

# Collaborative Research Center for Energy Engineering (CEE)

## [Global Environmental and Energy Issues]

<http://www.energy.iis.u-tokyo.ac.jp/>

### Aims of the Center

The aims of the Collaborative Research Center for Energy Engineering are:

1. Creation of a center at The University of Tokyo for international coordination of energy and environmental engineering
2. Development of advanced technologies for energy utilization
3. Construction of an academic structure encompassing energy and environmental engineering fields
4. Promotion of a sustainable society by establishing industry-government-academia cooperation
5. Creative cultivation of human resources with a comprehensive view that will have an important role in the development of innovative energy technology

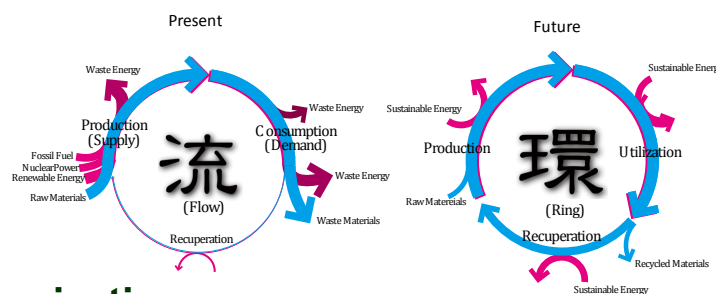
Energy and environmental issues cover a wide range and need to be resolved applying long-term vision. Our ultimate goal is to simultaneously resolve energy and environmental issues by developing comprehensive innovative technologies.

### Research Activities

In all processes, including energy itself, most of the available materials are discarded without being “recycled” in the conventional supply and demand structure of energy and materials. This “FLOW” structure, in which most materials are discarded, has poor sustainability because present design, production, distribution and usage processes are not suitable for recycling.

It is necessary to establish a cooperative production, usage and recycling system to avoid excessive depletion of resources such as carbon based resources for the stable supply of energy, or rare metals that are essential for high-technology products. One aim of this is to improve social and economic activities and global environmental problems. It is also important to maximize the energy utilization in the cyclic regeneration of substances. It is possible to develop a strategy for capturing the inherent energy which all materials contain.

The center aims to study the feasibility of the ring (Kan) concept, showing the coordination between the processes of “Production”, “Utilization” and “Recycling”, of integrated energy and materials for a sustainable industrial and social infrastructure.



### Mission and Organization

