

(As in principle approved by Holding Committee Board Resolution No. 431 dtd. 18/06/2015)

Our Vision

Mahagenco intends 100% utilization of fly ash in accordance with MoEF notifications.

Our Mission

- Capacity building for eco-friendly management, value addition and utilization of fly ash.
- This will be undertaken by dissemination of information through training, technical forums and workshops with development of wide network of technology delivery mechanism. To advertise through website/TV/Radio and/or other channels about the availability of ash and create public awareness about usage of ash and ash based products.
- To undertake, promote and facilitate Research and Development, guide and facilitate scale-up by adopting safe management technologies in the area of fly ash.
- To explore new/innovative ways of utilizing ash.
- Durable and economical construction and development of infrastructure projects through fly ash.
- To facilitate utilization of ash through production of fly ash bricks, cement manufacturing through JV route.

Scope

This ash utilization policy will cover all existing Thermal Power Stations of Mahagenco.

Human Resources

- It is envisaged that there is a need of an ash management agency for collection, distribution and management of ash utilization in various modes and by various organizations and construction agencies etc.
- Mahagenco will set up dedicated Ash Utilization Cell with adequate manpower at Corporate Office as well as at each TPS. The cell will be exclusively entrusted with the relevant functions including marketing aspects, sale of fly ash, ash based products. The cell will also ensure their availability in the markets like other construction materials.
- Quarterly meetings will be conducted at each TPS in a rotational manner for sharing of best practices as well as issues related with ash utilization.
- Ash utilization Cell at TPS will monitor ash disposal cost (water charges, electricity charges, etc) in ash bund
- Ash utilization cell at TPS will carry out the ash calculations on the basis of annual average value of actual ash content in the coal for the TPS.

Ash utilization Infrastructure Development

- As per MoEF notification Dt. 3rd April, 2007, the revenue collected from sale of fly ash and fly ash based products by TPS as applicable should be kept in a separate Account Head. Those funds shall be utilized only for development of infrastructure of facilities, promotion and facilitation activities for use of fly ash until 100% fly ash utilization level is achieved.
- Mahagenco will set up fly ash collection system at all its TPS and units. It will also make provision for loading of fly ash into bulkers, trucks, trailers, railway wagons and bags from the fly ash silos.
 - Mahagenco will make a provision in the form of weighbridge for weighing of fly ash loaded into bulkers, trucks, trailers and railway wagons.
- Mahagenco will monitor fly ash utilization by off-takers through integration of weighbridges using ERP to capture truck/trailer/bulker/railway wagons movements directly into ERP wherever available and practicable.
- Mahagenco will provide CCTV system near ash silos and gates at each TPS/unit for monitoring ash off-take.

- Mahagenco will allow ash off-take at TPS on round the clock basis except for shift change and in case of any plant emergency, etc.
- Mahagenco will maintain the access roads in good condition for easy movement of trucks, trailers and bulkers. Repairing/upgrading/strengthening/widening of existing roads, approach roads near fly ash silos and ash bunds shall be undertaken on a regular basis.
- To facilitate easy and increased off-take of fly ash, Mahagenco will develop railway siding wherever feasible.
- All new ash ponds, top roads, access roads, slope protection of ash dykes, lining of toe drains, minors, drains etc. will be provided with ash based bricks, blocks, tiles, panels etc. or roller compacted pavements.

Database of Ash Users:

- Each TPS shall maintain ash users database for fly ash as well as bottom ash. This ash database shall be updated by respective TPS (Ash Utilization Cell) twice a year (on 1st April and 1st Oct.)

Ash Sale:

- In accordance with MoEF notification 2009, Mahagenco will provide 20% fly ash free of charge to units manufacturing fly ash based bricks, blocks, tiles and other materials used in housing/construction activity. In case of demand less than 20% at a particular plant, the balance quantity shall be provided to other ash off-takers at a market determined price.
- Before issue of 20% free fly ash, the credentials of the agencies shall be checked to ensure that agencies are actually manufacturing fly ash based bricks, blocks, tiles, etc and are not selling it as traders.
- The minimum prices for fly ash and development charges for bund ash for each TPS shall be worked out by the committee headed by Corporate Ash Utilization Cell In-charge and having 2 members each from Corporate office and 2 members from the respective TPS.

