EXPO2025 Osaka, Kansai, Japan

Experience NEDO's technology!

The results of NEDO-supported research and development will be on full display at World Expo 2025 in Osaka, Japan from April 13 to October 13.
Try out the latest technologies and stop by NEDO events.
Join us to experience the innovations making life more comfortable in the future.

Highlights

Perovskite Solar Cells Light the Way

The emerging technology of thin, lightweight, film-type perovskite solar cells generates electricity to power the bus shelter's nighttime lighting.
Location: West Gate Bus Stop
Organization: SEKISUI CHEMICAL Co., Ltd.

Hydrogen Fuel Cell Boat *Mahoroba* Begins Commercial Operation

Ride to the Expo in comfort on an FC boat. Unlike a traditional boat engine, there is no vibration or fuel odor. A total energy management system has been developed to collect data on hydrogen charging and enable its efficient operation.
Route: Nakanoshima Gate South Pier - Universal City Port - Yumeshima (Expo site)
Organizations: Iwatani Corp., The Kansai Electric Power Co., Inc.

On the Move with Autonomous, Wireless-Charging E-Buses

Image: Kansai Electric Power, Osaka Metro

Level 4 autonomous driving buses charge wirelessly via coils embedded in the road. This demonstration aims to optimize electric bus operation and charging.
Location: In and around the Expo site
Organizations: The Kansai Electric Power Co., Inc., DAIHEN Corp., Osaka Metro Co., Ltd., Obayashi Corp., East Nippon Expressway Co., Ltd.

Expo Shuttle Buses Run on Synthetic Fuel

Synthetic fuel produced from hydrogen and CO_2 at a one-barrel-per-day demo plant powers direct-service shuttle buses from Osaka Station to the Expo site.
Route: Osaka Station, Umekita Bus Terminal - Expo site
Organization: ENEOS Corp.

DAC Technology for CO_2 Capture

Direct Air Capture (DAC) technology separates CO_2 right from the atmosphere and is used to demonstrate processes such as methanation.
Location: Carbon Recycle Factory RITE Future Forest
Organizations: Research Institute of Innovative Technology for the Earth (RITE), Nagoya University, Kyushu University

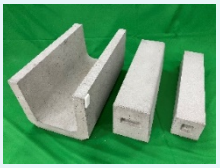
Low-Emission, CO_2-Fixing Concrete

This innovative concrete uses recycled materials for low CO_2 emissions and fixes a large amount of CO_2 during production and curing. It is used in the construction materials and for ground improvement around the Expo site.
Location: Kid's Experience, EXPO Arena *Matsuri*, EXPO Exhibition Center *WASSE*, Future City Pavilion, Mitsubishi Pavilion
Organizations: Kajima Corp., Takenaka Corp., Hazama Ando Corp., Taisei Rotec Corp., Osaka-Hyogo Ready-Mixed Concrete Industrial Assoc., Haikou Onoda Remicon Co., Ltd.

Travel to a Future Where Concrete Overcomes Global Warming

See how the environment can be saved by concrete that absorbs and fixes CO_2 as you travel through time on an airship to the future.
Location: Future City Pavilion
Organizations: Hazama Ando Corp., Uchiyama Advance Co., Ltd., Osaka-Hyogo Ready-Mixed Concrete Industrial Assoc., Haikou Onoda Remicon Co., Ltd., Taisei Rotec Corp.

Recycling CO_2 to Make Artificial Limestone



Stroll down concrete sidewalks made with artificial limestone from recycled CO_2. The Sumitomo Pavilion showcases various concrete products made from artificial limestone and other materials like resins, paper products and paints.
Location: Sumitomo Pavilion, RITE Future Forest
Organization: Sumitomo Osaka Cement Co., Ltd.

Cultivate Mouth-Watering Meats at Home

Based on the theme of the dream kitchen of the future, this exhibit features a futuristic device that automatically creates cultured meat using 3D bio-printing technology.
Location: Osaka Healthcare Pavilion
Organization: Osaka University

Bio-Manufacturing Using CO_2 as a Raw Material

Explore technologies under development, like microalgae cultivation and biodegradable plastic containers, and watch videos that show how CO_2 is converted into new substances.
Location: Japan Pavilion
Organizations: Kaneka Corp., Chitose Laboratory Corp., SEKISUI CHEMICAL Co., Ltd., National Institute of Technology and Evaluation (NITE)

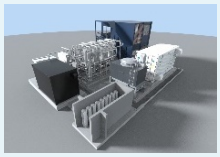
Source: Chitose Laboratory

Large-Scale Hydrogen Power Generation from a Gas Turbine

Electricity for the Expo is generated with up to 30% clean hydrogen co-firing at the Kansai Electric Power Company's large gas turbine power plant.
Organization: The Kansai Electric Power Co., Inc.

Next-Generation System to Recover CO_2 from Exhaust

CO_2 is recovered efficiently from the flue exhaust of the e-methane powered boiler in the back of house area and used as a raw material for dry ice and methanation.
Organizations: Air Water Inc., TODA KOGYO Corp., Saitama University



Stable Supply of Japan-Made SAF

In order to establish a stable supply network of sustainable aviation fuel (SAF) from waste cooking oil, a plant to produce it is being built near the Expo site.
Organizations: JGC Holdings Corp., Cosmo Oil Co., Ltd., REVO International Inc.

Next-Generation Green Data Centers

From May 13 to 26, experience a future made possible by next-gen green data centers that reduce energy consumption by over 40% compared to conventional data centers. Also on display will be optical communications, power-saving equipment, and related technologies.
Location: Future Life Experience
Organizations: Fujitsu Ltd., KYOCERA Corp., NEC Corp., AIO Core Co., Ltd., Kioxia Corp., Fujitsu Optical Components Ltd.

Building Back Better After the Great East Japan Earthquake

From May 18 to 24, videos and displays at the Fukushima Recovery Exhibition will showcase how the hydrogen produced at FH2R in Namie Town is being used even in areas far from Fukushima.
Location: EXPO Exhibition Center *WASSE*

Future Creation Robot Week

From July 13 to 19, come watch teams battle for the top spot in the World Robot Summit, an international event launched with NEDO's support. Visitors will also be able to check out exhibits that portray a future where humans and robots live together.
Location: EXPO Exhibition Center *WASSE*

NEDO Moonshot Research and Development Program

For two weeks from September 2 to 15, NEDO will showcase the results of its Moonshot Research and Development Program.
Location: Future Life Experience

Global Startup EXPO 2025

On September 17 and 18, NEDO, METI, and JETRO are hosting an international hub event for investors and entrepreneurs from around the world that showcases startups working to solve problems.
Location: EXPO Exhibition Center *WASSE*

GLOBAL STARTUP EXPO 2025

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OSAKA, KANSAI, JAPAN EXPO 2025

Purchase tickets here

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https://www.nedo.go.jp

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