

## **B-14 Comprehensive evaluation of technological measures to arrest global warming (Final Report)**

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The purpose of this research project is to evaluate technological countermeasures comprehensively, especially technologies to control greenhouse gases emissions. To do this, considered are three main subjects which are to analyze greenhouse gases emissions in their life cycle that is basic data for technology assessment, to evaluate countermeasures in residential and commercial, transportation and energy supply fields and to evaluate technologies comprehensively. The contents during this period are as follows.

1)Compilation of life cycle greenhouse gases inventory database, 2)experimental study using model house and simulation study and evaluation as for Eco-house, 3)survey of innovative technologies for Eco-communities and their evaluation by simulation study, 4)life cycle analysis of a vending machine and its evaluation, 5)emission involved with construction materials and evaluation of alternative ways of construction and/or materials. 6)survey and development of devices being suitable for commuter electric vehicles, 7)simulation with battery monitoring system for combined batteries, 8)experiment of hybrid system including simulation study and survey and evaluation of abandoned energy recovery technologies for diesel engines, 9)estimation of influence of photovoltaic system to electric power systems and assessment of life cycle greenhouse gases emissions for photovoltaic systems, 10)assessment of recovery energy potential and quantity and implementation of energy flow map, 11)survey of energy and material inputs to fossil fuel extraction activity and calculation of CO<sub>2</sub> and methane emission in such activities and 12)proposal of an appropriate method for allocationg resources and assessment of alternative fuel vehicles.