Carbon Neutrality Research Center (CNRC)

The hub for carbon neutrality promotion

Overview of the Center

The Kansai University Carbon Neutral Research Center(CNRC) was established on October 1, 2022.

It was founded as one of the important growth strategies for the university's future, with the view that our initiatives for achieving carbon neutrality are an opportunity to contribute to the further development of the University and the realization of a sustainable society.

The Center aims to be recognized by society as an institution that contributes to the conservation of the global environment from multiple perspectives through the development of human resources and the creation of new technologies, by taking advantage of the characteristics of an educational and research institution.



Messages from the Director of the Center



Director of the Center Satoshi Kitahara More than 120 countries and regions, including Japan, are working to achieve carbon neutrality by 2050. In particular, new approaches are being carried out in various fields of research, and we have received requests for joint research from a variety of organizations, including both literature and science departments.

Upon deploying requests from external organizations into the university, we found that a large number of extremely diverse research topics were proposed and that many faculty members are interested in carbon neutrality and are conducting research on the subject either directly or indirectly.

Conversely, it also revealed that the university's research on carbon neutrality has not been sufficiently disseminated outside the university and that information sharing within the university is lacking.

CNRC was established against this background to promote joint research on carbon neutrality, disseminate research results outside the university, share information in the university, and create new projects related to carbon neutrality.

CNRC will continue to serve as a university contact point for carbon neutrality consultation, which is expected to increase in the future.

Goals

We aim to be recognized by society as an institution that contributes to the conservation of the global environment from multiple perspectives, through the development of human resources and the creation of new technologies, by taking advantage of the characteristics of an educational and research institution.

Promote human resource development and research activities that can contribute to achieving carbon neutrality for society as a whole.

All members of the university, including students, faculty & staff , are able to act in an environmentally conscious manner. Integrate knowledge of environmental conservation in the university to provide advice and technologies to solve environmental problems.

Support social activities for carbon neutrality, working with society and the community.

All members are able to not only absorb knowledge on environmental conservation, but also to think about what actions they can take in the real world from their own standpoints (students, faculty & staff) and implement them. (Volunteer work, educational activities, internships, industry-academia-government collaboration, inter-university cooperation, etc.)

Aim to reduce emissions by 50%*1 by FY2030 and to accomplish carbon neutrality by FY2050.

Replace on-campus facilities with environmentally-friendly equipment to minimize emissions from business activities. Promote behavioral change among students, faculty & staff to build momentum toward achieving carbon neutrality.

*1 These figures are for Scope 1 and 2 emissions, and will be revised as necessary in consideration of changes in the social environment and technological innovation.

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Center Researchers • Research Topics

| Name | Faculty | Qualification(s) | Research topics |
|------------------------|----------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AKIYAMA, Takamasa | Faculty of Environmental and Urban Engineering | Professor | Urban Transport Policy for Carbon Neutral Society |
| IKENAGA, Naoki | Faculty of Environmental and Urban Engineering | Professor | Development of catalysts for production of lower hydrocarbons by hydrogenation reaction of carbon dioxide |
| ISHIKAWA, Masashi | Faculty of Chemistry, Materials and Bioengineering | Professor | Research on high-performance electric energy storage devices for realizing a low-carbon electric power-utilizing society |
| INOKUCHI, Hiroaki | Faculty of Environmental and Urban Engineering | Associate professor | Urban transport policies in decarbonized society |
| UEDA, Naoshi | Faculty of Environmental and Urban Engineering | Associate professor | Study on structural use of alkali activated concrete |
| UEDA, Masato | Faculty of Chemistry, Materials and Bioengineering | Professor | Short- and long-term fixation of carbon dioxide using blue carbons |
| OKA, Shoji | Faculty of Business and Commerce | Professor | Development of carbon management accounting methods that contribute to a carbon neutral society |
| OZAKI, Taira | Faculty of Environmental and Urban Engineering | Professor | Climate change impact on urban energy consumption based on shared socio-economic pathway scenarios |
| KAJIWARA, Akira | Faculty of Policy Studies | Associate professor | Analysis on Local Policy Implementation and Cooperation between Local Governments toward Carbon Neutrality |
| KAWASAKI, Hideya | Faculty of Chemistry, Materials and Bioengineering | Professor | Metal Nanocatalysts for CO2 Recycling/ Hydrogen Production |
| KITAZUME, Keiichi | Faculty of Environmental and Urban Engineering | Professor | Analysis of the effect of urban policies on energy consumption reduction in line with the progress of energy-saving technologies |
| KUWANA, Kinzo | Faculty of Societal Safety Sciences | Associate professor | Research on Corporate Management for a Carbon Neutral World, for example "Analysis on Innovation Strategy to achieve Carbon Neutrality in Japanese Iron Steel Industry" Research on Financial and Insurance System to Promote Carbon Neutrality |
| SHINKUMA, Takayoshi | Faculty of Economics | Professor | Effectiveness of the liberalization of the electricity market on CO_2 emissions |
| TAKAHASHI, Tomoyuki | Faculty of Societal Safety Sciences | Professor | Micro hydropower using flow-induced vibrations and coral reef restoration using feeble electrical current |
| TANAKA, Shunsuke | Faculty of Environmental and Urban Engineering | Professor | Development of selective and highly efficient CO2 separation and capture technology |
| NAKAO, Yuriko | Faculty of Informatics | Associate professor | Transforming Sustainability for Carbon Neutral. |
| HOSOKAWA, Shigeo | Faculty of Societal Safety Sciences | Professor | Distributed Energy Conversion Systems using Natural Energy |
| MATSUMOTO, Ryosuke | Faculty of Engineering Science | Professor | Energy analysis and evaluation of energy-conservation activities for energy-saving and environment-friendly campus |
| MIYAZAKI, Hiroshi | Faculty of Environmental and Urban Engineering | Lecturer | Research on the development of an optimal operation method for building equipment in regional cooperation by utilizing energy management information |
| YUN Yeboon | Faculty of Environmental and Urban Engineering | Professor | Development of Highly Accurate Prediction Method on Electricity Demand Using Machine Learning |

Carbon Neutrality Research Center(CNRC) Inquiries

|Contact Us | cnrc@ml.kandai.jp |Contents to be described | Affiliation, name of contact person and contact information The issue you have identified, or the issue that you would like to solve