

President's Introduction 'Man & Energy'

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Today, more than ever before, man's requirements for energy are immense and ever-increasing throughout the world. Man's development and even survival is dependent on it: heating, transport, drinking water are some of the basic needs requiring energy for everyone.

Energy consumption jumped 38% in the 2 decades from 1982 to 2002. And the rate of increase reduced only slightly over the period: + 20% between 1982 and 1992, and 15% from 1992 to 2002. Energy comes largely from raw materials extracted from the ground (oil, gas, coal, uranium).

Man has arrived at a turning point in his history. Fossil resources, which are the forms of energy most used today, are going to become scarcer and scarcer. Over the last 20 years, the share of oil (more than 1/3 of world consumption in 2003 according to the IEA) has reduced, whereas the shares of gas (1/5 of world consumption) and of nuclear electricity (ca 6.5% of world consumption) have increased. Oil and gas now represent well over half of world energy consumption; with coal about one third. In 2003, renewable energy sources represented 13.3% of energy consumed worldwide (2% in 1980) – a massive growth! To meet the planet's energy requirements, they will all be necessary and all are complementary in their uses.

However, 1.6 billion people in the world, more than 25% of earth's population have no access to electricity and 2.4 billion people rely on wood, charcoal or dung as their principal source of energy for cooking and heating. Often the real costs of these alternative energy sources are high relative to those of electricity or gas delivered through networks to wealthier households. Also, these energy sources can have high non monetary costs. When people spend many hours collecting firewood or dung for heating and cooking, for example, they have less time for education or for developing other productive activities. In addition, the use of traditional energy sources can have serious health and environmental consequences. Two and a half million women and children die each year from the indoor pollution of cooking fires.

Eighty-six percent of the world's energy comes from fossil fuels. About 25% of the world's population remains without adequate or quality energy resources. Renewable energy is far from being able to meet current and rising energy demands, and is likely to remain too expensive for the foreseeable future. Given these factors, it is necessary to render fossil fuels environmentally acceptable until affordable, clean, and plentiful technologies are available. This is particularly important as major users such as China and India will be burning far greater quantities of fossil fuel in the years ahead.

The aim is energy for all, sustainable development whilst improving social cohesion and reducing poverty. In recent years there has been far more intergovernmental co-operation, from action on acid rain and CFCs to climate

change and beyond. These governments are often helped and influenced by NGOs and public concerns.

Ideally, we would have a plentiful, clean and affordable energy sources that allow the world to operate in a sustainable manner. However, today's energy technology cannot be scaled up quickly (and cleanly) to provide eleven billion people with a standard of living better than or equal to that we now enjoy. The development of a sustainable energy base that can provide clean, cheap and copious energy for everybody should be of the highest priority for all. Considering the Millennium Goals, we can aim for clean energy and a proper energy infrastructure that will help to fight poverty, hunger, infectious diseases and child mortality.

We need to do the following

- Raise the awareness of decision-makers at all levels
- Spread best-practice
- Encourage developed and developing countries to behave in a socially and ethical manner
- Ensure a strong level of public awareness and technical understanding

The panel discussion will identify what is required for everybody to understand the energy challenges that lay ahead. The differences in approach between developed and developing countries will be put in context and related to social responsibility. It will stress the importance of energy in affecting human development and social cohesion and define the key elements that can contribute to the reduction of extreme poverty.

Some of the key points we will try to address here are:

- How can energy improve social cohesion? Is it an element which encourages integration? Does it have a role and if so, what is it?
- To what extent is access to energy for all a determining factor in the reduction of poverty and extreme poverty?
- Many developing countries do not have energy policies and are even less likely to have social energy policies, even though this would be for the use of the population
- One-off actions are often prompted more by political considerations than by research into solutions to genuine problems

We will get back to these points in the discussion, but first, here are the presentations from around the world on our topic of Man & Energy.