

## Analysis of the Mitigation Potential of Japan

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(i) Analysis of the mitigation potential, effectiveness, efficiency, costs and benefits of current and future policies, measures and technologies at the disposal of Annex 1 Parties, appropriate in different national circumstances, taking into account their environmental, economic an social consequences, their sectoral dimensions, and the international context in which they are deployed;

(ii) Identification of possible ranges of emission reductions by Annex I Parties, through their domestic and international efforts, and analysis of their contribution to the ultimate objective of the Convention, ensuring due attention to the issues mentioned in the second sentence of Article 2 of the Convention;

The Climate Action Network (CAN) urges the Japan, the 'self-claimed most energy efficient country', to admit that it is only 'one of the most energy efficient countries' and submit real mitigation potential, as well as concrete ranges of emission reduction in order to move the discussion forward.

Japan suggests that its energy efficiency is No 1, but this is mainly achieved in the household and transport sectors, the energy usage of which is low compared to EU countries and the USA. Japanese industries' energy efficiency was superior in the 1970s and 80s, but its superiority has already been lost and other countries are catching up, with the UK surpassing Japan in 2004.



Source : IEA (2006) Energy Balances of OECD Countries 2003-2004. IEA/OECD.

Japan still has room for improving its energy efficiency, judging from differences in energy efficiency among facilities in each sector of industry. For example, the efficiency level of thermal power stations within the country differs to a great extent, indicating that if all power stations become as efficient as the most efficient ones as shown by the bars on the left side of the graph, thermal power stations could make more reductions. This proves that there are lots of power stations that have abundant room for reducing their emissions by improving their energy efficiency. It is not the case in only the power sector, but also in the cement sector, and similar results can be expected in other sectors too.



Source: Kiko Network estimate based on METI Natural Resources Agency, Electricity and Gas Business

Section (2005) Summary of Electricity Supply/Demand in 2004.

Moreover, Japan has increased coal use in power generation by almost three-fold from 1990 to 2004, which has led to a 10 % increase of CO2 emissions in Japan. As a result, Japan's use of coal , is only average among OECD countries. Also, among developed countries, Japan stands out as a heavy user of coal in the industry sector. It is clear, fuel switch is one of the measures to reduce big amount of emissions from the "most energy efficient country."

## International comparison of the growth of coal-fired power generation [Changes (1990-2004) in coal-fired power generation: international comparison]



\* The red numbers shows the change rate Source: IEA (2006) Energy Balances of OECD Countries 2003-2004, IEA/OECD Although Japan prides itself for its high-tech renewable technologies such as solar photovoltaic industries, Japan lacks effective measures that promote the use of renewable energy in its own country. The only existing policy that aims at furthering the use of renewable energy is the RPS (Renewables Portfolio Standard) System. It annually imposes an obligation on electricity retailers to use a certain amount of electricity from renewable energy. However, its target is only 1.35% in 2010, and 1.63% in 2014, which is not only very low, but actually restricts the growth of renewable energy industries. From the range of emission reduction's point of view, Japan has huge reduction potential if it implements effective renewable energy policy, such as a feed-in tariff.

The Japanese research center, the National Institute Environmental Studies (NIES), has released its research paper "Japan Scenarios towards Low-Carbon Society – Feasibility study for 70% CO2 emission reduction by 2050 below 1990 level – " in February 2007, which was funded by the Ministry of the Environment of Japan. It identifies that a 70% CO2 emission reduction below the 1990 level is feasible by reducing 40-45 % of the energy demand and by increasing the share of low-carbon energy supply, which cost would be approximately 1 % of the estimated Japanese GDP in 2050.

http://2050.nies.go.jp/interimreport/20070215\_report\_e.pdf

All Annex I countries should honestly put the real mitigation potential and a concrete number of possible ranges of emission reduction on the table, so that all countries can get into the real discussion of how to meet the ultimate objective of the Convention.