

GENERAL SCIENCE

Limit Nuclear Testing

Grand Jury poll of presidents of scientific and technical organizations shows majority in favor of limit or halt in tests of hydrogen bombs by all nations.

► THE QUESTION of continuing atomic weapons testing, posed to a panel of presidents of America's scientific and technical organizations, shows that this group of experts by a vote of 59% favors either halting or limiting the testing of atomic or hydrogen weapons of all nations.

In this Science Service Grand Jury inquiry, polled before the current political controversy, the vote for limitation, 44%, exceeded the vote for continuation, 41%, while 15% voted for a complete halt.

The leaders of American science were asked to express their opinions in view of the following facts:

Both American and British scientific inquiries on the dangers of radiation indicate that the amount of radiation increase caused by nuclear weapons testing at the present date is not larger than, in general, the background radiation due to medical uses.

In their answers, they were guaranteed they would not be identified individually by name, position or otherwise. Invited to the jury were 52 heads of representative associations, of whom 34 returned ballots.

The vote was as follows: The testing of atomic and hydrogen weapons by all nations should be halted, 5 or 15%, limited, 15 or 44%, continued, 14 or 41%.

In comments accompanying their votes, the experts amplified and explained their opinions.

One expert, who voted to halt the testing, declared: "A further order of magnitude of destruction, the theoretical aim of the testing, is meaningless."

Another, who voted to halt, commented: "The use of such weapons is contrary to the best interests of civilization. Consequently all nations should halt all tests and reach agreement to never use them as weapons of war."

Another pro-halt comment was: "Action by the United States would give evidence of our opposition to any and all atomic wars to other nations with whom we should work to get a general halting of development of atomic weapons."

Among the comments by experts voting to continue tests were:

"We must know the effects of such weapons for our own protection. The more that is known about their destructive powers, the less likely that any aggressor will invite their use against him."

Another pro-continuance opinion: "Man must experiment to understand nature. Tests should continue until evidence indicates that resulting radiation is dangerous."

"The abolition of testing," another expert said, "is not a step toward the banning of these weapons, and proposals to do

so seem merely to indicate an ostrich-head-in-the-sand complex."

Another expert commented: "The tests should be limited so that the over-all fallout does not exceed an average exposure to any population of more than a maximum of 2 roentgens over a 30-year period. Only by studying the consequences of a number of explosions will it become possible to know more adequately what amounts, kinds and distributions of fallout are to be expected from explosions of a particular size and under particular conditions. Such information is vital to national security and to civil defense."

Several experts agreed that the United States should not stop testing unless other nations, especially Russia, take similar action.

Further studies leading to knowledge of radiation levels that can be safely tolerated by the human race and a following of the radiation levels in all parts of the world were advocated by a pro-limitation expert.

Several experts emphasized the difference in opinion among even the best informed authorities on the effect of any increase in

radiation upon human life expectation. Some favored limited tests to obtain more scientific information.

It was recognized by several that under present lack of international control of atomic energy it would be unrealistic to expect any government to stop such testing for weapon development.

One expert favored not only limitation of test explosions but limitation of the programs for the industrial use of radioactive substances. Another declared that any increment of radiation would be dangerous even if no greater than the existing background radiation.

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TECHNOLOGY

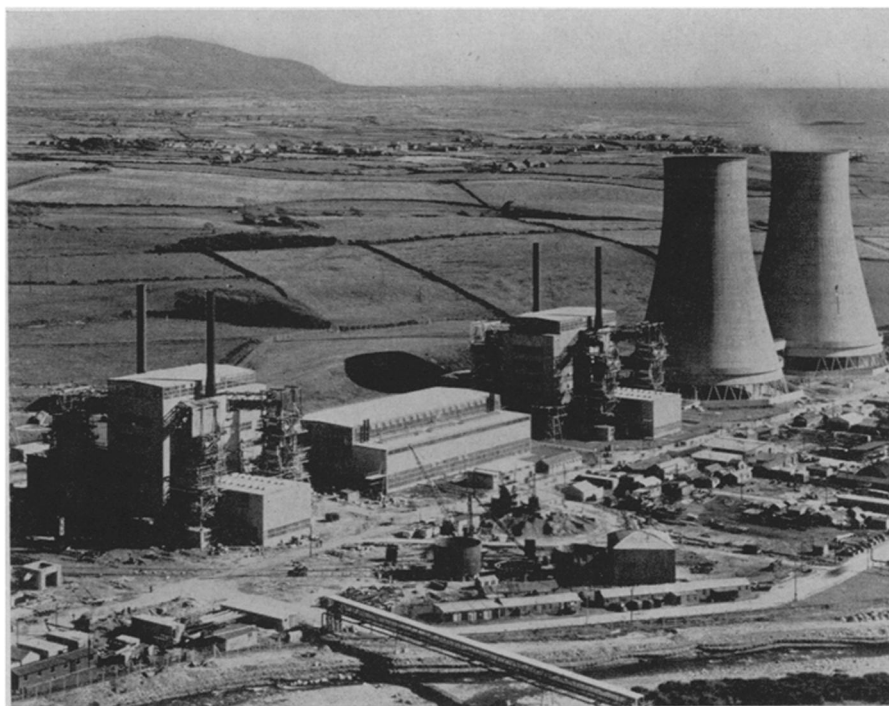
Atomic Electricity Now Part of Britain's Grid

► ELECTRICITY generated by splitting atoms is now part of Britain's national electricity grid.

Queen Elizabeth II pulled the lever that diverted power from Calder Hall, the world's first large-scale atomic power station, into the domestic system. The station is designed as a dual-purpose plant to produce both plutonium for military use and power from nuclear energy on an industrial scale.

It will feed more than 60,000 kilowatts of power into the grid, and is a fore-runner of four identical plants.

Science News Letter, October 27, 1956



ATOMIC POWER STATION—The world's first large-scale atomic power station, Calder Hall, Cumberland, England, is now pouring some of its energy into Britain's national electricity grid. The power station and reactors are seen photographed from the top of one of the filter towers of Windscale, nearby plutonium factory housing two atomic piles.