

## Summary

### **Entrusted Work Concerning the Development and Disclosure of Basic Zoning Information Concerning Renewable Energies (FY 2018)**

The introduction of renewable energies is important not only as a countermeasure for global warming but also from such viewpoints as establishing energy security, developing autonomous and scattered energy systems and creating new industries and jobs. For this reason, in an effort to develop basic data to examine measures to introduce and spread the use of renewable energies in the coming years, the Ministry of the Environment (MoE) conducted the “Study on the Potential for the Introduction of Renewable Energies” in FY 2009 and FY 2010, the “Development of Basic Zoning Information Concerning Renewable Energies” in FY 2011 through FY 2016 and the “Development and Disclosure of Basic Zoning Data Concerning Renewable Energies” in FY 2017, thereby estimating the abundance as well as introduction potential of renewable energies (PV power, wind power, small and medium-scale hydropower, geothermal heat, solar heat and underground heat) in Japan and their possible introduction amounts by different scenarios and, at the same time, developing basic zoning information.

The work conducted in FY 2017 included the trial production of a prototype WebGIS system and the revision of the summary document featuring the work in previous years concerning information and tools developed so far by the MoE pertaining to renewable energies from the viewpoint of improving the convenience of such information, etc. for users.

#### **1. Verification of the Enhanced Function of the Information Service Site Using the WebGIS**

A questionnaire survey was conducted with assumed users of the system for the purpose of verifying the enhanced function of the information service site using the WebGIS. Based on the opinions obtained, a feasible countermeasure plan was examined and part of this plan was implemented by the end of FY 2018.

#### **2. Review of the Calculation Method and Numerical Information Pertaining to Estimation of the Introduction Potential of Renewable Energies in Previous Years and Renewal of the Database**

Various reference materials were studied to find any points for review in relation to the natural conditions (legal system) and social conditions (business feasibility, etc.) of each type of renewable energy and a feasible method to re-estimate the potential was examined for each identified point for review.

#### **3. Compilation of the Introduction Potential, etc. of Renewable Energies Established in Previous Years and Revision of the Summary Document**

In view of the opinion that the reference materials and summary documents prepared in previous years were difficult to understand for some readers, an introductory summary

document (draft) compiling the related information in much simpler language was prepared. A questionnaire survey was conducted with the assumed users of this introductory summary document (draft) and this document was further expanded and modified as required to reflect the opinions expressed in the survey.

**4. Refinement of the Survey and Analysis Pertaining to the Renewable Energy Introduction Results**

As the study in FY 2017 confirmed several areas where the introduction results for wind power (on land), small and medium-hydropower generation and geothermal heat exceeded the introduction potential, the study in FY 2018 extracted local public entities corresponding to these areas and analysed the possible underlying factors by means of hypothesis verification.

