Japan - UK Joint Research Project Developing visions for a Low Carbon Society (LCS) through sustainable development

The Ministry of the Environment of Japan (MoEJ) and the Department for Environment, Food and Rural Affairs in the UK (Defra) are jointly promoting a scientific research project toward achieving a Low Carbon Society (LCS) by 2050. The National Institute for Environmental Studies (NIES), the UK Energy Research Centre (UKERC) and the Tyndall Centre for Climate Change Research are conducting research activities in line with this goal. We held the 1st LCS workshop in June 2006 (Tokyo) and the 2nd LCS workshop in June 2007 (London). The 3rd LCS workshop will be held from February 13 to 15, 2008 (Tokyo) and it will summarize research outputs for G8 Japan.

Japan-UK Joint Research Project LCS through Sustainable Development for Global Participation

The First workshop was held in Tokyo, June14-16, 2006.

Participants from 19 countries; Asia: Japan, China, India, Thailand, Taiwan (China) Africa: South Africa, Nigeria Europe: UK, France, Germany, Denmark, Spain, Netherlands, Russia Latin America: Brazil, Mexico, Chile North America: US, Canada



The Second workshop was held in London, June13 -15, 2007.

The Third workshop will be held in Japan, Feb13-15, 2008.

Developing and diffusing innovations for our good life and LCS through SD

G8 Gleneagles 2005

G20 March 13-15, Chiba G8 Env. May 25-27, Kobe **G8 Japan**



http://2050.nies.go.jp

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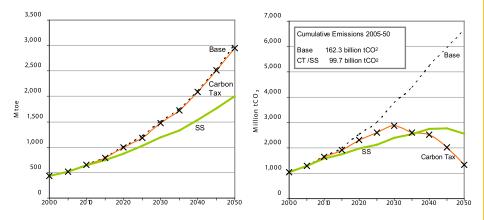
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Energy & CO₂ Emission Trajectories across LCS scenarios in India



P.R.Shukla, "Approach and Analysis of Low Carbon Society Scenarios for India"



AIM Training Workshop 2007 Organized by NIES, October 2007, Tsukuba, Japan

Japan GHG 70% reduction in 2050 Scenario A: Vivid Techno-driven Society

Demand side energy -40% + Low carbonization of primary energy + CCS

with moderate cost of technological options as 1% of GDP in the year of 2050 Main factors to reduce CO2 emissions Factors Class. High economic growth Demand growth by · Decrease of population and number of households activity level change Energy efficient improvement of furnace and motor Energy Efficiency Imp. (EE) · Fuel switching from coal/oil to natural gas Carbon Intensity SO₂ Imp. (CI) High insulation dwelling and building Reduction of servic Home/Building energy management system demands (SD) Efficient air-conditioner, Efficient water heater Efficient lighting system Fuel cell system Photovoltaics on the roof Intensity Imp. (CI) Intensive land-use. Concentrated urban function Reduction of service ပ္ပ Public transportation system demands (SD) Motor-driven mobiles: Electric battery vehicles. Fuel EE & CI cell battery vehicles Nuclear energy Carbon Intensity Effective use of electricity in night time with storage Imp. (CI) · Hydrogen supply with low-carbon energy sources Advanced fossil fueled plants + CCS Carbon Capture · Hydrogen supply using fossil fuel + CCS and Storage (CCS

EE: Energy Efficiency Improvement, CI: Carbon Intensity Improvement, SD: Reduction of Service Demand