



YOUR BUSINESS
OUR INSIGHT

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Overview of our services

IDTechEx supports your strategic business decisions on printed electronics, electric vehicles, emerging materials and components, energy harvesting, energy storage and RFID, by providing



Reports and Subscriptions

Over 70 globally cited market research reports

Company profile database, premium articles, access to analysts

Events

Run **over 60** events in the past 14 years. IDTechEx organize the World's leading events for Printed Electronics and other topics.

Consultancy:

Over 275 consultancy projects including opportunity scouting, market and technology appraisal, due diligence, masterclasses...

Web Journals

Printed Electronics World, **Energy Harvesting Journal**, Electric Vehicles Research

Why IDTechEx?

IDTechEx is a 14 year old company with bases in the US, UK, Germany and Japan and customers in 80 countries. We are **technical, impartial** and **experienced** in our chosen research topics.

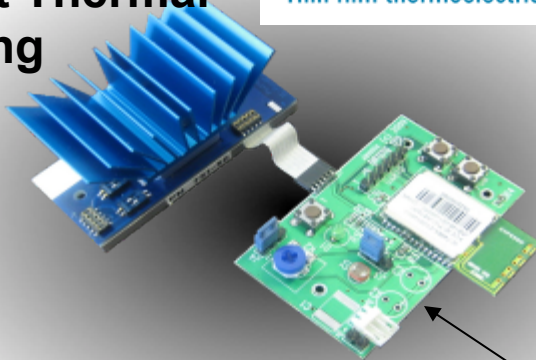
- **Globally cited** analyst team combining technical analysts (most have PhDs) and successful business leaders.
- **Global Research:** in 2013 we visited Japan, USA, Korea, Germany, Brazil, Belgium, France, UK, The Netherlands, Canada, etc
- **Hundreds of interviews** are conducted each year as part of our global research programmes with organisations across the value chain
- **80,000+ global contacts** in our targeted contact database of the printed, organic and flexible electronics industry. More than **15,000** people read our journal www.energyharvestingjournal.com.

Enabling Wireless Sensors

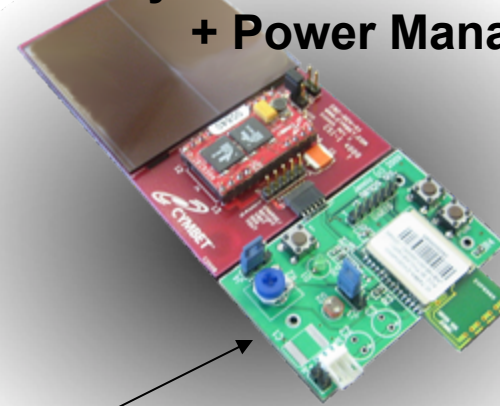


Micropelt Thermal Harvesting

micropelt
Thin film thermoelectrics.



