

For the daily and business press
London, June 23, 2008

Siemens releases study on sustainable infrastructure in London

- **First comprehensive analysis of costs and potentials of greenhouse gas abatement technologies in a city**
- **Identified reduction potential for London in 2025: ~20 megatonnes CO₂ (~44 percent reduction compared to 1990)**
- **Additional investments required annually: less than 1 percent of London's total economic output until 2025**
- **About two-thirds of the necessary investments would pay for themselves**

London can meet international greenhouse gas reduction targets without a dramatic shift in its citizens' lifestyle. This is a central finding of the study "Sustainable Urban Infrastructure" presented today in London at the Siemens Media Summit. Adopting currently available technologies could reduce annual CO₂ emissions in the British metropolis by nearly 44 percent – almost 20 megatonnes (Mt) – by 2025 compared to 1990. Working with Siemens, the international management consultants McKinsey & Company analysed more than 200 technological levers that reduce greenhouse gas emissions, water usage and waste disposal in the city. The study shows that the adoption of many technologies for reducing greenhouse gases also makes good economic sense. Almost 70 percent of the potential abatement could be achieved with the help of technologies that would pay for themselves, largely by reducing energy costs.

Major cities play a decisive role in fighting climate change: Over half of the world's population lives in urban centres today, and the number is likely to grow to nearly 60 percent by 2025. Cities are responsible for some 80 percent and, therefore, a disproportionate share of the world's greenhouse gas emissions. Confronting this challenge, London has set ambitious goals in combating climate change: By the year

2025, it aims at reducing greenhouse emissions by 60 percent compared to the reference year of 1990 set in Kyoto.

The newly released study for the first time comprehensively examines the costs and potentials of technological levers to reduce greenhouse gases for a city– from the point of view of decision-makers (investors, homeowners, consumers, companies and others).

The findings: Overall, greenhouse gas emissions from buildings, transport and energy supplies can be reduced by around 44 percent by 2025, compared to 1990 – enabling London to meet its Kyoto target (-12 percent by 2012), the EU goal (-20 percent by 2020) as well as the national reduction target set by the UK government (-30 percent by 2025). Beyond that, a combination of additional regulatory changes, lifestyle change brought about by other means, and future technological innovation could also help the city bring its goal of reducing greenhouse gas emissions by 60 percent by 2025 into reach. “With the help of technologies available today, London could not only fulfil its international obligations, but come close to meeting its own ambitious climate goals without a massive shift in its citizens’ lifestyle,” commented Siemens CEO Peter Löscher on the study findings.

The study also shows that investments in these technologies can make good economic sense: Nearly 70% of the identified saving potentials of nearly 20 Mt of CO₂ could be achieved with technologies that would pay for themselves through their energy savings. Until 2025, an incremental total investment of around €41 billion – an amount less than one percent of London’s total economic output – would be needed to implement all the identified technologies. This is roughly in line with the findings of Nicholas Stern’s 2006 report (Stern Report), which places the cost of slowing the impact of greenhouse gases at up to one percent of global GDP per year. Should nothing be undertaken, the Stern Report estimates that an unchecked rise in global temperatures could cost up to 5-10 percent of the global GDP.

Study findings for sustainable infrastructure

- The biggest saving potential lies in buildings, which generate some two-thirds of London’s entire CO₂ emissions. By the year 2025, savings of around 10 Mt of CO₂ could

be achieved in London's buildings alone. Overall, investments of roughly €20 billion would be necessary. Nearly 90 percent of these pay off for those making the investment decisions. Energy-efficient lighting in London households is the single most cost-efficient measure and would cut CO₂ emissions by 400,000 metric tonnes, saving €270 per tonne abated. The greatest reduction – a total of 4.5 Mt – could be achieved through improved insulation.

