

4.3 WTE Scenario results

Three scenarios for WTE development were developed and analyzed: complete incineration; incineration with recycling; and RDF with biomethanation. The forecast results for three scenarios for Libya is presented in figure 4. The figure shows that for the incineration scenario has a potential to generate about 197 MW in 2030 while incineration with recycling scenario shows a potential to produce about 57 MW in 2030. The RDF with biomethanation scenario shows a potential to produce about 76 MW in 2030 from Libya.

The figure also shows that complete incineration scenario has the highest power generation capacity over the other three scenarios. Additionally, the three scenarios provide a viable disposal option for MSW and, if implemented, will alleviate the landfills problem in the area. The decision to select among the three scenario will required further financial, social, technical, and environmental analysis.

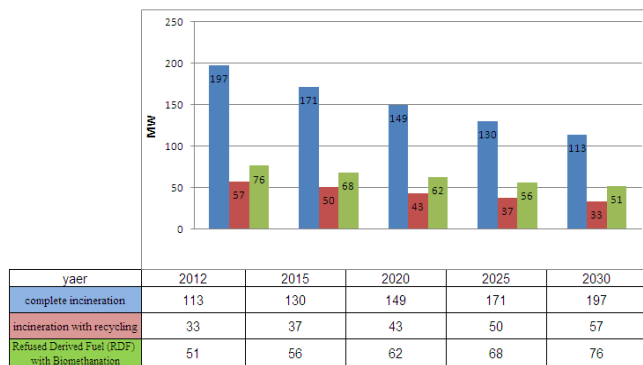


Figure 4: Power Generation Potential (MW) of Libya for the years 2012-2030

5. FUTURE WORK

Choose from the three scenarios discussed in this the paper requires more financial, social, technical and environmental analyses in which the authors work of this work. It will be useful to consider the cost of capital Ton, operational cost, complexity of technologies, and work Skills levels, and geographic location for their respective implementation of these scenarios. By looking at the actual global trend the implementation of these operations, will be possible.

6. CONCLUSION

Local solid waste practices in Libya are carried out simply by collecting and disposing of waste by dumping it at landfill sites. This practice has led to a chronic problem in the disposal of municipal solid waste. Libya considers vocational and commercial training to be renewable the source of energy that can contribute to the demand for electricity in the Libya and alleviate the problem of disposal of municipal solid waste. This paper assessed the potential contribution of a facility to meet the electricity needs of Libya and provided a solution to the problem of landfill sites. Three scenarios were developed and analyze: Mass Burn, Mass Burn with recycling and RDF with biomethanation. The scenarios were forecasted up to year 2030. The research results show that Mass Burn Scenario has the highest power generation capacity over the other two scenarios. Additionally, the three scenarios provide a viable disposal option for MSW and, if implemented, will alleviate the landfill problem in the area.

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