News Release

November 2, 2026
Headspring Inc.
Osamu Hoshino, President & CEO

Headspring Opens "HS SmartEnergy Lab YAMAZAKI" at Art & Technology Village Kyoto, an Innovation Hub of Kyoto Prefecture, to Demonstrate and Develop Behind-the-Meter Power Systems

First project: battery storage that runs EV fast chargers with limited grid-supply capacity

Headspring Inc. (Headquarters: Shinagawa-ku, Tokyo; President and CEO: Osamu Hoshino; hereinafter "Headspring") opened the power-system demonstration and development facility "HS SmartEnergy Lab YAMAZAKI" on November 2, 2026, within Art & Technology Village Kyoto (ATVK), Kyoto Prefecture's open-innovation hub in Oyamazaki, Otokuni District, Kyoto Prefecture.

At HS SmartEnergy Lab YAMAZAKI, Headspring will demonstrate and develop power systems that utilize power-generation and energy-storage facilities as well as energy-management equipment installed on the customer side of the utility meter (behind the meter, or BTM). As its first project, the lab will begin demonstrating a "one-way battery storage system" that can run EV fast chargers even where the power available from the utility is limited. The system draws power from the grid without feeding power back into it.
An opening ceremony was held at the facility on the same day. Attendees included Mr. Akimasa Yamashita, Mayor of ATVK and former Vice Governor of Kyoto Prefecture, together with representatives of the Kyoto Industrial Support Organization 21, the public-interest foundation that operates ATVK.



Exterior of HS SmartEnergy Lab YAMAZAKI (left: front with solar carport; right: rear)

Background

As new and expanded AI data centers (AIDCs) drive demand for large amounts of electricity, there is a growing need to secure substantial power capacity at an early stage. At the same time, expanding transmission and distribution infrastructure required for grid connections takes time, while procurement lead times for large transformers and other equipment have lengthened. As a result, securing the required grid-supply capacity when it is needed has become a major challenge. Against this backdrop, interest is growing in behind-the-meter (BTM) power systems that use on-site power generation and energy storage to supplement grid electricity and meet demand.

The Role of HS SmartEnergy Lab YAMAZAKI

Headspring specializes in power electronics—the technology for converting and controlling electricity efficiently—and has been involved in more than 450 development projects. "HS SmartEnergy Lab YAMAZAKI" is a base for extending this technology from individual devices to entire systems, focusing on behind-the-meter (BTM) power systems, and it has three roles.

1. **Connecting and testing equipment:**
   We connect and operate energy equipment from Japan and overseas—solar power systems, battery storage, EV chargers, and more—to verify how they work in combination. Equipment will be added over time to broaden the range of demonstration themes.
2. **Developing the system that runs them together:**
   We develop and refine biPOWERshare, Headspring's system for sharing electricity among devices, using actual equipment.
3. **Showing the system and supporting it after deployment:**
   The lab serves as a venue for tours and joint testing with customers and partner companies. Operating data will be used to improve our products and to provide remote monitoring and maintenance services.

HS SmartEnergy Lab YAMAZAKI at a Glance

Name	HS SmartEnergy Lab YAMAZAKI
Location	30-1 Oaza-Oyamazaki Koaza-Kagamida, Oyamazaki-cho, Otokuni-gun, Kyoto Within Art & Technology Village Kyoto (ATVK)
Opening date	Monday, November 2, 2026
Area	Approx. 330 m^2 (approx. 100 tsubo)

About Art & Technology Village Kyoto (ATVK)

ATVK is an open-innovation hub that Kyoto Prefecture opened in Oyamazaki in October 2023; it is operated by the Kyoto Industrial Support Organization 21. By combining the strengths of Kyoto's culture and arts with technology, it aims to create new industries and develop the talent of the next generation. The roughly 23,000-square-meter site includes areas for its ten tenant companies, an exchange building, and space for demonstration projects. Companies from different industries and universities gather here to pursue new initiatives together. Headspring has established its power-system demonstration and development facility "HS SmartEnergy Lab YAMAZAKI" here as a tenant company.

First Demonstration: A Storage System for High Power with Limited Grid-Supply Capacity

The first demonstration theme is the "one-way battery storage system." When factories and business sites install EV chargers or solar power, two obstacles typically arise on site.

1. **Insufficient grid-connection capacity:**
   EV fast chargers draw a large amount of power in a short time. Upgrading the incoming power equipment to accommodate them can cost more than the charger itself.
2. **Grid-interconnection procedures:**
   Connecting solar power or battery storage to the power grid requires consultation with the utility and compliance with its rules. This takes time, and many overseas products do not meet Japanese requirements, which limits the choice of equipment.

