

# Powercast Joins RAIN Alliance Sustainability Workgroup, Explains Wireless Power's Role in Sustainable RAIN RFID Systems

*Combining RAIN & Powercast technologies creates smart, sustainable, maintenance-free devices able to recharge/communicate over the air without wires, batteries*

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[/EINPresswire.com/](https://EINPresswire.com/) -- Powercast Corporation, the industry's one-stop-shop for wireless power, announced it has joined RAIN RFID Alliance's (<https://rainrfid.org>) Sustainability

Working Group. This group's goal is to provide education on how RAIN RFID technology, already used worldwide for the item tracking necessary in inventory management, stock control, logistics, retail and other applications, can also be an enabler for companies to achieve their sustainability objectives.

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Powercast is committed to initiatives furthering a brighter sustainable future for generations to come, so we're excited to join like-minded companies in RAIN's Sustainability Working Group.”

*Charles Greene, Ph.D., COO  
and CTO of Powercast*

What is RAIN RFID? RAIN Radio Frequency Identification (RFID) is a wireless technology that uses both handheld and fixed ultra-high frequency (UHF) RFID inventory readers that are prevalent in industries around the globe to connect billions of everyday items to the internet. It enables businesses and consumers to identify, locate, authenticate and engage each item bearing an RFID tag or label.

The Sustainability Working Group just published a report, “Bridging the Gap – Connecting Corporate Sustainability

with RAIN RFID” (<https://rainrfid.org/rain-alliance-research-reveals-how-rain-rfid-data-will-transform-corporate-sustainability-initiatives/>), based on a 20-company survey of apparel, automotive, healthcare and other companies.



Wireless electronic bag tag harvests RF from airport RFID equipment to refresh the passenger's itinerary on E Ink's ePaper screen that can maintain an image perpetually, without a constant power source, until another wireless update is sent.

Findings include:

- Data collected in existing RFID applications can also inform sustainability strategies, and there is evidence this is happening, but more education is needed to bridge RFID systems and sustainability efforts.
- Many examples of how RFID can help address sustainability challenges already exist, including: 1) achieving inventory accuracy levels that reduce waste and keep excess goods out of landfills, 2) being able to anticipate the lifespan of a product to facilitate recycling and waste management, and 3) collecting environmental data related to CO2 reduction.

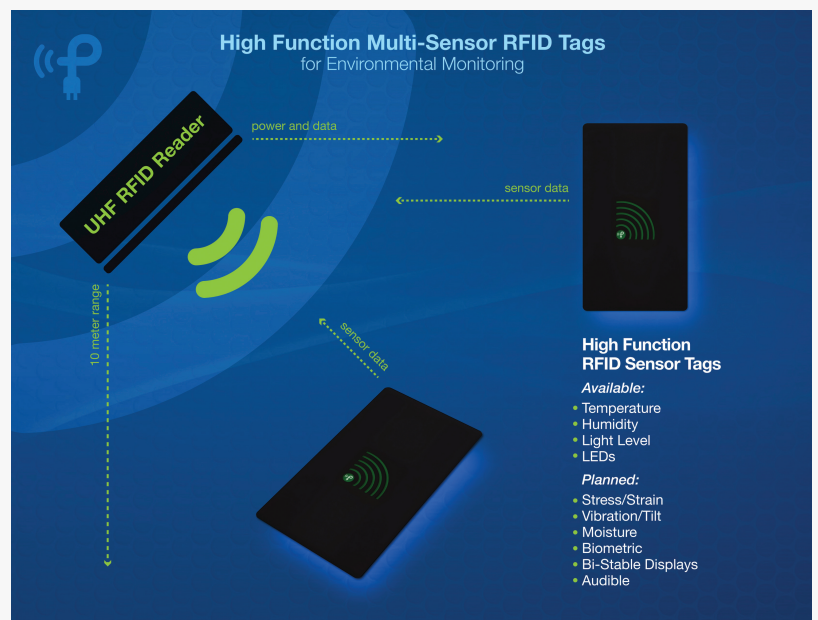
“Powercast is committed to initiatives furthering a brighter sustainable future for generations to come, so we’re excited to join like-minded companies in RAIN’s Sustainability Working Group,” said Charles Greene, Ph.D., COO and CTO of Powercast. “Since 2007, our wireless power technologies have enabled untethered devices that need no battery maintenance and reduce the e-waste – cables, cords and disposable batteries – that litters landfills.”

Charles Goetz, CEO of Powercast, will explain wireless power’s role in sustainable RAIN RFID systems at the Connections Summit 2024 (<https://bit.ly/RainAllianceSummit>), organized by RAIN RFID Alliance and NFC Forum, in Taichung, Taiwan, from May 13th to 16th.

“Combining RAIN’s identification and communication capabilities with Powercast’s radio frequency (RF) to direct current (DC) conversion technology can create smart, sustainable, maintenance-free device ecosystems able to both recharge and communicate over the air without wires or disposable batteries,” continued Greene.



Another example of an electronic paper display (EPD) tag, Powercast's electronic shelf-edge label (ESL) can harvest RF when it comes within range of an RFID reader to provide over-the-air retail price updates.



Other RFID over-the-air wireless power applications include environmental monitoring, such as Powercast's RFID Sensor Tags which measure temperature, light and humidity.

How Powercast's Wireless RF Power Technology Combines with RAIN RFID to Add Functionality: Since UHF RFID readers emit an RF signal that's similar to that of Powercast's RF wireless power transmitters, these readers can be a reliable source of wireless power. Powercast's tiny Powerharvester® PCC110 receiver chip embedded in RFID tags or labels can harvest RF and data sent over the air from any RFID reader – whether it's fixed infrastructure or a handheld reader used by employees – and convert that RF to usable DC to both power devices and communicate data. Range depends on power consumption level; most devices can function up to 20 feet from a reader, while ultra-low-power devices can work up to 120 feet away. Devices can either be batteryless or rechargeable-battery-based, which eliminates inconvenient and expensive battery replacement efforts and keeps disposable batteries out of landfills.

As examples, a Powerharvester embedded in an electronic paper display (EPD) tag such as a retail electronic shelf-edge label (ESL), or an environmental sensing or logistics tag can harvest RF when it comes within range of a UHF RFID reader.

Several EPD applications were recently developed using partner E Ink's bi-stable digital ePaper screen (<https://go.eink.com/download-our-whitepaper-powercast-rf-technology>) that can maintain an image perpetually, without a constant power source, until another over-the-air wireless update is sent. These EPDs include a [wireless electronic bag tag](#) which harvests RF from airport RFID equipment to refresh the passenger's itinerary on the screen, and Powercast's own [batteryless ESL](#) which enables over-the-air retail price updates.

Other RFID over-the-air wireless power applications include environmental monitoring, such as Powercast's [RFID Sensor Tags](#) which measure temperature, light and humidity; logistics and advanced location tracking devices; and sensing devices on products such as tires.

#### About Powercast

Powercast Corporation is the one-stop-shop for all things wireless power, short to long range and microwatts to kilowatts, with the industry's broadest technology offering covered by over 300 patents worldwide. Our mission is to revolutionize the way the world accesses and uses power by delivering innovative wireless solutions - from power-over-distance RF charging to powerful contact-based inductive charging to Lifetime Power® 25-year battery life sensors - that change communities and contribute to a brighter sustainable future for generations to come.

Powercast is leading the way in transforming the power landscape, creating a world where wireless power solutions are seamlessly integrated into our daily lives. We are at the forefront of sustainability, productivity, and convenience, envisioning a future where every device is charged wirelessly, every task is simplified, and every action leaves a smaller ecological footprint.

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