IIT-Indore's 'pocket windmill' can charge cell phones in remote areas

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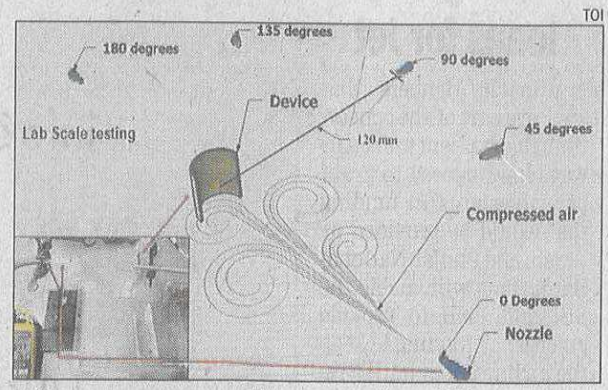

Indore: Go with the wind if you want to charge mobile phones and power banks. A tiny device weighing less than 30 gram can easily charge phones and even lit an array of LEDs.

Two years of hard work by a team of researchers at Indian Institute of Technology (IIT) has transformed into a tiny flexible Piezoelectric based smart flags with inbuilt circuits that can charge devices from wind energy trapped through fluttering of the flag.

This device can be used to charge mobile phones, power banks and lit up an array of LEDs in remote and restricted areas like in dense forests and Army areas, researchers claimed.

These portable flag of about 30cm, when put on a poll in direction of the wind, will convert wind energy for charging devices.

IIT-Indore mechanical engineering associate professor Dr IA Palani, who is leading the research team said, "This tiny flag can be rolled and taken to any place. This device can generate up to 15 volts with respect to wind speed, fluttering frequency and crystal capability."

This flag made of polythene sheet is capable of generating energy without the need of any infrastructure and rigid setup at low cost unlike heavy cost involved in generating energy from windmills.

Electrical engineering associate professor Dr Vipul Singh and PhD research scholar Rajagopalan were part of the research of IIT Indore.

Palani said, "The device can be of immense help for Army personnel in restricted areas and in dense forest, where this energy can be used in tribal areas. This flag can be put on a pole in direction of the wind and charge devices."

Researchers said that in dense forests, there will not be any need to carry power back up and high wind speed can be used to tap energy and charge devices.

The institute is mulling plans to launch this as a commercial product in market in next six months.

Researchers said that regular charging of heavy batteries has made researchers search for self-powering alternatives and wind and solar are the only source of scavenging energy.

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