

October 12, 2021

## PSMA White Paper - Energy Harvesting for a Green Internet of Things

*The white paper, prepared by an international team of experts from diverse backgrounds, offers a broad range of insights into the world of energy harvesting, especially for IoT applications.*

PSMA has announced the availability of a White Paper entitled “[Energy Harvesting for a Green Internet of Things](#).” This seminal work is the result of a multi-month effort by a dedicated team of 28 international experts from a variety of backgrounds in academia and industry, led by Dr. Michalis Kiziroglou from Imperial College London and Dr. Thomas Becker of Thobecore Germany. The PSMA Energy Harvesting Technical Committee supported this work and is responsible for making the White Paper available.

The ubiquitous nature of energy autonomous microsystems, which are easy to install and simple to connect to a network, make them attractive in the rapidly growing Internet of Things (IoT) ecosystem. The growing energy consumption of the IoT infrastructure is becoming more and more visible and impactful. Energy harvesting describes the conversion of ambient energy into electricity, enabling green power supply of IoT key components such as autonomous sensor nodes. Energy harvesting could lead to a lower CO<sub>2</sub> footprint of future IoT devices by adapting environmentally-friendly materials and reducing cabling and primary battery usage.

The key findings in the White Paper are as follows:

- energy harvesting is a key enabling technology for the green Internet of Things;
- this potential is demonstrated with several use case studies;
- industrial adoption is reluctant despite positive costs-benefits and their life-cycle impacts;
- massive future deployment requires a concerted strategy in research and technology accompanied by disruptive industrial product developments and innovations.

The paper is available at no cost on the PSMA website Energy Harvesting Technical Forum at <https://www.pdma.com/technical-forums/energy-harvesting/whitepaper>.

### About PSMA:

[PSMA](#) is a non-profit professional organization with the objective of enhancing the stature and reputation of its members and their products, and improvement of their technological power sources knowledge. Its aim is to educate the entire electronics industry, academia, government, and industry agencies as to the applications and importance of all types of power sources and conversion devices.

The [Energy Harvesting Committee](#) is one of 12 committees within PSMA that focuses on particular power electronics technologies (from materials to devices and systems) and/or applications. The committee is planning the 2022 EnerHarv Workshop at NCSU in Raleigh, NC. For more information, visit [www.enerharv.com](http://www.enerharv.com)

### Editorial Contact:

[The Power Sources Manufacturers Association](#)

Joe Horzepa, Executive Director

973.543.9660 • [joeh@psma.com](mailto:joeh@psma.com)

[www.pdma.com](http://www.pdma.com)



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