The Process of Designing Environmental Policy
– Lessons learnt from the cases in UK –

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The United Kingdom, by enacting The Climate Change Act 2008, has introduced legally binding long-term target of 80% Greenhouse Gas (GHG) emissions reduction by 2050 relative to 1990 level for the first time in the world. To achieve the target, the UK government set reduction targets (budgets) for each five year annual average emissions. So far, it is decided in its fourth budget that the target is set as 50% reduction by 2025 (more exactly annual average of 2023-2027). The author of this column thinks this is so challenging and costly, and may not be achievable. On the other hand, the author highly appreciates the process of setting climate policies and targets in the UK. This is the background of this short essay.

In the UK, the independent Committee on Climate Change (CCC) plays a central role in setting the climate policies and targets. In December 2008, the CCC sent its 828-page recommendation to the Government. The recommendation covers wide range of climate related issues including long-term reduction target toward 2050, emission targets for 3 budget periods until 2022, costs, impacts to competitiveness for UK industries and ensuring stable energy supply. This forms the base of current UK climate policy.

As a basis of long-term target, the CCC, acknowledging the necessity to limit the temperature increase below 2 degree since pre-industrialization in order to restrain the adverse impacts of climate change to a certain extent, concluded 50% global emissions reduction is necessary. This roughly corresponds to global per capita emissions in 2050 to 2.1-2.6t/CO_2. For the UK to attain this level, per capita emission must be reduced by 80% in comparison to 1990. This is the logic of 80% reduction target. Setting aside whether this is feasible or not, the basic idea behind is to make global per capita emissions equal.

The CCC also conducted global cost benefit analysis based on the integrated assessment model. The outcome shows that the cost of 50% reduction in 2050 will be 1-3% of GDP and benefit far outweighs cost. After thorough review of academic literatures, discount rates (pure rates of time preference) used here are 0.1-1.5%. For the reference, the CCC also showed that if the rate is bigger than 2.25%, cost will exceed benefit.

Though the author thinks the UK target is too much challenging, the author also feels there are many aspects we should learn in designing Japan's climate policies and targets; several examples include transparent explanation of the necessity of policies, measures to achieve the target and its cost-effectiveness, impact to the economy. The same applies to the Electricity Market Reform just passed the Parliament in December 2013. The UK Government published various papers (including white papers, technical updates, policy overviews and consultations) since 2010 on the necessity of the reform, measures to be taken, cost of the reform etc. and listen to stakeholders' comments from time to time. This contrasts to the way of setting recent Japan's GHG reduction target of 3.8% by 2020 that was decided without any consultation with the Government Council and without showing measures and cost of achieving the target. The author thinks there are many aspects that RITE, one of the leading research institutes in Japan, can play in forming transparent and reasonable climate policy in Japan.