- To have proper Data Management System on Ash generation and utilisation, software needs to be developed for processing the fly ash quality, quantity, suitability and availability of fly ash for various usages.
- The fly ash sale contract period may be kept between 12 to 36 months with a built-in price escalation clause.
- The Contract Agreements will have defined termination clause i.e. if the actual quantity of fly ash lifting goes below 80% of awarded quantity in any consecutive 3 months. During rainy season relaxation in monthly ash lifting target will be given which will be decided by local authority.
- In case of no/poor response to ash tender of Mahagenco, the respective TPS will be authorised to discuss and negotiate directly with identified ash off-takers so as to improve the ash utilization with the approval of H.O.
- The penalty clause as well as minimum price criteria will be tailored for individual TPS and will depend upon the ash demand in that area.
- Mahagenco will levy infrastructure development charges to ash off-takers. The separate charges will be fixed for each type of vehicle i.e. Tractors, Trucks, Dumpers, etc.
- In order to improve the ash utilization, Mahagenco will provide the pond ash for NHAI/PWD/other construction projects. The fly ash being used as construction material requires inclusion of the same in the technical specifications, schedule of rates, analysis of rates, tender documents by CPWD, PWD's, construction agencies, Bureau of Indian Standards, road transportation, Highway, Hydro sector, Railways, mining sector etc.

Existing Agreements:

- In case of over/under utilization of ash by the appointed agency, Mahagenco will allow transfer of ash from/to other silos/TPS at a pre-determined/agreed rate.
- In case of breach of agreement, Mahagenco will terminate the agreement and will provide the ash to other ash off-takers at a market determined price.

Setting up of Cement Manufacturing through JV Route & Brick Manufacturing:

- Each TPS may explore the possibility of forming JV (Joint Venture) with cement manufacturer for setting up cement/grinding units at ash bunds of stations in order to improve the fly ash utilization. Selection of company for participation in JV shall be done through EoI/Tender system.
- The terms and conditions and modalities will be worked out and finalized separately.
- Ash utilisation is an industry in itself and fly ash based industry needs to be developed at the thermal power plants in the immediate vicinity and the ash dump areas. It will provide excellent employment opportunities to PAPs.

The Important areas of Ash Utilization are indicated below:

- i) Building Sector for use in bricks, blocks, tiles, cement, concrete, plaster etc.
- ii) Land reclamation, filling low areas, raising ground levels.
- iii) Roads, embankments, ash dykes, road blocks, kerb stones, etc.
- iv) Wasteland area development
- v) Hydro sector, Irrigation, drains, water supply & drainage, lining of rivers, tributaries, canals, minors, sub-minors etc.
- vi) Mine filling
- vii) Industrial applications & high value areas.
- viii) Roller compacted dams, pavements, roads etc
- ix) Separating Cenospheres from ash

Focus will be given on:

- Development of new/incremental technologies
- Adaptation/large scale application of technologies
- Preparation & updation of standards/specifications
- Support & facilitation to other Government Ministries/Department

- Identification of laboratory scale work which can be scaled up
- Niche application areas
- Filed demonstration, scale-up and hands on training
- Collaborative mode for transfer of technology: setting up of initial few projects
- Standards, specification and guidelines
- Statutory notifications and fiscal incentives
- Dissemination and sharing of information and expertise
- Technology Demonstration projects
- Participation of stake-holder agencies
- Dissemination of information
- Multiplier Effects
- Update of Existing Standards/Specification
- Standards/Specifications for new utilisation areas
- Develop code of practice
- Supply Chain Management
- Technology Transfer and facilitation Mechanisms
- Government facilitation/Support

KEY BENEFITS:

- Mahagenco will achieve the target of 100% ash utilization set by MoEF&CC vide notification 2009.
- As the ash will be utilized the land requirement of ash pond area will be reduced.
- The ash handling system expenditure, power and water consumption will be reduced.
- It will generate employment opportunities in various sectors.
- It will reduce use of soil for bricks manufacture and therefore soil conservation will take place.