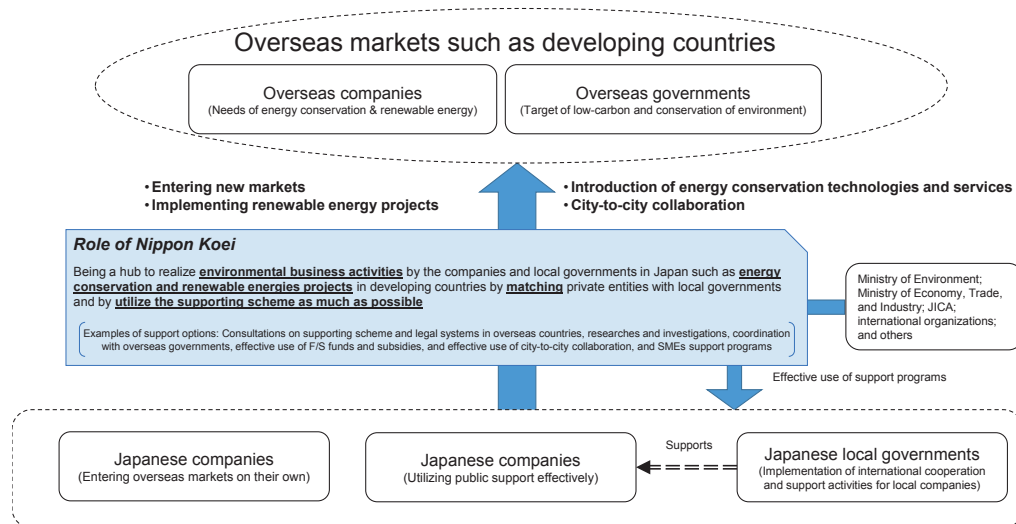


Consulting Service for Low Carbon Projects (Energy Conservation / Renewable Energy)

Features

- ◆ Background Adopted at COP 21 and going into force in November 2016, the Paris Agreement made all countries set GHG reduction targets, whether they are developed or developing. This spurred a rise in the momentum towards the promotion of energy conservation and the introduction of renewable energies. The Japanese government announced that it would extend the energy-saving technologies and renewable energy techniques of Japanese companies overseas, particularly to developing countries. To achieve this, the government actively supports the spread of the Joint Crediting Mechanism (JCM) and Japan's high-end infrastructure to overseas countries.
- ◆ Our technology: Nippon Koei provides supports to private companies and municipal governments looking to enter overseas markets using our long experience and extensive networks in developing countries. Specifically, we provide various supports that include consultation on available schemes and institutions, investigation on the feasibility of markets and projects, investigation on systemic and environmental factors related to overseas market entry, preparing written proposals to obtain subsidies, and support for executing projects.

What is JCM?
 A mechanism supported by Japanese government to introduce expensive but **quality low-carbon technologies** into partner countries by **providing subsidies up to 50%** for initial costs and to share GHG credits **between two countries**



Basic Concept or Summary

- ◆ Project preparation: Nippon Koei offers investigation support for executing projects
 - > Investigations to help reduce the carbon emitted by plants and buildings through energy-saving devices and renewable energies overseas
 - > Investigations to help small - to - medium - sized enterprises enter overseas markets
 - > Consultation services on assistance schemes for the Ministry of the Environment; the Ministry of Economy, Trade and Industry; JICA; and the Asian Development Bank (ADB), as well as the effective use of subsidies
 - > Consultation on local legislative systems
 - > Investigations to form projects through collaboration between cities in Japan and developing countries, and to spread Japanese knowledge
- ◆ Project execution: Nippon Koei provides support for project execution
 - > Support for obtaining subsidies to introduce energy-saving equipment and renewable energy devices in overseas locations
 - > Supports for obtaining subsidies to develop technologies related to energy-saving equipment in overseas locations
 - > Support for the development and registration of JCM methodologies and PDDs (project plans)
 - > Support for issuing JCM credits
- ◆ Examples of supported low-carbon technologies: turbo refrigerators, absorption refrigerators, once-through boilers, photovoltaic power generation, biomass power generation, wind power generation, smart grids, rechargeable batteries, EMS, high-efficiency pumps, water-saving toilet systems, carbonizing furnaces (thermal decomposition furnaces), waste oil recycling systems, railway electrification, and power regeneration for railroad systems