Cymbet Solar Harvesting + Power Management



Low Power Sensor Board



PowerCast RF Harvesting

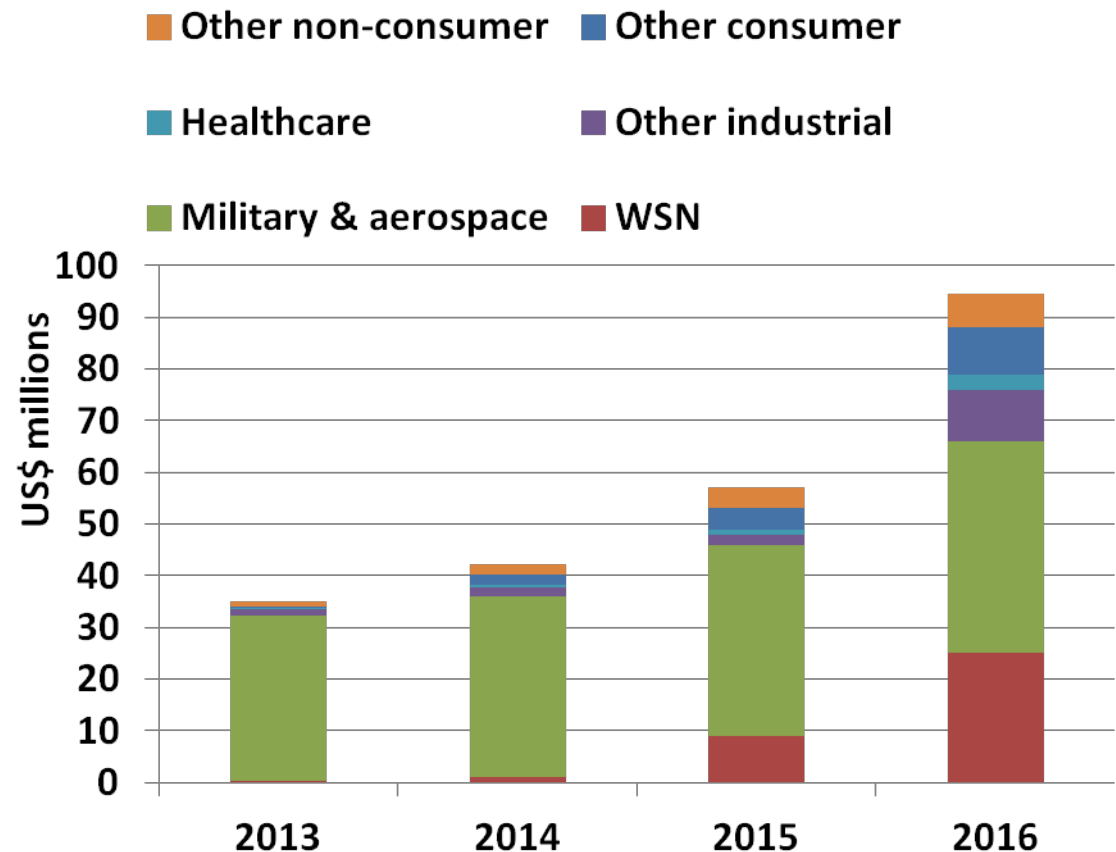
Source: Jennic

...Each Harvester Contains Integrated Energy Storage...

**Electrodynamic,
Piezoelectric
Magnetostrictive
Harvesting...**

Market forecasts for TEGs (US\$ Million)

- Almost a \$900 million in the next decade
- Optimize materials for high temperature applications
- Wireless sensors and sensor networks 2015 onwards, industrial applications
- Automotive applications taking off later



source: "Thermoelectric Energy Harvesting 2013-2023: Devices, Applications, Opportunities" www.idtechex.com/thermo

Automotive waste heat recovery: Global investment

- GM
- Ford
- BMW
- Honda
- Daimler Benz
- Volkswagon
- Fiat/Chrysler
- Renault
- Toyota

Global Investment in TE Technology- November 2012 Snapshot (~ 4 yr bucket)		
Region	Total Spent, USD	Total Government funds, USD
EU	\$ 145,732,370	\$ 97,336,809
North America	\$ 53,923,077	\$ 37,250,000
Russia	\$ 40,000,000	\$ 20,000,000
Japan	\$ 22,600,000	\$ 21,700,000
China	\$ 15,100,000	\$ 15,100,000
Worldwide Total	\$ 277,355,447	\$ 191,386,809

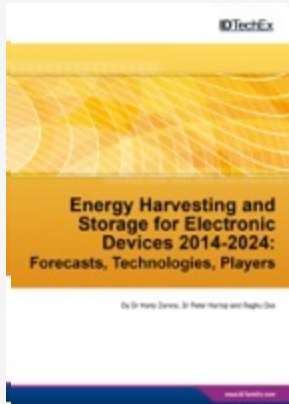
Source: Gentherm

Applications in the build environment

[1] wireless switches [2] wireless outdoor light sensors [3] wireless occupancy sensor [4] wireless room temperature sensor [5] wireless climatic sensors [6] [7] wireless position sensors [8] Central control [9] Remote monitoring/control



