JCM City-to-city collaboration between Ho Chi Minh City and Osaka city

Seminar on the JCM implementation in Vietnam
- Accelerating promotion of environmental infrastructure through JCM scheme -

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Introduction of Nippon Koei Co., Ltd.

Japan’s No.1 international engineering consultants plays a role in nation building around the world through our consulting.

No.1
Sales among civil consulting firm in Japan

160
Countries where we operate

over
5,500
Number of orders per year

Our offices and group companies

Environmental Dept. conducts projects on many environmental aspects.

Air/Water

Solid waste

Renewable energy

Forestry/ Biodiversity

Environmental impact assessment

Climate change

Mitigation
GHG emission reduction, JCM

Adaptation
Taking appropriate action to prevent or minimize the damage
02 Our JCM city-to-city experience

Nippon Koei have a lots of experiences on the city-to-city collaboration projects. (The followings are the current projects by NK’s support.)

- Ho Chi Minh – Osaka (2011~)
- Semarang – Toyama (2018~)
- EEC – Osaka (2019~)
- Jakarta – Kawasaki (2017~)
- Bali – Toyama (2018~)

The goal is to realize a low-carbon society by utilizing each Japanese city’s experiences/knowledge and formulating JCM model projects.
03 Chronology of city-to-city collaboration

Since October 2013, Osaka city and Ho Chi Minh city have commenced a policy dialogue to aiming for realization of low carbon society. So far two cities has discussed and collaborated various theme, not only low carbon development concerned but also water management etc. In addition, Japanese advanced technologies are currently considered to utilize in HCMC projects to tackle with the issue of global warming with JCM scheme.

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dec. 2009</td>
<td>Sign of the memorandum concerning technical exchange with HCMC water supply corporation (SAWACO)</td>
</tr>
<tr>
<td>2</td>
<td>Apr. 2013</td>
<td>Start of JCM city-to-city collaboration</td>
</tr>
<tr>
<td>3</td>
<td>Oct. 2013</td>
<td>Sign of the memorandum for a low-carbon city formulation between Osaka &amp; HCMC.</td>
</tr>
<tr>
<td>4</td>
<td>Nov. 2015</td>
<td>Update of memorandum concerning technical exchange with SAWACO.</td>
</tr>
<tr>
<td>6</td>
<td>Sep. 2016</td>
<td>Formulation of the “HCMC CCAP (2017-2020), prospect to 2030”.</td>
</tr>
<tr>
<td>7</td>
<td>Sep. 2019</td>
<td>Policy dialogue in Ho Chi Minh city</td>
</tr>
<tr>
<td>8</td>
<td>Nov. 2019</td>
<td>Policy dialogue in Osaka city</td>
</tr>
</tbody>
</table>
1. Survey items related to city to city collaboration

- The technical cooperation agreement between Osaka and HCMC for low-carbon society
- To support discussion/coordination between Osaka and HCMC related to city-to-city collaboration
- To support the spreading of energy saving technologies or renewable system in HCMC
- To support various city-to-city collaborations between Osaka and HCMC

2. Goal of the city-to-city collaboration

GOAL

- Spread of energy saving / renewable energy project in HCMC with JCM model project development
- Support for business expansion of the companies in Osaka city having energy saving technologies under the city-to-city collaboration
- Achievement of low carbon society in HCMC
- Formulated with the support of Osaka city, the “Climate Change Action Plan (CCAP) of HCMC (2017–2020), prospect to 2030” would be further promoted.
Osaka City

Ho Chi Minh City People’s Committee

Comprehensive cooperation

Dept. of Natural Resources & Environment
Dept. of Industry and Trading
Dept. of Tourism

Promotion of energy saving and support project implementation etc.

Companies & organization in Ho Chi Minh City

Vietnam state-owned enterprises

Support for JCM model project formulation

Support for JCM model project formulation

Consideration of project formulation and collaboration among private entities

Support for overseas business of companies based in Osaka

Support for city-to-city collaboration

Support for JCM model project formulation

Nippon Koei

Global Environment Centre (GEC)

Mayor

Environment Bureau

Osaka City

Japanese companies

Osaka companies

Johnson Controls-Hitachi Air Conditioning

Support for city-to-city collaboration

Support for JCM model project formulation

05 Implementation structure, FY2019

Nippon Koei
1. Study for JCM model project formulation

Conduct a Study to formulate JCM model project in HCMC.