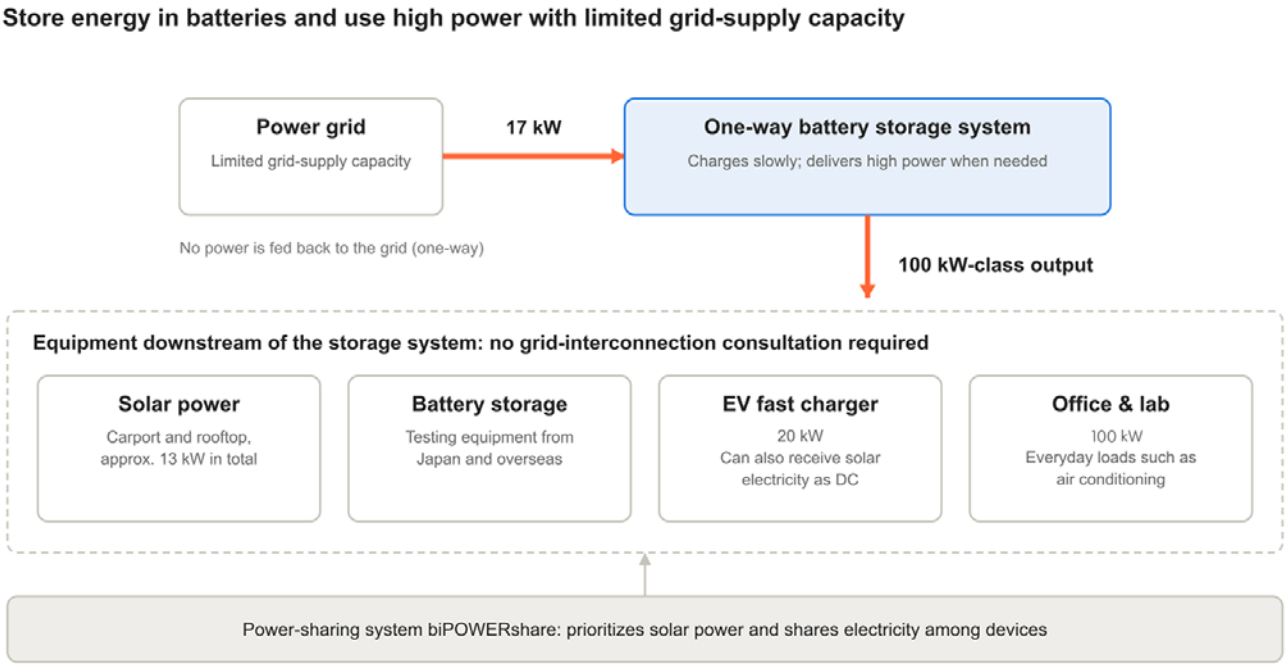


Figure: First demonstration system

The one-way battery storage system forms an independent power network (microgrid) that connects solar power, battery storage, EV chargers, and other equipment. Power drawn from the grid is used solely to charge the batteries inside the system. The microgrid is not interconnected with the power grid; it is supplied with power through the internal batteries.
With this arrangement, even where the power available from the grid is small (17 kW), stored energy can deliver output in the 100 kW class—well above the incoming supply—whenever it is needed. And because the microgrid is not interconnected with the power grid, the solar power systems and batteries connected to it do not require grid-interconnection consultations.

The demonstration will verify the following four points.

1. **Using high power with limited grid-supply capacity:**
   Confirm that EV fast chargers and other equipment can run with the grid connection kept at 17 kW.
2. **Testing a variety of connected equipment:**
   Connect solar power systems, batteries, and chargers from Japan and overseas, and confirm that they operate together.
3. **Making the most of solar power:**
   Use Headspring's power-sharing system biPOWERshare to prioritize solar electricity and share power among devices. We will also test a configuration that supplies solar-generated electricity to the chargers like DC.
4. **Collecting operating data for post-deployment monitoring:**
   Collect real operating data and use it to improve products and to provide remote monitoring and maintenance services.

Future Outlook

Following the first project, HS SmartEnergy Lab YAMAZAKI will pursue the following developments.

- **Expanding demonstration themes:**
  Add new equipment over time and proceed with the second and subsequent rounds of demonstrations.
- **Regional demonstrations in partnership with Kyoto Prefecture:**
  Working with Kyoto Prefecture, conduct demonstrations at sites such as disaster-response hubs and roadside stations (michi-no-eki). The systems proven at HS SmartEnergy Lab YAMAZAKI will be applied to creating facilities that keep electricity available during disaster-related outages and to building out EV charging infrastructure.
- **Expansion across the entire ATVK site:**
  Add a large-scale battery storage system and aim to demonstrate optimized electricity flows across the whole facility.
- **Offerings for factories, business sites, and EV charging hubs:**
  Combine the demonstrated equipment with biPOWERshare to provide end-to-end support, from design and installation through post-deployment monitoring and maintenance.
- **Application to power supplies for AI data centers:**
  Using high power where the grid connection is constrained is a shared challenge, and Headspring will explore the potential application of insights gained from this demonstration to power supplies for AI data centers.
- **Cybersecurity:**
  Work toward meeting the applicable requirements of JC-STAR, Japan's national IoT product security assessment and labeling scheme.

Headspring evaluates power semiconductors at its laboratory in Kitakyushu (HS PowerDevice Lab HIBIKINO). Development will proceed at two sites: Kitakyushu, responsible for component evaluation, and Kyoto, responsible for system demonstration.

Company Overview

Company Name	Headspring Inc.
Head Office	Harbor One bldg. 3F, 2-5-5 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002, Japan
Kyoto Office	HS SmartEnergy Lab YAMAZAKI 30-1 Oaza-Oyamazaki Koaza-Kagamida, Oyamazaki-cho, Otokuni-gun, Kyoto Art & Technology Village Kyoto (ATVK)
Nagoya Office	STATION Ai, 1-2-32 Tsurumai, Showa-ku, Nagoya, Aichi
Kitakyushu Office	HS PowerDevice Lab HIBIKINO 2-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka Development Center Bldg. 1F, Advanced Information Technology Center, Kitakyushu Science and Research Park
India Subsidiary	Headspring Smart Energy Pvt. Ltd.(HSSE) Shapath-V,1501,15th floor, opp.karnavati club, s.g.highway, prahladnagar, Ahmedabad, Gujarat - 380015
President & CEO	Osamu Hoshino
Business Overview	- Providing Support for Energy Conservation - Development, manufacture and sales of power electronics devices - New energy business and consultation business for emerging markets
Capital	100 million yen
Established	July, 2014

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