- ◆ Nippon Koei provides support to calculate GHG reduction amount achieved through the introduction of energy-saving devices and renewable energies as well as the economic efficiency.
- ◆ Nippon Koei has experience in developing the methodologies to calculate reduction amount under the JCM, registering JCM projects, and issuing credits for JCM projects in many projects and overseas countries. Notably, we supported a project that introduced high-efficiency centrifugal chillers in Indonesia—and this was the world's first registered JCM project.

		
<p>High-efficiency centrifugal chillers introduced in Indonesia, Bangladesh, and Thailand under JCM to date</p>	<p>Lessons learned from the course of Kawasaki city's environmental measures, as well as technology transfers and sharing of private technologies in Myanmar's largest city, Yangon.</p>	<p>Took on projects from the Asian Development Bank (ADB) to introduce smart/micro grids to the island country of the Maldives</p>

Installation in Practice or Schedule

Overseas Major recent results (including projects Nippon Koei supported)

Indonesia

2013 JCM model project: Energy reduction for factory air-conditioning and process cooling, Ministry of Environment, GEC

2014 JCM investigation for project formulation: Low-carbon waste disposal, Ministry of Economy, Trade and Industry

2015 JCM model project: Introduction of highly-efficient once-through boilers in a film factory, Ministry of Environment, GEC

2015 and 2016 Assessment projects for climate change impact on the formulation of adaptation plans for local governments, Ministry of Environment, University of Tokyo

2016 JCM FS on city-to-city collaboration (Batam city, Yokohama city), Ministry of Environment

2013 to current Methodology development for refrigerators and once-through boilers, development of PDD, execution of MRV, Ministry of Environment, GEC, IGES

Myanmar

2015 and 2016 JCM FS for city-to-city collaboration (Yangon city, Kawasaki city), Ministry of Environment

2016 JCM model project: Introduction of energy-saving brewing facilities at a beer factory, Ministry of Environment, GEC

Vietnam

2014 Feasibility Study (FS) for the Joint Crediting Mechanism: Promoting energy conservation in marine vessel operation in Vietnam, Ministry of Economy, Trade, and Industry

2016 JCM model project: Introduction of High Efficiency Water Pumps in Da Nang City, Ministry of Environment, GEC

Bangladesh

2015 JCM model project: Project for cooling factory facilities using energy-saving turbo refrigerators (suburb area of Dacca), Ministry of Environment, GEC

2015 to current Methodology development for refrigerators, development of PDD, execution of MRV, Ministry of Environment, IGES

Thailand

2015 JCM model project: Promotion of energy conservation through introduction of highly-efficient refrigerators at a tire factory, Ministry of Environment, GEC

2016 to current Methodology development for refrigerators, Ministry of Environment, IGES

Maldives

Smart Micro-Grid System for POISED Project in Addu Atoll, ADB

Mexico

2016 JCM model project "Introduction of high-efficiency once-through boilers to tequila factory", Ministry of Environment, GEC

Mexico, Costa Rica, and Chile

2015 Project formulation for implementing Joint Crediting Mechanism in Latin America and island countries and to support the formulation of MRV systems, Ministry of Environment

Contact: **Nippon Koei Co., Ltd.**, Consulting Operations Headquarters
 Environment Technology Division, Renewable Energy and Climate Change Group
 Tel: +81-3-5276-3930 Fax: +81-3-5276-3024
 URL: <http://www.n-koei.co.jp/> Email: nk-jcm@n-koei.co.jp