

## RITE Future Forest Ongoing at World Expo 2025 Osaka, Kansai, Japan! (April 13 to October 13, 2025)

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### 1. What is the RITE Future Forest?

As a Silver Partner of the Future Society Showcase, Green Expo in the ongoing World Expo 2025 Osaka Kansai, Japan, the Research Institute of Innovative Technology for the Earth (RITE) is exhibiting the RITE Future Forest to publicize negative emission technologies featuring Direct Air Capture (DAC).



Figure 1 RITE Future Forest (panoramic view)

The exhibition is named “RITE Future Forest” because DAC removes CO<sub>2</sub> from the air in the same way as a natural forest.

In the RITE Future Forest, visitors first watch a 3D video image in the Guidance Hall, which provides an

overview of the global warming issue and an explanation of the necessity of DAC and carbon dioxide capture and storage (CCS). Subsequently, visitors are guided through DAC plants where a demonstration test is in progress as part of the Moonshot Research and Development Program of the New Energy and Industrial Technology Development Organization (NEDO), an exhibition on the CCS technology (CO<sub>2</sub> separation, collection, and geological storage technology) that RITE has continuously researched, and other next-generation technologies indispensable for achieving a carbon-neutral society.

Visitors also see exhibition booths for Nagoya University and Kyushu University, which similarly conduct DAC research as part of the Moonshot Program, and for Maeda Road, which pursues CO<sub>2</sub> locking in asphalt with minerals. With hands-on exhibits, these technologies are explained in an easy-to-understand manner.

### 2. Guidance Hall and a video image for explanation

The Guidance Hall, which welcomes visitors first, is a wooden building in a Cross Laminated Timber (CLT) panel-folded structure that combines sustainability and architectural beauty. The architectural method that

folds a CLT panel in an origami-like manner achieves high strength and an open space without pillars. Inside the Guidance Hall, the latest 3D imaging technology dispenses with goggles and provides explanations on global warming and negative emission technologies in a story format that is easy to understand for children and adults.



Figure 2 Guidance Hall

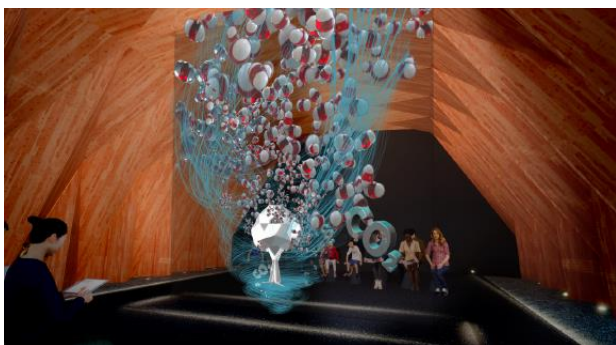


Figure 3 Video image

### 3. DAC demonstration plants

Visitors can see DAC plants, where a demonstration test is in progress for actually removing CO<sub>2</sub> from the air on the EXPO site. They consist of three plants, all of which are seven meters in total length. And, various tests are conducted there as part of the Moonshot Program during the EXPO period, including process checks and the performance testing of absorbents.

The CO<sub>2</sub> removed by DAC is transported off the EXPO

site to be stored on the storage sites of the members of the Geological Carbon Dioxide Storage Technology Research Association. The CO<sub>2</sub> is also supplied for effective use to the adjoining methanation facility of Osaka Gas, and the CO<sub>2</sub> recovery and dry ice production system of Air Water.



Figure 4 DAC demonstration plants

### 4. Study tours

Study tours of the RITE Future Forest are available (closed every Thursday). Six tours are offered daily, with a maximum capacity of 20 participants in each tour.

Because the RITE Future Forest is located in a controlled area that is not accessible for general visitors on foot, tour participants need to travel on a dedicated EV bus. The tour starts at the East Gate South Stop after passing through the East Gate of the Expo site from Osaka Metro Yumeshima Station. After two or three minutes on an EV bus, participants arrive at the forest to watch the explanation video in the Guidance Hall, visit the actual DAC demonstration plants, and experience RITE technologies through exhibits. The content is easy to understand not only for businesspersons but also for students and general visitors. Reservations for the tour can be made on RITE's website "[RITE Future Forest](#)." We look forward to seeing you at the forest!

## 5. Conclusion

The concept of the World Expo 2025 Osaka, Kansai is “People’s Living Lab.” Through the Expo as a global forum for promoting future technologies, RITE publicizes these negative emission technologies featuring DAC to the world. Do not miss this opportunity to experience the actual DAC plants as the cutting-edge technology for countering global warming.