

Solid Waste Management Challenges and Possible Solution in Kabul City

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Abstract : Most developing nations face energy production and supply problems. This is also the case of Afghanistan whose generating capacity does not meet its energy demand. This is due in part to high security and risk caused by war which deters foreign investments and insufficient internal revenue. To address the issue above, this paper would like to suggest an alternative and affordable way to deal with the energy problem. That is by converting Solid Waste to energy. As a result, this approach tackles the municipal solid waste issue (potential cause of several diseases), contributes to the improvement of the quality of life, local economy, and so on. While addressing the solid waste problem in general, this paper samples specifically one municipality which is District-12, one of the 22 districts of Kabul city. Using geographic information system (GIS) technology, District-12 is divided into nine different zones whose municipal solid waste is respectively collected, processed, and converted into electricity and distributed to the closest area. It is important to mention that GIS has been used to estimate the amount of electricity to be distributed and to optimally position the production plant.

Keywords : energy problem, estimation of electricity, GIS zones, solid waste management system

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