

# GREY REVOLUTION IN BENGAL

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## Introduction

The journey towards a revolution started back in 2015 with the commissioning of first Fly Ash Brick Manufacturing unit in the state at Bankura Sadar Police Station under Mahatma Gandhi National Rural Employment Guarantee Scheme and Mejia Thermal Power Station boasts of supplying vital raw material like Fly Ash free of cost to this noble initiative. This initiative is first in its kind in the country as none thinks of setting up such unit under Employment Guarantee Scheme. It's a perfect blend of rural employment generation mechanism, environment hazard mitigation module and low cost building material production technique.

I would like to elaborate the evolution of the first unit which was visited by all upcoming factories in the list and a team from Jharkhand state as well. The unit came up over a plot of one acre having plot(LR) no. 29 of Pachirdanga Mouza(JL-82), Kenjakura GP, Bankura-I block in 2015. 42 families were identified to get engaged in the factory as wage seekers as mandated in Mahatma Gandhi National Rural Employment Guarantee Act'05. Not only that these families have got the ownership of the unit having registered through Society Registration Act.1860 and usufruct agreement with the Gram Panchayat, through regular employment and incentives, these families are to get over the line of poverty, they were reeling under. The implementing Agency Kenjakura Gram Panchayat signed an agreement with DVC (Mejia Thermal Plant Authority) on 09.04.15 for monthly supply of 250 MT fly ash free of cost. The production started on 15.04.15, immediately after the signing of agreement, first commissioning in Bengal under MGNREGA.

As per the Laboratory Test Report of Bankura Unnayani Institute of Engineering the compressive strength of the brick produced in Bankura PS is 21.4 N/mm<sup>2</sup>, water absorption is 2-16% , thermal conductivity is 1.90-1.05 w/m<sup>2</sup>0°C. Bricks will be ready for delivery within one month of production taking into consideration the drying and curing period. One brick will cost Rs.2.06 only as per input cost @ Rs.0.14 for sand, Rs.0.12 for lime, Rs.0.27 for Gypsum, Rs.0.50 for Carriage of material, Rs. 0.92 for wage, Rs. 0.11 for electricity. The cost of wage is to be borne from MGNREGA and rest to be provisioned from sale proceed. For 4 lakh bricks, 620 cum Fly ash, 165 cum sand/stone dust, 120 ton lime, 72 ton Gypsum 10649 unit electricity is required with estimated carriage cost of Rs.201500.

## Progress So Far

The success of the Bankura Fly Ash unit was replicated across the breadth and length of the state and with the passage of time state could start building up 11 units apart from running 11 factories as follows

<b>Fly Ash Unit</b>	<b>Related Power Plant</b>
1. Gangajalghati Fly Ash Unit	from Mejia TP
2. Bankura Sadar Fly Ash Unit	from Mejia TP
3. Chakdah Fly Ash Unit	from Bandel TP
4. Chakdah Paver Block Unit-I	from Bandel TP
5. Chakdah Fly Ash Unit-II	from Bandel TP
6. Nakashipara Fly Ash Unit	From Sagardighi TP
7. Karimpur-I Fly Ash Unit (under construction)	From Sagardighi TP
8. Karimpur-II Fly Ash Unit (under construction)	From Sagardighi TP
9. Chhatna Fly Ash Unit (proposed)	from Mejia TP
10. Kolaghat Fly Ash Unit (yet to be started)	from Kolaghat TP
11. Mahishadal Fly Ash Unit (under construction)	from Haldia CESC TP
12. Tamluk Fly Ash Unit-I	from Kolaghat TP
13. Tamluk Fly Ash Unit-II	from Kolaghat TP
14. Barrackpore-II Fly Ash Unit (proposed)	from Bandel TP
15. Raghunathpur Fly Ash Unit	from Raghunathpur TP
16. Bakreswar Fly Ash Unit	from Bakreswar TP
17. Sagardighi Fly Ash unit (yet to start )	from Sagardighi TP
18. Ondal Fly Ash Unit (under construction)	from Durgapur TP
19. Bagnan Fly Ash Unit (yet to start )	from Kolaghat TP
20. Englishbazar Fly Ash Unit (yet to start )	from Farakka NTPC
21. Dhaniakhali Fly Ash Unit	from Bandel TP
22. Budgebudge Fly Ash unit (yet to start )	from Budgebudge CESC TP

The semi-automated machine, used for the purpose, costing about Rs.10 lakh each can produce upto 75 lakh bricks per year if fully utilised and normally to the tune of 50 lakh. If all 22 units start operating in full capacity, 260000 cum Fly Ash will be consumed in these units and 16.5 crore bricks could be produced. Every year State Government builds 4.749 lakh PRIME MINISTER HOUSES which need about 284.94 crore bricks for completion, apart from other demand like in household toilet construction under SACHA BHARAT MISSION etc. Hence there will be no marketing constraint.

## Path Forward

Thus State Government is pursuing a sound policy in utilising Fly Ash in making environment friendly and low cost bricks for furthering the cause of developing rural infrastructure with these bricks under MGNREGA and provide yeoman service in protecting environment to the optimum level. This will certainly usher in a new era in post MGNREGA domain in West Bengal.