

Harvesting Wasted Energy in water distribution network in Buea-Cameroon

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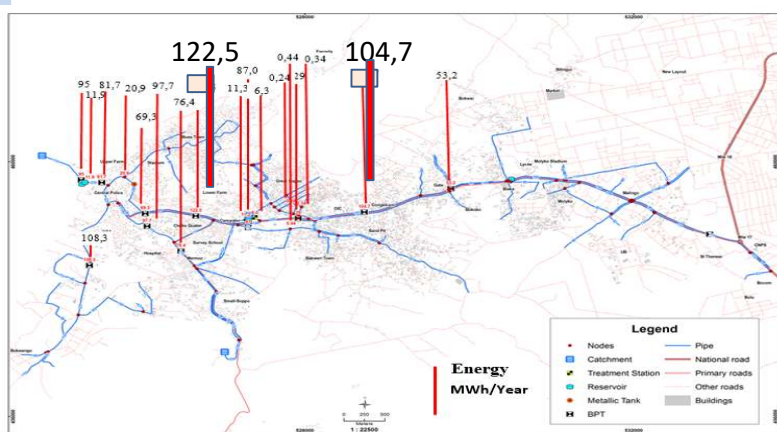
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Introduction



Problem Statement

Pressures are dissipated in break pressure tanks and pressure reducing valves resulting in significant energy losses. The water distribution network of Buea presents 18 Potential Sites with a total of approximately 976.21 MWh dissipated per year.

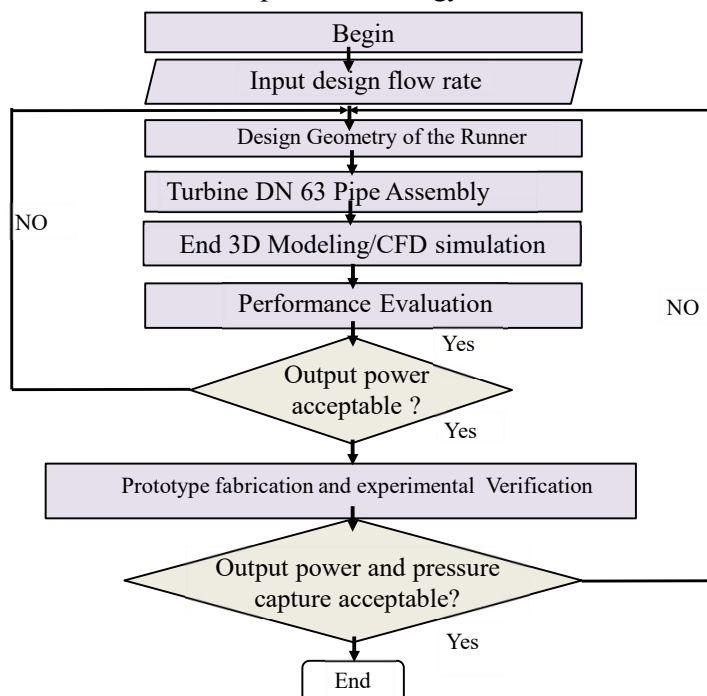


Objective

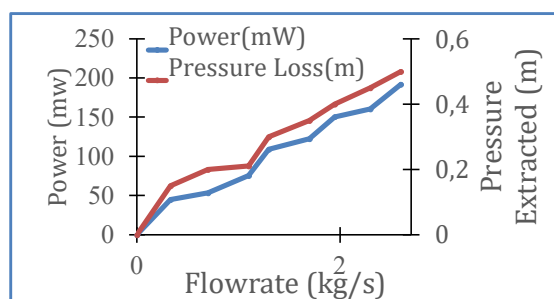
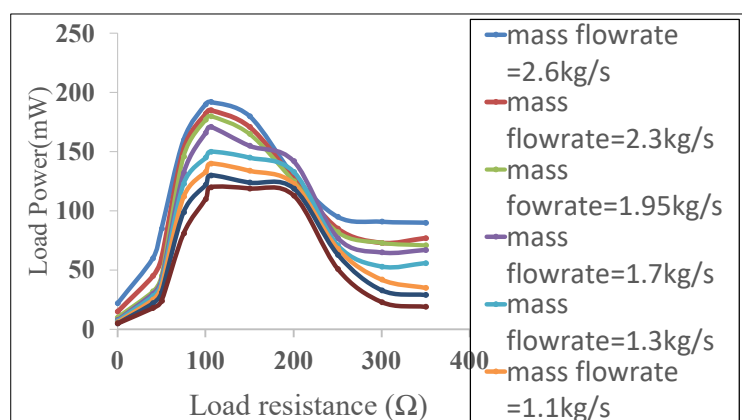
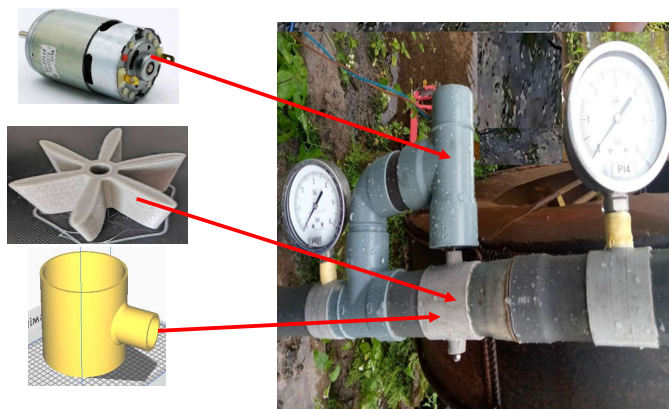
To recover energy at locations of excess energy through the implementation of Micro Hydropower Technology.

Materials and Methods

Development of Energy Harvester



Results



Maximum output 192 mW / 106 Ω / 2.6kg/s

Applications

- Charging Telephones
- Street Lighting



Conclusions

- There's abundant renewable energy in the Water Distribution network.
- The Energy can be used for Streeting Lighting etc

References

- Samora, I. M. (2016). Energy
- Blom, P., & Van Dijk, M. (2018). Renewable Energies