- Greenhouse gas emissions from transport could be reduced by 25 percent or roughly 3 Mt CO₂ a year by 2025. This would require investments totalling €12.5 billion. Automobile fuel-efficiency offers by far the greatest saving potential (1.2 Mt CO₂). In public transport, which is already more efficient, an additional 400,000 tonnes of CO₂ could be saved with measures such as a switch to hybrid buses.
- After exploiting all technological levers in buildings and transport, CO₂ emissions from energy supply could be reduced by a further 6.2 Mt. At the local level, the use of various combined heat and power systems offers by far the greatest savings potential at 2.1 Mt CO₂ a year by 2025. An additional 3.7 Mt CO₂ could be eliminated by measures related to the national grid mix: For example, increasing the share of power generation with gas (instead of coal) would cut London's emissions by 1.2 Mt CO₂. The increased use of renewable energy sources above and beyond previously defined targets would reduce London's CO₂ balance by another 800,000 tonnes of CO₂.
- London currently loses over 30% of its water production through leakages in its 4,800-kilometer distribution system – the equivalent to the volume needed to fill about 350 Olympic swimming pools every day. Savings on the demand side would therefore be especially effective: For every litre of water saved by consumers, nearly one-and-a-half litres less need to be filtered and pumped into the system. A total of around 65 million cubic meters of water – approximately 13% of the city's total consumption – could be saved through economically sensible measures every year by 2025.
- In view of high and rising landfill fees and taxes in England, there are also economically interesting alternatives to waste treatment. In addition to recycling, there are a number of technologies that use household garbage to generate electricity – either by converting it into biogas or by burning it. The energy generated in this way can supply thousands of households with electricity and heat.

The study also shows: Nearly 75 percent of these technological changes are controlled by consumers – whether individuals or businesses. Therefore, cities at all levels need to address not only what they can do to directly reduce CO₂ emissions but also how they can promote greater adoption of these technologies by consumers. Depending on the technology, this can be achieved through changes in regulation, taxes, subsidies, access to capital and provision of reliable information, as well as marketing and campaigning to raise public awareness and encourage consumers to make choices that are both economically and environmentally sound. Cities can also help bring together the various stakeholders who need to cooperate in order to make change happen.

The study's methodology:

The study "Sustainable Urban Infrastructure" identifies technological levers for reducing greenhouse gas emissions and their costs in the three sectors buildings, transportation and energy supply. The economic evaluation has been made from the point of view of decision-makers – that is, of those who invest in the abatement levers (businesses, homeowners, car buyers, etc.). More than 200 individual levers were analysed using uniform, cross-sector methodologies. To estimate potential savings, the study assumed a maximum, realistic implementation rate for the relevant technologies (capture rate) and compared the resulting emissions with those to be expected if today's rate of implementation were to continue unchanged into the future. The report did not take into account changes in individual behaviour that are above and beyond purchasing decisions (such as turning down thermostats or changing driving behaviour to save petrol).

Siemens AG (Berlin and Munich) is a global powerhouse in electronics and electrical engineering, operating in the industry, energy and healthcare sectors. The company has around 400,000 employees (in continuing operations) working to develop and manufacture products, design and install complex systems and projects, and tailor a wide range of solutions for individual requirements. For over 160 years, Siemens has stood for technical achievements, innovation, quality, reliability and internationality. In fiscal 2007, Siemens had revenue of €72.4 billion and income from continuing operations of €3.9 billion (IFRS). Further information is available on the Internet at: www.siemens.com.

This document contains forward-looking statements and information – that is, statements related to future, not past, events. These statements may be identified by words as "expects," "looks forward to," "anticipates," "intends," "plans," "believes," "seeks," "estimates," "will" or words of similar meaning. Such statements are based on our current expectations and certain assumptions, and are, therefore, subject to certain risks and uncertainties. A variety of factors, many of which are beyond Siemens' control, affect its operations, performance, business strategy and results and could cause the actual results, performance or achievements of Siemens worldwide to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements. For us, particular

uncertainties arise, among others, from: changes in general economic and business conditions (including margin developments in major business areas); the challenges of integrating major acquisitions and implementing joint ventures and other significant portfolio measures; changes in currency exchange rates and interest rates; introduction of competing products or technologies by other companies; lack of acceptance of new products or services by customers targeted by Siemens worldwide; changes in business strategy; the outcome of pending investigations and legal proceedings; our analysis of the potential impact of such matters on our financial statements; as well as various other factors. More detailed information about our risk factors is contained in Siemens' filings with the SEC, which are available on the Siemens website, www.siemens.com, and on the SEC's website, www.sec.gov. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in the relevant forward-looking statement as expected, anticipated, intended, planned, believed, sought, estimated or projected. Siemens does not intend or assume any obligation to update or revise these forward-looking statements in light of developments which differ from those anticipated.