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Energy and Climate Security for Development

Nick Mabey, Chief Executive, E3G

Delhi Sustainable Development Summit
January 2007

Energy and Climate Security have large impacts on development



- Stern Review estimates cost of climate change to be between 5-20% of global GDP from 2050
- Recent oil prices rises have annual cost to developing countries of \$137 billion – compared to \$85 billion in net aid
- World Bank estimates that 40% of development aid investment is at risk from climate change
- Humanitarian costs could rise by 200% by 2015 under higher climate change scenarios

Moving to low carbon energy system is affordable – especially if oil prices rise



- Stern Review estimates total additional cost of reaching 550ppm as 1% GDP in 2050- falling to 0.1% GDP with \$80bbl oil price;
- IEA “Alternative Scenario” consistent with 550ppm breaks even at \$60bbl and \$20 t carbon
- IEA scenarios reduce investment needed in energy supply sector by \$7-11 trillion over 25 years; much of this in lower pipeline and transmission investment.

Energy and Climate Security are public goods; markets will not automatically give right signals to shift major investment



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- Equilibrium carbon price in Stern Review \$100 t/C – current oil price rise equivalent to \$350-450t/C – but not leading to carbon-free economy
- Price rises and energy security are driving investment in climate instability:
 - rapid rise in coal power investment
 - coal to liquids investment in USA and China
 - Large increase in carbon inefficient biofuels
- Impact on energy efficiency of high energy prices has been very slow, even in transport sector

Need coherent, clear and effective policy signals to drive investment to deliver energy and climate security together

The Case for Clean Coal



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- Even with higher efficiency USA, India and China all plan to build more coal power stations
- Current investment plans mean that coal plants built by 2030 will have lifetime emissions equal to 2/3rds of global emissions between 1970-1990
- Cannot keep below 2°C warming unless carbon sequestered from these coal power stations

Building markets through standards; the EU Carbon Capture and Storage (CCS) Strategy



- EU ETS price is not moving investment into CCS
- EU Energy package proposal 11 Jan 2007 for agreement March 2007
 - 12 demo plants for new technology
 - 2020 ban any fossil plant without ccs
 - 2010 carbon capture ready only- will be retrofitted post-2020
- EU-China agreement in 2005 on CCS demo – similar agreement with India?

Strong signal to kickstart global CCS markets using technical standards, public investment and regulation