



Foreword

All the forecasts of world energy demand for the next 50 years point towards very significant increases in consumption. A big share of this new demand will come from areas of the world where existing energy consumption is now relatively low in comparison with the OECD countries, and which are becoming increasingly integrated in the global economy. As energy demand grows, all societies worldwide will face a real challenge in providing the energy needed to feed economic growth and improve social development, while enhancing protection of the environment.

In this context, it is not difficult to conclude that it is the responsibility of policy makers to establish energy policies that meet that challenge while being robust enough to cope with the risks associated with the globalisation of the world economy. Diversification, security of supply, protection of the environment and technology development are key elements of any energy policy that tries to put into the markets enough energy at a reasonable price in a sustainable way.

Among the different energy sources that are contributing significantly to world supply none appears to policy makers as more complex than nuclear energy. The economic, technological and social implications of nuclear power makes any decision something that goes far beyond the normal actors of the market place.



The serious questions our societies are asking about nuclear energy include the safety of nuclear installations, the ultimate disposal of long-lived radioactive waste, nuclear energy's potential to help reduce greenhouse gas emissions, the economy of the whole fuel cycle, especially in liberalised electricity markets, and the non-proliferation of nuclear weapons.

The OECD Nuclear Energy Agency (NEA) has worked in many of these areas for more than 40 years. The NEA methodology calls for having most of the main world specialists in every field work together to provide a collective analysis in an objective way as a fundamental input for governments.

The work of the NEA is based on the scientific and technical analysis of the various components of the entire nuclear fuel cycle. This base of science and technology is the solid ground on which policy makers can establish nuclear and energy policies, once the social factors have been incorporated.

It is very difficult to describe in a short publication all the aspects that need to be considered to establish a robust nuclear policy. Yet, I think that this NEA publication can help policy makers in fulfilling their responsibilities, and other readers in better understanding what are the realities surrounding one of the most impressive technologies of the past 60 years; a technology that is based on something we cannot see, the internal forces that link together the basic physical entities, which form that smallest component of matter, the atom.

To the extent to which the atom can be mastered without unacceptable risk, the contribution of nuclear energy to the sustainable development of our societies is on the table.



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