Message

Kingo Hayashi,
Chairman, Federation of Electric Power Companies of Japan
(President, Chubu Electric Power)

The Federation of Electric Power Companies of Japan has exhibited at four previous international expositions held in Japan. Expo '70 in Osaka saw the first-ever power being sent from a nuclear power plant, Kansai Electric Power's Mihama Plant. Happening in the midst of the "economic miracle," this attracted much attention. Then in at Expo '85 in Tsukuba, Expo '90 in Osaka, and Expo 2005 in Aichi, while the times may have changed, we continued to present our industry as one that contributes to society through the resource that is electric power. Seeing a valuable chance to present the world-view of carbon neutrality that the electricity industry aims to achieve, we made the decision to exhibit again at this expo, our fifth.

At present, we are moving towards a paradigm shift in energy, towards achieving a carbon-free society. The 7th Strategic Energy Plan that was approved by the Cabinet this February lays out a realistic policy to utilize all possible technologies to achieve both the ambitious vision of decarbonization and economic growth. In this with this, FEPC will continue to dedicate all our strength to achieving stable supplies of electricity and carbon neutrality, contribute to Japan's economic development and improving the lives of its citizens.

At the Electric Power Pavilion – Eggs of Possibilities, we will present possible energies for the future from the sort of perspective only the electricity industry can offer, looking beyond the goal of carbon neutrality by 2050. It is our hope that many of the children who will lead the next generation will sense a future made possible by the possibilities of energy.

Architecture

The concept behind our pavilion, Eggs of Possibilities, is expressed in its design.

Inside, the main axis is titled 15 degrees to ensure a huge space, while over 2,100 steel frames form Voronoi diagrams egg shape. A fireproof membrane is applied on top of it, making 352 Voronoi diagrams in 60 different types stand out.

The silver film represents future possibilities. And light is taken in from a range of angles, so the appearance changes in different ways depending on weather or time of day. It harmonizes with nature and the surrounding environment.

Core design : DENTSU INC, DENTSU LIVE INC, NIKKEN SEKKEI LTD
Actual Design / Construction : DAIWA HOUSE INDUSTRY CO.,LTD

Eco-friendliness

This pavilion uses the following ways to preserve the environment.

- **Interlocking blocks made from recycled waste glass from solar panels (Hokuriku Electric Power Company)**
  The paving stones within the pavilion site are interlocking blocks that incorporate waste glass from solar panels, the disposal of which in mass quantities is becoming a social issue. Some of these blocks also include recycled roofing tiles from the damage caused by the Noto Peninsula Earthquake.

- **AI-powered energy management system (Kinden Corporation)**
  Optimizes operation of air conditioning equipment by using AI connected to monitoring data from that equipment stored on the cloud. The aim is to save about 20% in air-conditioning costs for multiple units within large buildings.

- **Smart cubicles using vegetable-based insulating oil (Kanden Engineering Corporation)**
  A system to remotely provide security for power-receiving equipment. Its transformers use environmentally-friendly vegetable-based insulating oil (Sun-Ohm ECO) made from rapeseed oil.

- **Device shell material made from recycled plastic (Daiichi Seikosha Co.,Ltd.)**
  Development of original materials for reducing plastic use and reusing waste materials. The top parts include 5% eggshell, and the bottom parts include 15% scallop shell.

- **Recycling uniforms**
  Uniforms, made of a recycled polyester material, which after use will be processed into high-quality solid fuel through the ECOLICE uniform recycling system, then provided to paper and other companies.

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Electric Power Pavilion special website

Federation of Electric Power Companies of Japan official X

Federation of Electric Power Companies of Japan,
Expo 2025 Promotion Office 06-7507-2744

Electric Power Pavilion – Eggs of Possibilities
Federation of Electric Power Companies of Japan
Expo 2025 Osaka, Kansai, Japan April 13, 2025 - October 13, 2025

Towards a shining society where the possibilities of energy open up the future.

To achieve a sustainable society while coexisting with all the different life on Earth, we need a stable supply of energy and to achieve carbon neutrality.

The key is the energy of possibilities

At the Electric Power Pavilion – Eggs of Possibilities, you can learn in a fun way about around thirty types of energy that could pave the way to the future. These include energies that utilizes the power of nature, energies hidden in our daily lives, energy technologies that are close to practical application, and innovative energy technologies that may have the potential to change the world.

Collect possibilities with your glowing egg

Visitors will each be given an egg-shaped device to take around the pavilion with them, They will use their entire bodies to experience the uniqueness and fun of energy, and the eggs will glow gently each time a “possibility” is interacted with. How many possibilities will you encounter?

Uniforms

Emphasizing harmony with the exterior, a similarly monotone Voronoi-patterned design has been selected. The over-shirts are noted for each one having a different pattern, due to the way the fabric was positioned for cutting. This means that while they have a uniform look, they also represent diversity.

VR Pavilion

The Virtual Electric Power Pavilion will feature in the Virtual Expo: Yumeshima Islands in the Sky. This is where you can experience behind future energies through the sort of games VR space makes possible, but in line with the concept of the real pavilion.

