

Summary

The Center for Low Carbon Society Strategy (LCS) quantitatively evaluates various low carbon technologies under the Quantitative Technology Systems Research program (LCS Proposal Paper(FY2014-PP-00(June, 2014)), (FY2016-PP-00(December, 2016))). The Evaluation Platform is the information system infrastructure that supports this quantitative evaluation in LCS. The platform is used for quantitative evaluation of various low carbon technologies. The results of evaluation analysis, using this platform for individual technical systems that will become important in the future, will ultimately lead to policy proposals.

To predict future performance and cost of low carbon technologies and propose the direction for future research and development, quantitative analysis of the hierarchical structure of these technologies is absolutely necessary. It reduces the time and cost required for quantitative analysis to create databases of process calculation methods and cost evaluation methods. Quantitative analysis makes it easy to share evaluation results and criteria with other relevant departments. Furthermore, it is possible to discover problems and hints concerning performance improvement and cost reduction.

In this fiscal year, we implemented the following points concerning the enhancement of system functions and the content of databases.

- (1) Expanding application to new processes
Hydrogen technology, SOFC
- (2) Further function development, cooperation with existing Excel assets
Optimization calculation function
- (3) Enhancement of databases
Material Balance, Energy Balance, Equipment Selection Procedure, Calculation Library, and User Defined Function Library
- (4) Improve system operability
Function to display formulae for base

Based on the achievements in the current fiscal year, we will further expand the scope of adaptation during the next fiscal year, enhance the Excel library for frequent and necessary calculations in the chemical process and process assembly process, and develop the database to improve the functionality and operability of the system.