

After the Great East Japan Earthquake on March 11, 2011, a major accident occurred at the nuclear power plant in Fukushima, and power supply to Fukushima Dai 1st and 2nd nuclear power plant stopped. Approximately 40% of the usual supply capacity was lost, the supply and demand of electricity in the TEPCO pipe was tight, and there was a possibility of large-scale blackout. The planned power outage was done to avoid this as the social function receives a catastrophic blow if it becomes a large blackout. In the month of April, the immediate crisis was avoided and planned blackouts were discontinued, but there was a risk of reaching the critical level again in the summer electricity demand increase period. On May 13, the central government requested a reduction of 15% uniformly, and issued an electricity restriction order to business operators, but it stopped calling for individual households. "Akasaka Power-saving Mileage" is a power-saving incentive measure for individual households that Arakawa-ku Tokyo Metropolitan Government independently carried under this circumstance, and all households that achieved energy savings of 20% or more compared to the previous year will receive a "prize" It was a measure to present it. Under these circumstances, what kind of method can be considered to promote individual households in the direction of energy saving and achieve reduction in demand? First, there is a way to "persuade" people's morality by reason of social crisis. Second, there is a demand reduction by the price mechanism "price increase". Third, there is a method to encourage demand reduction by adding "economic incentive" to the above "persuasion". When the third method is used as a policy, the mechanism and design of economic incentives become important, but the effect is not unified and is complicated. For example, in a demonstration experiment on the power saving effect of private households of Ito, Ida, and Tanaka (2015), it was effective to reduce the demand by notifying the fluctuation of the electricity fee by installing the smart meter at home, It is reported that the habit of energy saving was also formed. On the other hand, in the demonstration experiment by Greezy, and Rustichini (2000), it was a result that the fine for the late arrival of the nursery school grew late rather than the delay, and the number of late delays increased even after the abolition of the fine remained unchanged. This paper is a policy study using the method of demand reduction with "economic incentive" added to "persuasion" which is the third method mentioned above. Analyze the mechanism of economic incentives with the theme of energy saving of individual households in the emergency called summer after the earthquake. The object of research was to compare the types of economic incentives such as "cash voucher" with monetary nature "common shopping ticket in the city" which is one of eight kinds of prizes and "other goods" without monetary character, And verify the hypothesis that cash vouchers are more effective against saving power than "other goods" and are sustainable. As for the number of households who are one of the social attributes of participants, we also verify the hypothesis that the larger the household size is, the higher the power saving effect is. The data to be analyzed is data on the 5,030 household participants in 2011 and data on the power saving effect of a total of 836 households in 2012 and 2013 for follow-up survey, acquired from the Arakawa Ward Environment Division. In the application form for participation, the amount of electricity used by the TEPCO's vote (information on the amount of electricity used), the amount of electricity used in the same month in the previous year, the power reduction rate, the number of households and the questionnaire are stated, It is an object. As a result of the analysis, "cash voucher" with monetary nature was more effective in power saving effect than "other goods" which do not have monetary properties. However, the sustainability of the effect is relatively short-term and can not be said to have extended to habit formation. There is also a "negative correlation" in the relationship between the number of households and the power saving rate, and it became clear that the power saving rate declined as the number of households increased. As for the implication to the policy obtained as a result of the analysis, firstly, from the second year onwards, the policy change with only "cash vouchers" being appropriate, with the "other goods" abolished, was reasonable. Secondly, "economies of scale" were seen with regard to electricity usage, but as the number of households increases, the power saving rate decreases with respect to power saving. Promoting policies after grasping this trend can effectively save power saving effect. That is two points.