IDTechEx Research on energy harvesting and wireless sensors



Energy Harvesting and Storage for Electronic Devices 2014-2024: Forecasts, Technologies, Players





Mobile Phone Indoor Positioning Systems (IPS) and Real Time Locating Systems (RTLS) 2014-2024
Forecasts, Players, Opportunities

[**www.IDTechEx.com/research**](http://www.IDTechEx.com/research)



Wireless Sensor Networks (WSN) 2012-2022: Forecasts, Technologies, Players

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Energy Scavenging, Power Scavenging - Making small electronic and electric devices self-sufficient

LATEST ARTICLES 12 February 2013 Country: United States

Static nanogenerator powered by footfalls
A team led by Zhong Lin Wang, of the Georgia Institute of Technology has developed a novel generator that can produce significant amounts of electrical power from static electricity. Static electrostatic...

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Nemesis project to explore energy harvesting
11 Feb 2013 | United Kingdom
The University of Bath has received funds for a project titled 'NEMESIS', which will allow it to set up a new world-leading Centre for energy harvesting and generation. The Centre aims to create new piezoelectric and ferroelectric energy harvesting a...

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Energy Harvesting Network one-day dissemination
Press Release | 11 Feb 2013 | United Kingdom
The Energy Harvesting Network is holding its annual one-day dissemination event on 29th March 2013 at Hamlet House, London. The Network is EPSRC-funded, and is for academia, industry and end-users of energy harvesting technology. The prime sponsors...

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Next-generation battery chemistries
8 Feb 2013 | United States
Leyden Energy, Inc has raised \$10 million in Series C financing from existing investors, including New Enterprise Associates (NEA), Lightspeed Ventures, Sigma Partners and Walden International. The new round will help fund production and commercial...

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Energy harvesting iPhones in the future
7 Feb 2013 | United States
The U.S. Patent and Trademark office has granted a patent application from Apple for an invention that integrates a touch sensor array with a solar panel, allowing for a portable device to be both power-efficient and compact. Apple's newly-granted ...

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Funding and collaboration to develop redox flow battery
6 Feb 2013 | Germany
German researchers are developing a long-lasting battery by teaming up four German universities, two research institutes and two companies. They aim to increase the amount of energy from wind and solar power sources that can be stored by redox flow B...

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Fully functional smartphone operating on integrated solar power
5 Feb 2013 | France
Wysip® (What You See Is Photovoltaic Surface), a subsidiary of Sunpartner, inventor of the component capable of transforming any surface into a solar energy source without changing its look, will be introducing for the first time a fully functio...

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Research into self-powered systems using nanoscale devices
4 Feb 2013 | United States
It's relatively simple to build a device capable of detecting wireless signals if you don't mind making one that consumes lots of power. It's not so easy to design energy-efficient devices that function as well as the components they replace, or to d...

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BERLIN, GERMANY

Energy Harvesting Solutions

17-18 April 2013
Berlin, Germany
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Register by 22 Feb 2013

IDTechEx Reports

Wireless Power Transmission for Consumer Electronics and Electric Vehicles 2012-2022
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Energy Harvesting/Regeneration for Electric Vehicles Land, Water & Air 2012-2022
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Thin Film Photovoltaics 2012-2022: Forecast, Technologies, Analysis
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Energy Harvesting and Storage for Electronic Devices 2012-2022: Forecast, Technologies, Analysis
[read more](#)

Thermoelectric Energy Harvesting 2012-2022: Devices, Applications, CaseStudies
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IDTechEx Events

ENERGY HARVESTING & STORAGE 2013
17 - 18 Apr 2013
Berlin, Germany

WIRELESS POWER TRANSMISSION & STORAGE 2013
17 - 18 Apr 2013
Berlin, Germany

SUPERCAPACITORS
17 - 18 Apr 2013
Berlin, Germany

ENERGY HARVESTING & STORAGE 2013
20 - 21 Nov 2013
Santa Clara, CA, USA

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