- Consideration of installing high efficiency air conditioning system (made by Johnson Controls-Hitachi Air Conditioning)
- Consideration of installing high efficiency gas once-through boiler (made by MIURA)
- Consideration of solar PV system on the rooftop (made by Sharp)
- Preparatory study for large-scale JCM model project formulation, such as cement industry.
How to support by Nippon Koei

International Consortium

Representative: Japanese entity
- Management of JCM model project
- Reporting of monitoring result

Partner: Local entity (e.g. Factory, Office building etc.)
- Site supervision of high-efficiency equipment
- Installation, progress management
- Monitoring

A : Support for JCM application
B : Business matching
C : JCM instruction
D : Confirmation of JCM conditions

Ministry of the Environment, Japan (MOEJ)

Manufacturer
Supply

Contractor

OR

Supplier

① Order
② Procurement w/ Receipt
③ Joint Implementation
④ Subsidy application
⑤ Subsidy
2. City-to-City collaboration activities

To materialize a mature relationship of two cities, the followings are implemented.

- Holding a policy dialogue on low carbon society development.
- Sharing experiences of utilization of rainfall prediction and disaster prevention smart-phone application.
- Support for upgrading of the Climate Change Action Plan CCAP.
- Participation of JCM seminar in Japan.
Positioning of this year's activities

Formulatoin of low carbon city in HCMC

10 targeted area of CCAP
- Urban planning
- Energy
- Transportation
- Industry
- Water management

- Waste management
- Construction
- Health
- Agriculture & food security
- Tourism & raising awareness

Agenda of Mayor-level policy dialogue in 2018
- Reconsideration of tendering system
- Consideration of energy saving in buildings
- Installation of PV
- JCM project formulation in industrial parks
- Sharing information regarding climate change adaptation

Program of MOEJ

FY 2019 JCM city-to-city collaboration project

✦ Activities
  1) Consideration of JCM model project formulation by installing high efficiency equipment
  2) Pre-study for JCM model project formulation in cement factory
  3) Consideration of JCM model project formulation by other technologies
  4) Review of CCAP (2017-2020)

JCM model project

Additional activities by JCM city-to-city collaboration project (FY2020~)
### 08 Further activities in three fiscal years

#### FY2018

**City-to-city collaboration**
1. Policy dialogue

**JCM prj formulation**
Consideration of JCM model project formulation by:
1. Installing heat exchanger and once-through boiler
2. Installing high-efficiency inverter in water treatment system

#### FY2019

**City-to-city collaboration**
1. Policy dialogue (1 Nov)
2. Making plan for reviewing CCAP2017-2020
3. Discussion of schedule for formulating CCAP2021-2025

**JCM prj formulation**
Consideration of installing of:
1. High-efficiency A/C system
2. High-efficiency boiler

Preliminary study on cement industry

#### FY2020

**City-to-city collaboration**
1. Policy dialogue
2. Reviewing CCAP2017-2020
3. Support on drafting CCAP2021-2025

**JCM prj formulation**
Consideration of horizontal expansion of:
1. High-efficiency A/C system
2. High-efficiency boiler by BtoB or BtoG

JCM project formulation in cement industry

#### FY2021

**City-to-city collaboration**
1. Policy dialogue
2. Support on finalizing CCAP2021-2025

**JCM prj formulation**
Consideration of horizontal expansion of:
1. High-efficiency air conditioning system
2. High-efficiency boiler by BtoB or BtoG

Implementation of JCM model project in cement industry

<table>
<thead>
<tr>
<th>Candidate JCM model prj</th>
<th>1st year</th>
<th>2nd year</th>
<th>3rd Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Installation of high-efficiency inverter in water treatment system</td>
<td>Continued support under city-to-city collaboration</td>
<td>Applying for JCM model project/ Consideration of horizontal expansion</td>
<td>Implementation/ Consideration of horizontal expansion</td>
</tr>
<tr>
<td>2 Installation of high-efficiency air conditioning system</td>
<td>Feasibility study</td>
<td>Applying for JCM model project</td>
<td>Implementation/ Consideration of horizontal expansion</td>
</tr>
<tr>
<td>3 Installation of high-efficiency boiler</td>
<td>Feasibility study</td>
<td>Applying for JCM model project</td>
<td>Implementation / Consideration of horizontal expansion</td>
</tr>
<tr>
<td>4 Installation of high-efficiency equipment into cement factory</td>
<td>Preliminary Study</td>
<td>Feasibility Study</td>
<td>Applying for JCM model Project</td>
</tr>
</tbody>
</table>
Thank you for your kind attention!

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