

## GENERAL SCIENCE

# Building a Peaceful World

To benefit all mankind, it is important not only to understand the problems of nuclear power, but it is essential to train nuclear scientists in the developing countries.

*Excerpts from the statement by U Thant, Secretary General of the United Nations, at the Third United Nations International Conference on the Peaceful Uses of Atomic Energy, Geneva.*

► STATESMANSHIP and science join hands in the United Nations not only in seeking to prevent war and in re-directing human energies toward peaceful pursuits in general. They must, and do, join too in the positive task of building a world in which the growing needs of all countries may be met through constructive and co-operative endeavours.

Statesmanship and science under the auspices of the United Nations thus unite in the vast adventure of collaboration for economic and social development to which so many of the most challenging efforts of the UN family of organizations are now devoted.

This is the concerted effort against poverty, against hunger and disease, against illiteracy and want. This is the struggle that should absorb the energies of the world in a relentless quest toward the achievement of social decency and justice for all.

A historic step, of particular interest to participants in this conference, was taken just over a year ago. I refer to the treaty banning nuclear weapons tests in the atmosphere, in outer space and under water,

that was signed in Moscow at a ceremony I was privileged to attend.

The unlimited potential significance of diverting efforts and resources from weapons testing to the peaceful applications of atomic energy is the very foundation of your presence and your work here.

Nuclear power is a key issue for the long-term development of over half the world. If per capita consumption of electricity in the developing areas in one day is to compare with that now found in the major industrialized nations, the amount of additional power required will be so vast as to dwarf even the earth's immense reserves of fossil fuels and hydroelectric power.

Surely, in the long run it is, as far as

we can see today, only nuclear power—including perhaps power developed from fusion—that can fill these immense requirements.

In this realm, you have indeed come a long way, and I am confident that a fuller understanding of the problems involved will emerge from this conference.

When the first conference on the Peaceful Uses of the Atom gathered here in 1955, the world's first nuclear power station had been operating for only a year. Owing to fears of an impending fossil fuel shortage, a forced development of nuclear power was anticipated.

The second conference in 1958 was more fully aware of the vast technical and economic difficulties involved in translating this dream to reality. That conference, moreover, coincided with the discovery of additional conventional fuel resources, which in a sense mitigated the urgency of the problem by eliminating, for the time being, the fear of immediate serious shortages.

In the long run, however, the problem of sources of energy remains as basic for economic development as ever, and over  
(Continued on page 190)

## GENERAL SCIENCE

# Age of Nuclear Power

*Excerpts from statement at Geneva by Dr. Glenn T. Seaborg, head of the U.S. Delegation to The Third United Nations International Conference on the Peaceful Uses of Atomic Energy.*

The age of nuclear power has now begun.

With particular reference to the situation in the United States, the principal points I would like to make are these:

1. The operating experience we have had with more than a dozen prototype and demonstration nuclear power plants of several different types and in sizes up to approximately 200 megawatts has been excellent.

2. Projections of the cost of power from water-cooled plants in sizes of 500-to-600 megawatts which can now be purchased on a firm-price basis with performance warranties indicate that nuclear power is now in a position to offer competition for an appreciable share—perhaps as much as half—of the new steam-electric capacity to be added to the U. S. utility network in the decade or so ahead.

3. We in the U. S. Atomic Energy Commission have revised upward the projection of nuclear power plant construction we made less than two years ago. At that time we estimated that some 40,000 megawatts of nuclear capacity would be in operation in the United States by 1980. Our new figure for 1980 will be about 70,000 megawatts.

4. Major changes have just been made in the U. S. Atomic Energy Statute to permit, and in due course require, private ownership of the basic fuel materials used and produced in nuclear power plants. The new Statute, known as the Private Ownership of Special Nuclear Materials Act, essentially completes the transition that began a decade ago when the first steps were taken to convert what was then a Government nuclear power project into an independent nuclear power industry.

• Science News Letter, 86:178 Sept. 19, 1964



LEADERS OF U.S. ATOMIC DELEGATION AT GENEVA—Before a plenary session convenes, Dr. Glenn T. Seaborg, Chairman of U.S. Atomic Energy Commission and head of the U.S. Delegation (center) confers with Capt. Edward R. Gardner, executive director of the U.S. Delegation (leaning over) and Dr. Donald F. Hornig, President Johnson's Special Assistant for Science and Technology (right front).