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Thermoacoustic micro-electricity generator for rural dwellings in developing countries driven by waste heat from cooking activities

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Highlights

- Demonstrator with just under 20 W of electrical output is modelled and tested
- Design trade-offs are outlined to apply the technology in poor rural areas
- Atmospheric air has been shown as a viable thermodynamic medium
- Use of cheap components has been demonstrated to reduce costs
- Acoustic and electric efficiencies of 3.5 % and 1.9%, respectively, achieved

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