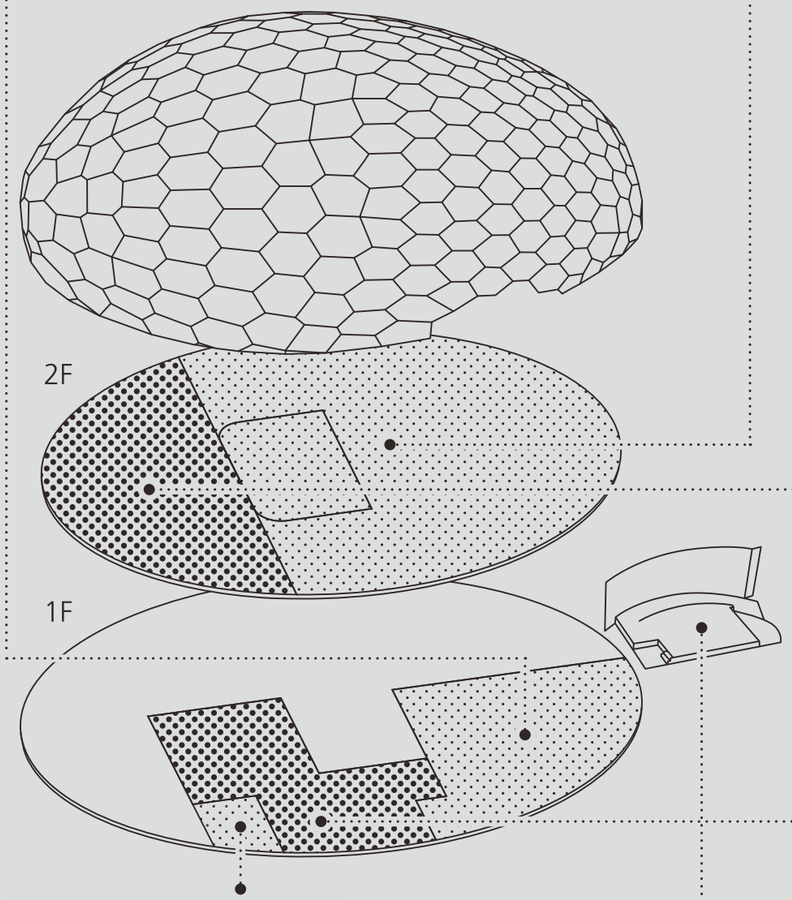
Pre-show

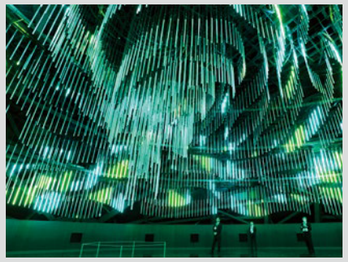
This area presents the encounters with the possibilities of energy that begin here through synchronization with video and your egg-shaped devices.

Main-show

Possibilities Area

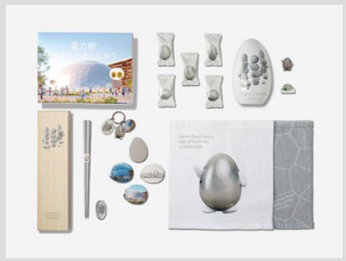
The largest space, the Possibilities Ar ea, is where visitors will encounter the various possibilities that could pave the way to the future, learning the importance of discovering and nurt uring possibilities. Each time visitors encounter an energy, the egg in their hands will glow, allowing them to feel that future potential and power.





Shining Area

Once visitors have collected plenty of possibilities, they will move to the next area. The light and sound that fill this space will resonate with the eggs in an immersive show where visitors can experience the glow of life.

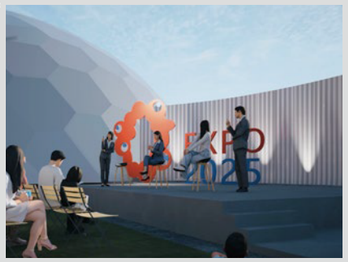


Shop

This is a shop that sells original Electric Power Pavilion goods.

Post-show

The latest information about all the energies encountered are displayed in the Knowledge Exhibit in a way that is easy to understand, with plenty of illustrations.



Stage

An outdoor stage where a range of events and shows will be put on during the Expo by numerous corporations, bodies, universities, NPOs and so on.

Energy Technologies

- Nuclear Fusion
- Wireless Power Transfer
- Tidal Power Generation
- High Voltage Direct Current Transmission
- Vibration Power Generation
- Hydrogen
- Heat Pumps
- Wind Power Generation
- Space-Based Solar Power
- Ocean Thermal Energy Conversion
- Magma energy geothermal power
- Perovskite Solar Cell
- Micro Hydroelectric Power Generation
- Wave Power Generation
- Electric Ray
- Power Generation from Waste Heat
- Thermoelectric Power Generation
- Transparent Solar Cell
- Concrete as a Battery
- Net Zero Energy Building
- Sound Power Generation
- Sorghum
- Plant microbial fuel cell
- Artificial photosynthesis
- CO_2 Resource Recovery
- Hydrogen-oxidizing bacteria
- Euglena
- Udon Noodles
- Food and Energy Cycle