Twenty-second General Conference - Highlights of the IAEA Director General's Speech

In his address on the opening day of the 22nd IAEA General Conference, Dr. Eklund departed from presenting the traditional balance sheet of the Agency's work and spoke about the status of nuclear energy in the world today sharing some of his concerns about certain trends in this field.

As regards the Agency he reviewed principally its 1979 budget of $65,177,000 which after a series of reductions still shows a 27% increase over that of 1978.

This increase was mainly due to three reasons:

1. the move of the IAEA to its new headquarters so generously provided for by the Austrian authorities
2. the increase in the Agency's safeguards' responsibilities especially as a consequence of the implementation of Euratom safeguards
3. inflation and decline in the value of the dollar in relation to the Austrian Schilling. Seventy-six per cent of the Agency's expenditures are in Austrian Schillings.

Dr. Eklund also reviewed the estimated production of electricity from nuclear power stations in the past year in countries with free market economies. He recalled that in 1955 the installed nuclear capacity in the world was only 5 MW, in 1967, 10 000 MW and today 100 000 MW with some 200 000 MW under construction or in an advanced stage of planning.

This extremely positive picture should be balanced against the levelling off of orders in the last 2 years – this trend was also reflected in the decline of orders for conventional power plants and was partly the consequence of the recession and the lower rate of increase in energy consumption due to energy conservation measures.

This recent trend and the fact that nuclear energy no longer seemed so attractive in some countries, led the leaders of the western world to declare at the Bonn summit meeting in July that:

> "the further development of nuclear energy is indispensable and the slippage in the execution of nuclear programmes must be reversed".

In analysing how this situation arose, one should remember that the century preceding the Second World War has been called the golden age of engineering and the spirit of this period was characterized by the expression: "the difficult we do immediately, the impossible takes a little longer". During the last twenty-five years this confidence has waned and belief in the benefits of technical development has changed in some quarters to mistrust and questioning of the necessity and usefulness of further applications of science and technology. Technology itself is looked upon in some circles as a malevolent force. In some countries, governments, although democratically elected, are prevented through the activity of pressure groups from introducing major technological changes in the society.

It should perhaps also be said at this stage that this phenomenon is particularly evident in the highly industrialized affluent countries with market economies. The developing countries with more than two thirds of the world's population are still primarily concerned with how to gain access to modern technologies on the best terms and how to use technology to further their economic development and self-reliance. Countries with centrally planned economies also continue to regard science and technology as benevolent forces. In this context it is useful to recall what Lenin said about the urgent need for and importance of electricity production for the advancement of society.

Although everybody wishes to benefit from the conveniences which electric energy makes available, further development of it is considered unnecessary by some groups. Very little thought is given to the means which must be provided to maintain the standard of living in the developed countries, not to mention what is needed to raise the standard of living in the developing countries. Very little thought is given to the question of how to secure food and water for a population which will probably reach the 6000 million level by the end of this century. Hiding behind terms like "appropriate", "soft" or "intermediate" technologies, these wishful thinkers would have a world where the developing countries can make do with windmills while the developed countries would content themselves with zero growth. Let there be no mistake: non-conventional energy sources might be the best solution to energy supply in small rural communities, but they cannot turn the wheels of industry of a country.

In this turmoil of unclear thinking, nuclear energy has become the symbol of the "hard" technology which non-believers in technical development are now so vigorously criticizing. One can see two explanations for this.

One is that the consequences of a slow-down or halt in the planning and construction of nuclear power stations are not immediately felt. The difficulties will only show up six to ten years later in the form of shortages of electrical energy for which the utilities and electricity boards will then be held responsible. Part of the difficulty lies in the different time-frames in which the scientist or engineer, as opposed to the politician, must operate. It is clear, for instance, that advocates of a decision to stop using artificial fertilizers, one of the greatest polluting agents of our surroundings, would never get much support because the consequences would be felt within a year's time and their responsibility for such a decision being taken would still be fresh in the public mind.

The other reason why nuclear energy has become a scapegoat lies in the conscious or unconscious association in most people's minds between the peaceful uses of nuclear energy and nuclear weapons.

There has so far been no case where a country went about developing nuclear explosives by constructing a nuclear power plant. It should also be noted that in the 10-year period from 1945 to 1954, three countries developed nuclear explosives. Between 1955 and 1964, another two countries, and between 1965 and 1974, one country. In this time span the nuclear capacity in the world grew from 5 MW in 1955 to 54 000 MW in 1974 in 19 countries. From this alone, one could conclude that there is no relationship between the expansion of nuclear power and the development of nuclear explosives.

Further, the Non-Proliferation Treaty (NPT) has now been ratified or acceded to by 104 countries. Non-nuclear-weapon States party to NPT promise not to acquire or develop

nuclear weapons and to accept IAEA safeguards to verify their adherence to this commitment.

The Non-Proliferation Treaty represents the fundamental basis for all the deliberations around the proliferation problem. This solemn undertaking, together with the safeguards provisions, is the best achievable guarantee that peaceful nuclear development will not lead to the proliferation of nuclear weapons.

In addition some countries, like the US, were requiring that countries receiving equipment or nuclear material from the United States should either be a partner to the NPT or accept full scope safeguards. If all supplier States adopted this policy, there would be a universal non-proliferation regime and many problems would be eliminated.

The Director General then referred to the results of the International Nuclear Fuel Cycle Evaluation (INFCE) which should provide a timely input to the Second NPT Review Conference in 1980. While international consensus on some aspects of the control Articles would be crucial to the future successful implementation of the Treaty, one should not lose sight of the fact that for the majority of countries attending that Conference, the implementation of Article IV on international co-operation and Article VI on disarmement are the most important questions.

This concern has recently been expressed in the final document of the UN General Assembly's Special Session on Disarmement held in June this year.

It was most unfortunate said Dr. Eklund that all these measures taken to control the peaceful fuel cycle tend to deflect attention from the **real** threat to peace represented by the existing nuclear weapons arsenals that continue to grow steadily.

The nuclear industry needs what it had in the 1960s – confidence in clear governmental policies and in the supplies of fuel and services from other countries where necessary; confidence that sites can be found and plants built without interminable and expensive legal complications.

In ending, Dr. Eklund underlined that the technical assistance programme forms a cornerstone of the Agency's work and he appealed to Member States to support it. He noted that the programme's target has been set at $8.5 millions whereas the average cost of a single nuclear plant is of the order of $1 billion.