



## Dialogue on Energy: Local Action, Global Impact

Thursday 22 June 2006

Vancouver Convention and Exhibition Centre Ballroom B

What do climate change, air pollution, and renewable energy have to do with cities? Everything. Cities are now home to half of humankind and are arguably the greatest consumers and users of energy. In fact, cities are the major contributors to deteriorating air quality and the emission of greenhouse gases that lead to climate change with urban activities generating close to 80 percent of all greenhouse gases.

To address these issues, this dialogue will be divided into two sections, the first on energy and the second one on transport. Participants will discuss the following issues:

- affordable and successful renewable energy solutions
- the constraints cities are faced with implementing such solutions
- the role industry and public-private-partnerships can play to help cities
- how a new approach to urban transport should look like, taking into account the needs of all urban dwellers
- how cities can lead the way in promoting more energy efficient and cleaner transport
- leapfrogging technology options and how to adapt solutions from developed countries in developing countries

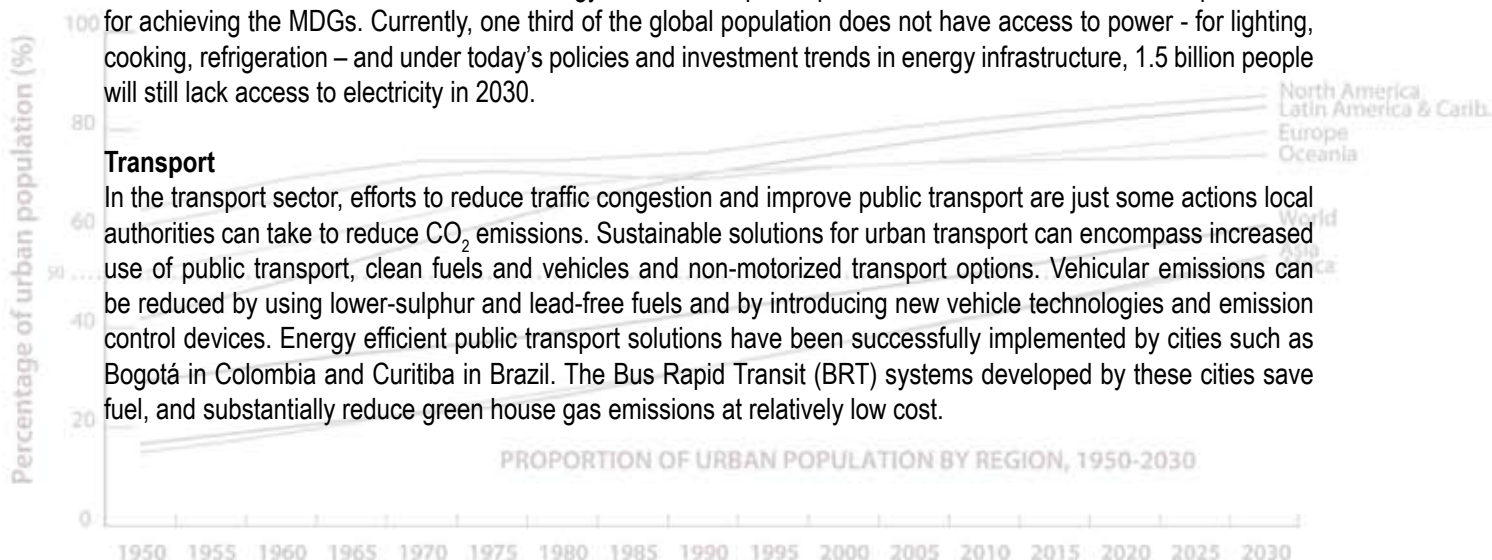
### Background Energy

Urban greenhouse gas emissions originate from vehicles, industry, energy consumption in buildings, and street lighting. Vehicular emissions are rising at a rate of 2.5 percent each year, while industry is responsible for 43 percent of the global CO<sub>2</sub> emissions from fossil fuel combustion. Urban energy needs affect the global and regional environment, as well as the ecosystems surrounding cities. Forests in developing countries are being rapidly cut down as a source of firewood which jeopardizes a city's own natural resource base as water catchment areas are destroyed and biodiversity threatened.

Poverty is a major contributor to this situation. Recent surveys in African cities show that fuels such as kerosene and gas are beyond the reach of the urban poor, forcing them to resort to unsustainable energy sources, such as charcoal. Access to affordable, modern energy services is a pre-requisite for sustainable human development and for achieving the MDGs. Currently, one third of the global population does not have access to power - for lighting, cooking, refrigeration – and under today's policies and investment trends in energy infrastructure, 1.5 billion people will still lack access to electricity in 2030.

### Transport

In the transport sector, efforts to reduce traffic congestion and improve public transport are just some actions local authorities can take to reduce CO<sub>2</sub> emissions. Sustainable solutions for urban transport can encompass increased use of public transport, clean fuels and vehicles and non-motorized transport options. Vehicular emissions can be reduced by using lower-sulphur and lead-free fuels and by introducing new vehicle technologies and emission control devices. Energy efficient public transport solutions have been successfully implemented by cities such as Bogotá in Colombia and Curitiba in Brazil. The Bus Rapid Transit (BRT) systems developed by these cities save fuel, and substantially reduce green house gas emissions at relatively low cost.



## **Sustainable energy and transport**

Renewable energy currently accounts for about 11 percent of the world's primary energy supply. Appropriate coordination by governments, the private sector and the public at large can help us push this to a 60 percent target. Climate change is both a local and a global problem. It requires action at all levels, including the city level, if it is to be addressed effectively.

### **Fast Facts on Energy and Transport**

- 80% of global carbon dioxide (CO<sub>2</sub>) and other greenhouse gases are generated by urban activities.
- Vehicular emissions are rising at a rate of 2.5% per year.
- Industry is responsible for 43% of the global CO<sub>2</sub> emissions from fossil fuel combustion.
- By the year 2010, global temperature will increase by 2oC if current patterns of energy consumption continue.
- Currently, 1/3 of the global population (at least 1.6 billion people) does not have access to power for lighting, cooking, refrigeration, etc. Most of these people live in developing countries, mainly in South Asia and in Sub-Saharan Africa.
- In Cameroon, 65% of the energy consumed by poor people comes from wood fuel, which accounts for the loss of an estimated 10,000 hectares of forest annually. This action alone reduces the possibility of storing, through photosynthesis, approximately 50,000 tons of CO<sub>2</sub>.
- In 2030, 1.5 billion people will still lack access to electricity under today's policies and investment trends in energy infrastructure.
- The city of Calgary, Canada, has made significant energy savings and considerably reduced CO<sub>2</sub> emissions, by replacing conventional streetlights with energy saving streetlights enabling it to cut streetlight energy consumption by half and achieving fuel savings of over 3 million US dollars a year.
- The Bus Rapid Transit in Bogota has resulted in a reduction of 50% in traveling times within the system; a reduction of 40% in noise and gas emissions in the city air; an increase in the safety of zones around the trunk roads; a decrease of 90% in accident rates in the corridors where the system operates; a reduction of 40% in automobile use during peak times; an improvement in public space; and a generation of 7,300 direct and 10,000 indirect jobs.
- Renewable energy currently accounts for about 11% of the world's primary energy supply.
- Supporting and enhancing the utilization and implementation of renewable energy sources could provide for more than half of our future energy needs without depleting primary energy resources.

Source: UN-HABITAT

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