Abstract

Investigating the adoption of small-scale household biogas digesters for cooking purposes in the Eastern Cape (South Africa): A case study concentrated in the Amathole region

Small-scale biogas digesters have a meaningful role to play in the household energy mix. Biogas digesters are robust in nature and possess a strong potential for alleviating energy poverty. The environmental benefits associated with small-scale digesters at the household level are noteworthy. Moreover, the adoption of this technology will yield some stimulated economic development scenarios as depicted in the literature review. The unenthusiastic apatite for the adoption of biogas digesters in urban areas may well be linked to the low levels of energy poverty in inner-cities. In addition to this, there are substantial limitations for accessing feedstock in in urban areas as determined by the research, particularly cow dung.

Overall, the supplementary environmental and socio-economic benefits connected to the adoption of biogas digesters for cooking purposes at household level add value to the argument that encourages the acceptance of biogas digesters. The research has noted that the cost of small-scale biogas digesters is tremendously high and this has been identified as a key blockage for the adoption of small-scale biogas digester in general. The data analysis and preliminary results in chapter 4 have exemplified that rural households are more keen on adopting biogas digesters for cooking purposes, however, financial constraints have made this impossible to achieve. While countries such as China and India have successfully adopted the utilisation of biogas digesters, this will not be possible in the Eastern Cape until some form incentives and subsidies are introduced as a policy instrument that is meant to strengthen the adoption of biogas digesters. For the interim purposes, it important to bring about financial instruments that can stimulate economies of scale the biodigester manufacturing segment.