

UNECE Committee on Sustainable Energy
Ad Hoc Group of Experts on Cleaner Electricity
Production from Coal and Other Fossil Fuels

Forum on Fostering Investment in Cleaner Electricity Production from Fossil Fuels
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Clean Energy: An International Imperative
Opening Comments of
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A few years into the twenty-first century mankind faces a terrible trio of challenges: ensuring an acceptable level of energy security, meeting growing global electricity demand and mitigating against the potential of climate change catastrophe. Central to all three of these intertwined challenges is the issue of our past, current and future use of fossil fuels. The goal of today's forum sponsored by the UN Economic Commission for Europe Ad Hoc Group of Experts on Cleaner Electricity Production from Coal and Other Fossil Fuels, is thus to explore the current and future status of both the technologies, economics and governmental policies necessary to enable necessary future electricity production from fossil energy. As the members of this committee are well aware, the barriers to achieving this goal are not solely technical but also implicate governmental policy and regulatory decisions.

While the issue of energy security is not a prominent a topic in today's agenda it does remain a significant political and policy issue nonetheless. The fact that coal resources are situated in many developed countries, relatively close to population centers or within rail car serving distances and in great abundance, adds an extra security dimension to the continuing use of coal as a fuel for electricity production. If energy security, in one definition, includes the aspect of vulnerability of supply disruption, then domestic coal certainly adds to energy security for those nations favored with such resources.

The 20th Century was the century of electricity. It was called the number one development of the century and the wide availability of economic electricity production has enabled the subsequent technologies enabling the communications and information (Internet) age. Yet, only a third of the world's population is adequately served by electricity, with another third receiving inadequate service and the last third with no service at all. Thus any global electricity demand scenario shows inevitable increasing demand. The underdeveloped and undeserved segments of humanity will and should expect that their governments institute policies which will bring electricity to them and improve the level of services there today. Many of us believe that governments which apply the three-part formula of 1) reliance on markets where possible 2) engagement of private capital and 3) implementation of progressive regulatory policies will be most likely to be successful in this effort. In the well developed economies of the UN ECE member countries growth in electricity demand will also continue as economies grow and as new electricity using technologies are adopted by consumers. Much of the electricity

production infrastructure, aging power plants, will also need to be replaced as units reach the end of their economic lives due to obsolescence. Thus, demand for electricity is universally expected to rise.

Alan Greenspan, writing in his new book, *THE AGE OF TURBULENCE*, says that “There can be little doubt that global warming is real and manmade.” According to most popular opinion polls, this view is also shared by U.S. consumers and no doubt by the citizens of most other countries as well. Whether that same public understands that they are also the cause of the problem is not clear. The great economic progress and improvements in standards of living for much of the world’s population through electrification and introduction of the internal combustion engine in the twentieth century was enabled by the exploitation of the earth’s bountiful store of solar energy in the form of fossil fuels: oil, coal and natural gas. The conversion of fossil fuels to useful energy has not however been without consequences. Chief among these has been the introduction of excessive amounts of green house gases into the atmosphere. Fossil fuels, however, remain in use today and will be, according to most estimates, available for use into the future. Most observers agree that fossil fuels can continue to contribute to future energy supply if new technologies for converting fossil fuels to electricity, which do not result in additional greenhouse gas emissions, can be implemented.

Faced with three intertwined issues tied to energy conversion and use most studies have come to the conclusion that the solution is to move ahead on a number of fronts.

Firstly, energy use must be made more efficient and rational. Immediate reduction of electricity demand creates immediate and long term economic benefits as well as reduces green house gas emissions no matter what the sources of power.

Secondly, the exploitation of alternative or renewable energy sources where possible is a rational and logical policy widely supported and supportable by public policy.

Thirdly, the implementation of new clean electricity technologies, a new generation of nuclear power plants where locally acceptable, and clean coal with carbon sequestration where economically feasible, remains a necessity to balance any reasonable estimate of global demand and supply scenarios.

The goal of today’s conference Forum on Fostering Investment in Cleaner Electricity Production from Fossil Fuels is to advance the body of knowledge in this area. The speakers, from around the world, will share their experience and expertise in the areas of technology, finance and public policy. It is my desire as the forum chairman that this vital information be as widely disseminated as possible and I urge you to share the information you gather here with your colleagues in your home countries, in particular those who influence and make public policies in this area. As an old engineer I long ago observed that the solution to many of our problems involving energy conversion technologies are political rather than technical. Thus, I believe, in the case of many of the issues in the implementation of clean coal technology, the solutions will require active political engagement. The members of this committee have an important task as leaders

in the industry to take the right message back to their governments. As former U.S. Federal Reserve Bank Chairman Alan Greenspan admonishes “Leaders who do no do so are followers.”