

Sustainability & the Champions of Coal

White Energy Supports Sustainable Development

The overall ambition of sustainability is to achieve development that meets present needs without compromising the ability of future generations to meet their requirements. To build a sustainable future, we must recognize that sustainability is a broad goal with three intertwined pillars of development – economic, social and environmental. Coal has a vital role to play in all three.

Economically, coal is an affordable fuel and its market competitive. Coal prices have declined steadily in real terms since the 1980's. For developing countries, coal exports generate US\$7 billion per annum in revenues and US\$60 billion in energy import cost savings. Socially, coal is a vital component to poverty alleviation. In poorer regions, coal mining supports the local infrastructure by providing jobs, roads, transport, education, water and communications and by improving public health. Coal-generated power offers an effective route to achieving widespread access to electricity in a reasonable time frame. Over the past 15 years in China, 700 million people have been connected to electricity; 98% of the country is now electrified. (World Coal Institute, 2003) By focusing solely on the environmental dimension of coal, we risk depriving the world of both economic growth and the benefits that it provides in improving people's lives. Environmental issues are critical but not the only priority. Sustainability requires us to respond to and meet the environmental challenges of coal. Clean coal technologies already offer answers to these challenges.

Champions of Coal Argue

Economic

- Coal is an abundant and relatively cheap fuel that is crucial for future decades.
- Coal produces 39% of the world's electricity (twice as much as the next largest source) and around 70% of the world's steel. Coal use in power generation is projected to grow 60% by 2030.
- The benefits to developed and developing countries alike amount to billions of dollars.

Social

- 1.6 billion people living in developing countries do not have access to electricity. For many, coal will be the route to electrification and a better life.
- Around 1 billion people have gained access to electricity via coal in the past two decades.
- Coal provides 7 million jobs worldwide and coal production is the key economic activity in many communities.

Environmental

- Emissions from coal burning have fallen substantially in recent decades even while consumption has increased.
- Development of modern advanced technologies can combine the economic and social advantages of coal with the need for environmental improvement.
- If coal-fired power stations across the world were brought up to current German levels of efficiency, the CO2 reductions from this alone would be greater than from the Kyoto process.
- In the long term, new coal-based power generation technology options, such as gasification and carbon capture and storage by geological sequestration, offer the possibility of ultra-low or zero emissions at an acceptable cost. Advanced coal technologies will meet the challenges of the 21st century.

Energy Security - Coal's Role

Without energy, our basic needs for lighting, heating, cooking and mobility would not be met. Affordable sources of energy must be available in sufficient quantities. World energy demand will increase precipitously, partly due to a global population growth of 50% by 2100, but largely because per capita energy use in populous countries such as China and India will rise toward levels seen in developed nations (Source: *Harvard Magazine*, 2006).

Coal can play a unique role in meeting the demand for a secure energy supply. World reserves of coal are enormous and, compared to oil and natural gas, widely dispersed. The world's proven reserve base represents up to 200 years of production at current rate. Proven coal reserves have increased by over 50% in the past 22 years. The correlation between strong growth of proven coal reserves and robust production

growth suggests that additions to proven coal reserves will continue to occur in those regions with strong competitive coal industries.

The Value of Flexibility in the Fuel System

Coal offers flexibility in the fuel system. Coal prices are consistently more stable than oil and gas prices, reflecting coal's diverse and competitive markets. When gas prices rose significantly at the end of the 1990's, the availability of coal and coal-burning capacity in the electricity system helped avoid any significant energy impact on consumers.

Economic Development

Coal makes a significant economic contribution to the global economy. For consumers, it offers excellent value. In most circumstances, coal is cheaper per energy unit than other fuels, and can be used for both power generation and industrial applications. For these reasons, coal has remained a global fuel of choice. As the relentless increase in global energy demand continues, the contribution of coal use cannot be ignored.

Sources: *BP (2007)*, *Massachusetts Institute of Technology (2007)*, *International Energy Agency (2002-03)*, *World Coal Institute (2003)*

For both producers and consumers of coal, economics and security of supply are significant incentives for the continuing use of coal.