

Green step: Harvesting Energy From Footsteps

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PROBLEM STATEMENT

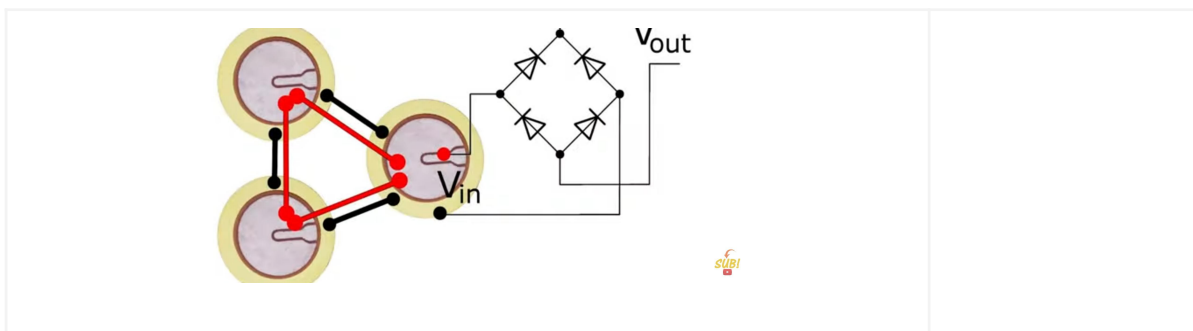
Developing Sustainable and Affordable Solutions to Provide Reliable Electrical Energy Access to Underserved and Remote Communities: Addressing the Energy Gap and Empowering Socioeconomic Development.

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INTRODUCTION

In an era marked by technological advancement and global interconnectedness, access to electrical energy has become a fundamental catalyst for social progress, economic development, and improved quality of life. However, a significant portion of the world's population continues to grapple with the challenge of obtaining reliable and affordable electrical energy, especially in underserved and remote communities. This glaring energy gap not only hinders the potential for socioeconomic growth but also exacerbates disparities in education, healthcare, and overall well-being. The problem at hand calls for innovative and sustainable solutions that can transcend geographical barriers and financial limitations, empowering communities with the transformative power of electricity. By bridging this energy gap, we have the opportunity to unlock new avenues for human advancement, enabling access to information, enhancing productivity, and fostering local entrepreneurship.





IDEA GENERATION

After conducting research, they proposed a solution to develop an efficient and user-friendly. The ingenious concept of harnessing piezoelectric technology to generate electricity through the pressure exerted during walking and running presents an innovative solution to address energy challenges. This approach stands out as an environmentally friendly energy source, aligning with the growing global emphasis on sustainable and green energy alternatives. Remarkably, this technology thrives on its ability to efficiently convert even the slightest pressure into a substantial voltage output, promising an optimal energy generation process. The beauty of this idea lies in its simplicity; the system requires minimal pressure application, making it feasible for people of various ages and physical capabilities to contribute to energy production. The proposed energy generation mechanism taps into a largely untapped resource – human movement – which has the potential to revolutionise energy access in hard-to-reach areas and communities lacking conventional power infrastructure. By detecting and converting small pressure differentials into electricity, this innovative system showcases its adaptability and effectiveness, especially in scenarios where conventional energy sources are limited or absent. The integration of this technology could potentially lead to a paradigm shift in remote regions, offering a decentralised and self-sustaining energy solution that empowers communities and enhances their overall quality of life.

PROTOTYPE IMAGES

