

Knowing the Score-Stove -- revolutionary sound-powered stove tested on the ground

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A revolutionary sound-powered stove and electrical generator is currently being tested in the conditions it was designed for — rural villages in Nepal and Bangladesh.

The Score-[Stove](#) project brings together researchers from across the world to develop a wood-powered generator capable of cooking food.

Led by the Department of Electrical and Electronic Engineering at The University of Nottingham, the project team uses thermo-acoustic technology to convert biomass fuels into energy, powering the stove and generator.

The generator has already broken electricity-production records in the lab. The thermo-acoustic wood-powered engine built by Score-Stove™ partner City University produced 23 watts. And an electrically-heated

wood-burning stove built by the Nottingham team produced 36 watts of power.

Now researchers at The University of Nottingham's Malaysia Campus, Kathmandu University, the Bangladesh University of Engineering and Technology and partner charity Practical Action, will adapt the stoves to replicate power production in their local environments. Energy company Alstom has provided €100,000 of funding for field trials in Nepal. And Engineers Without Borders is supporting four students in developing the Score-Stove stove at Kathmandu University.

Score project director Paul Riley said: "The successes in the lab are fantastic achievements for the project, but they're only the beginning for us. The Score-Stove™ generators will be used in areas across a world which has limited access to a reliable power source. We must adapt the lab version for each area, taking into account local biomass fuels, types of pots and pans used to cook, along with the everyday tasks the unit will be required for.

"It must also be able to be produced affordably and locally, rather than shipped in from overseas at great expense. That means assessing local access to materials like stainless steel and looking for workable alternatives where they're not readily available.

"Adaptability is hugely important. We must preserve the excellent levels of performance that we're seeing in our labs. The tremendous support we have from our partners across the academic, charity and energy sectors is instrumental in this."

Joe Jamieson, Group Head of Aerodynamics at Alstom UK, said: "This technology is transformational and highly novel. It helps to solve a very serious problem by reducing the risk of death from cooking smoke, which kills more people than malaria each year. It also provides

electricity in a safe and sustainable way.

“The Alstom Foundation is helping to bring new innovations to market that will change the prospects of so many families in developing countries.”

More information: For more information on the Score-Stove project, visit www.score.uk.com

Provided by University of Nottingham

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