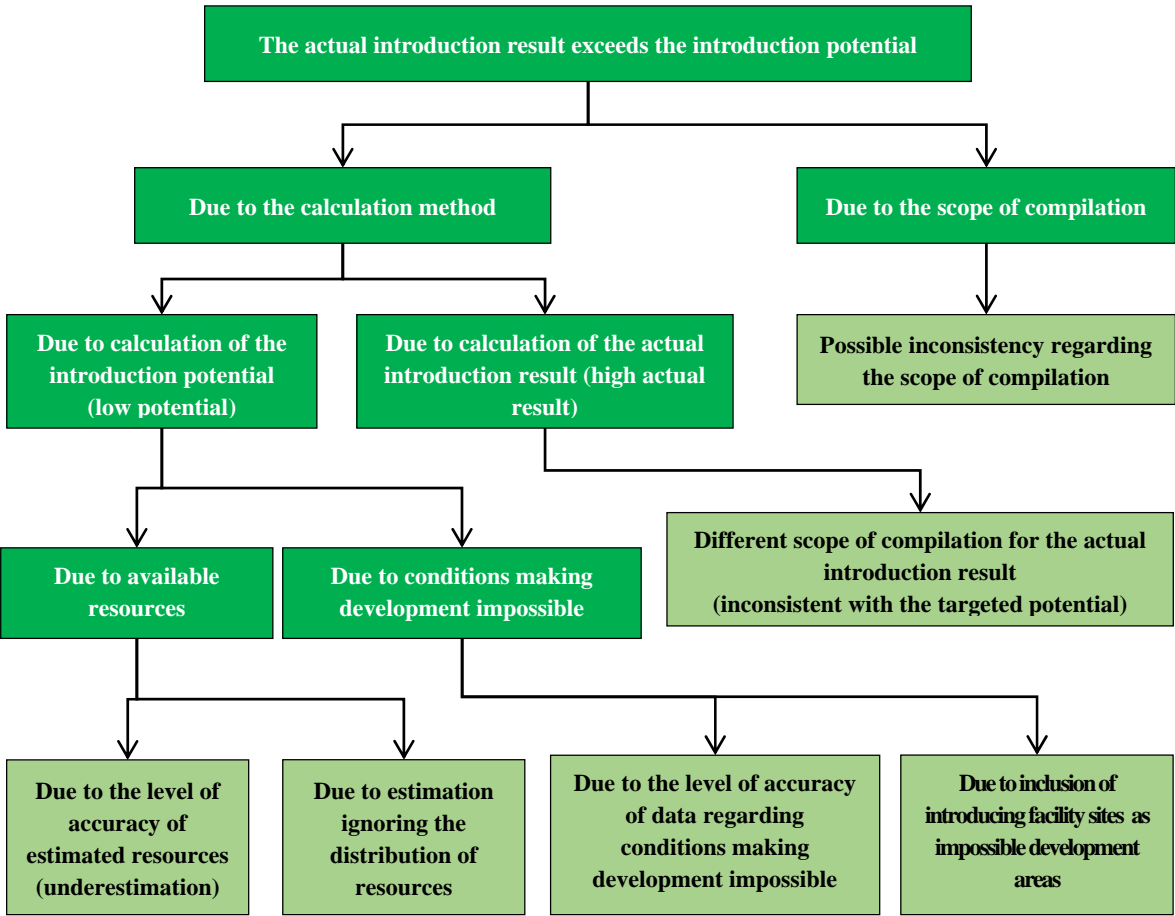
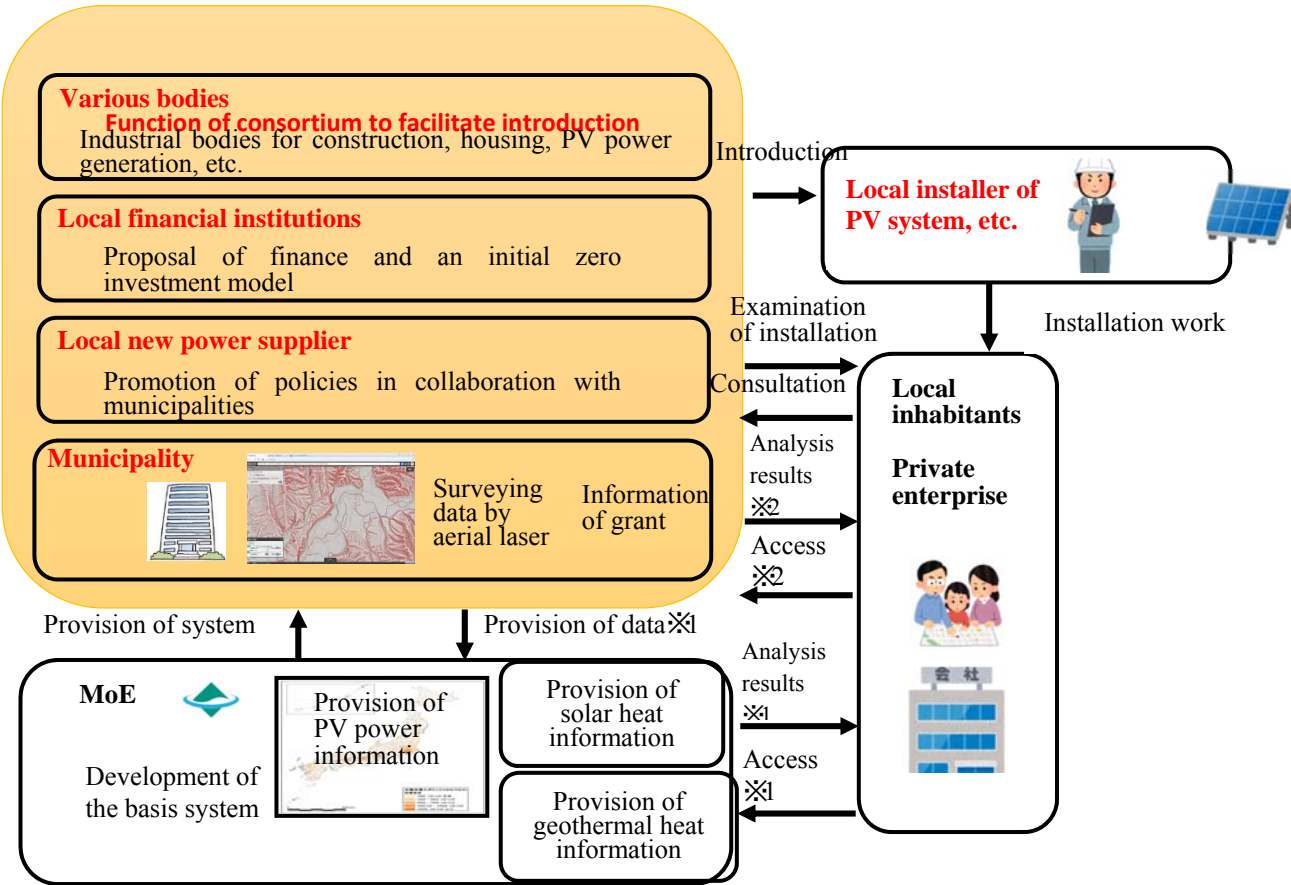


Fig.1 Tree analysis of the case where the actual introduction result exceeds the potential

### 5. Basic Examination Work for Refinement of the Mapping of Photovoltaic Power Generation

Based on existing cases of the mapping of photovoltaic power generation, a desirable mapping of photovoltaic power generation was examined with a view to facilitating the introduction of renewable energies. The actual work conducted in FY 2018 ranged from basic examination of the arrangement of data and creation of a system to provide information, identification of pending issues and examination of the facility introduction process as well as relevant road map.



□1 Case where a consortium provides local data and the MoE develops and manages the system.  
 □2 Case where a consortium arranges data and manages the system using the MoE system.

Fig. 2 Example of a desirable mapping of photovoltaic power generation (Led by a municipality or local new power supplier)