BENEFICIATION OF ESKOM ASH

Fact Sheet

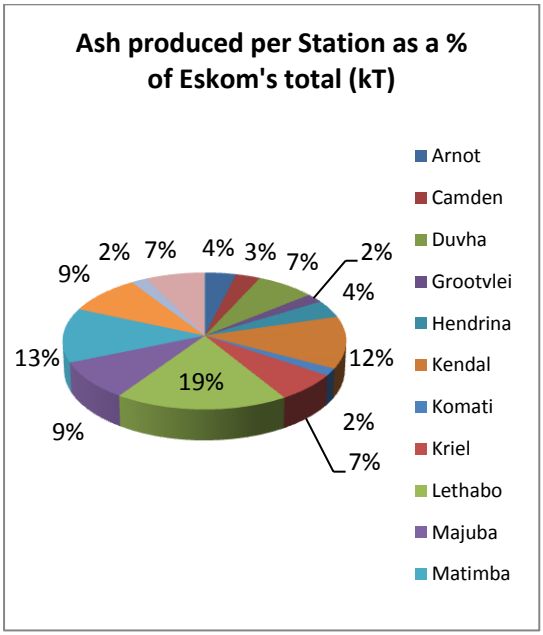
1. What is ash beneficiation?

Ash beneficiation refers to the process of ensuring that Eskom ash is sold commercially and used productively as a resource and not disposed of as waste.

2. How much ash does Eskom have, and where does it come from?

Eskom generates electricity through the burning of coal. In much the same way as you have to clean your Weber after a weekend braai, a power station must manage ash produced from burning coal at a much larger scale. Eskom manages the ash through safe disposal at designated ash disposal facilities. The disposal of ash at these facilities typically requires an area of land in excess of 600 hectares!

In the 2018 financial year, 119,2 million tons of coal was consumed, producing 34,4 million tons of ash. About 2,41 million tons (seven per cent per annum) of the Eskom ash are sold from six of the 15 Eskom coal-fired power stations.



3. What can Eskom ash be used for?

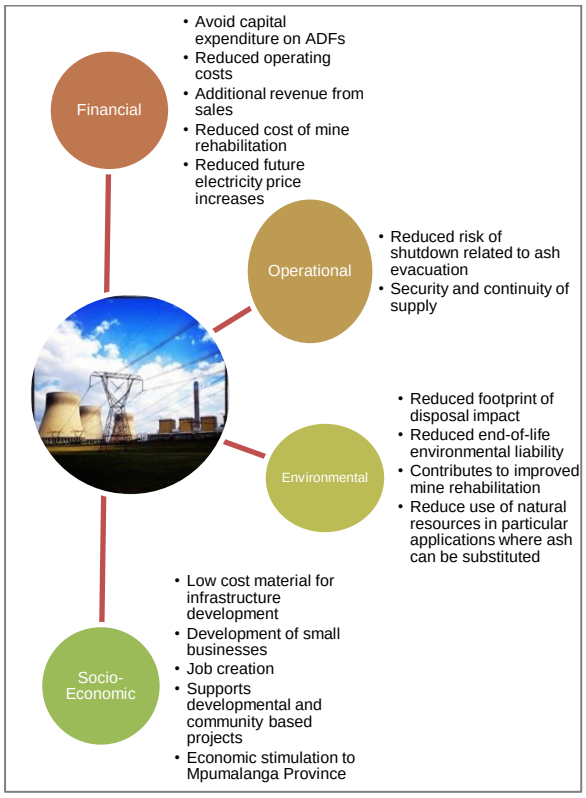
Ash may be used in a variety of applications from making rubber and also as a cement extender to paint! Eskom wishes to demonstrate that the use of ash is safe to human health and the environment, for the applications of brick and block making, road construction, mine backfilling, and use in soil amelioration, subject to certain control measures.

Brick and Block making	Bricks made from ash are cheaper, lighter, good quality and easy to manufacture
Cement	Ash can replace natural elements such as limestone as a cement extender There are favourable opportunities for exporting ash to be used in large construction projects
Mine Backfilling	Rehabilitation of previously mined areas to be economically utilised, for example housing, agriculture etc. Treatment of sulphate rich mine water and acid mine drainage.
Road Construction	Ash can be used for construction of roads and embankments – this saves top soil that otherwise is conventionally used from approved borrow pits/mining operations
Agriculture/Soil amelioration	More cost-effective option to using conventional lime

4. Is it safe for the environment?

Eskom has contractually supplied ash to large cement produces from its Lethabo and Kendal power stations for over 30 years. Internationally, ash is regarded as a raw material and has long 'lost' the label of being a waste. The Department of Environmental Affairs together with Eskom have designed specific norms and standards that govern the conditions within which ash can be managed safely throughout the commodities life cycle. As with any other product, controls relating to the storage, transport and handling of ash will need to be in place to ensure the safe use of ash in different applications.

5. What are the benefits to Eskom of ash beneficiation?



5. Are there some examples of successful projects that have used Eskom ash?

Figure 1: Projects involving Eskom Ash.

From left to right:

Gautrain project **Burj Khalifi (Dubai)**

Katse dam **Coega**

JHB freeway project **Soccer City**

6. But is Ash not considered a hazardous waste?

Yes, in terms of current South African legislation it is currently classified as hazardous waste. As with many other commercial products, ash has specific safety data sheets that ensure the safe handling and beneficiation of ash.

Recently promulgated Waste Legislation allows for Eskom to apply for exclusion from the requirements of the legislation for certain applications of ash. Eskom's application has been submitted to the Department of Environmental Affairs and Eskom awaits the final approval before initiating the commercial strategy around the selling of ash.

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