मात्रा (बोरा में)	भाव ( रूपयों में )		
				न्यूनतम	उच्चतम	मॉडल
1	मक्का	218	9983	1670	2057	1910
2	गेहूँ	3	20	2400	2486	2440
3	सोया०	1	3	4600	4600	4600
योग		222	10006			
व्यापारी संख्या 33						
प्रतिस्पर्धात्मक मूल्य, सही तौल, नकद भुगतान यहीं हैं चौरई मंडी की पहचान...						
मंडी में अवकाश :-						
शनिवार 25 नवंबर 2023 साप्ताहिक अवकाश ।						

दिनांक-23/11/23 बुधवार  
सोया-995 8600 5090  
52 9 1500  
14 25 2800 2500  
88/9855 9665 2060  
9636

शनिवार 25 नवंबर 2023 साप्ताहिक अवकाश ।



कृषि उपज मण्डी चौरई, जि० छिंदवाड़ा (म.प्र.) आवक भाव, मंगलवार 21 नवंबर 2023						
क्र.	जिंस	कृषक संख्या	मात्रा (बोरा में)	भाव ( रूपयों में )		
				न्यूनतम	उच्चतम	मॉडल
1	मक्का	298	13616	1860	2125	2025
2	गेहूँ	2	27	2511	2540	2520
योग		300	13643			
व्यापारी संख्या 30						
प्रतिस्पर्धात्मक मूल्य, सही तौल, नकद भुगतान यहीं हैं चौरई मंडी की पहचान...						

कृषि उपज मण्डी चौरई, जि० छिंदवाड़ा (म.प्र.) आवक भाव, बुधवार 22 नवंबर 2023						
क्र.	जिंस	कृषक संख्या	मात्रा (बोरा में)	भाव ( रूपयों में )		
				न्यूनतम	उच्चतम	मॉडल
1	मक्का	307	13147	1551	2075	1980
2	गेहूँ	1	10	2564	2564	2564
योग		308	13157			
व्यापारी संख्या 28						
प्रतिस्पर्धात्मक मूल्य, सही तौल, नकद भुगतान यहीं हैं चौरई मंडी की पहचान...						

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thanks  
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