The Analysis on the substitution of renewable energy and traditional energy, and reduction of CO2 emission, Beijing

School of Life and Environmental Sciences, University of Tsukuba, Yu ZOU * School of Life and Environmental Sciences, University of Tsukuba Feng XU School of Life and Environmental Sciences, University of Tsukuba Takeshi MIZUNOYA School of Life and Environmental Sciences, University of Tsukuba Yoshiro HIGANO

[Abstract] Currently, energy consumption and CO₂ emissions have grown significantly along with high speed economic development in Beijing. Unreasonably of energy structure and pollution has hindered the sustainable development. Especially, Beijing's CO₂ emissions are largely generated by coal energy. Therefore, it is important to develop renewable energy to adjust energy structure. Based on this condition, Beijing government issued "12th Five-Year Plan" to keep the annual growth rate of GDP by 8%, and an adjusting plan of renewable energy structure to develop the utilization of renewable energy. The renewable energy can directly or indirectly substitute for conventional energy consumption, in order to reduce the CO₂ emission.

Key words: renewable energy, traditional energy, CO2 emission, energy balance