

## ATOMIC POWER

Canada's first atomic power station, known as NPD (Nuclear Power Demonstration), will go into operation in 1959, sending about 20,000 kilowatts of electricity into the power distribution lines of the Hydro-Electric Power Commission of Ontario.

It is being built near the hydro-electric power station at Des Joachims, on the Ottawa River, about 150 miles west northwest of Ottawa--some 20 miles from the Chalk River establishment of Atomic Energy of Canada Limited.

Detailed design of the reactor for the station, which is based on the heavy water technology pioneered at Chalk River, is being done by Canadian General Electric Company Limited, at its plant in Peterborough, Ontario. This company is contributing \$2,000,000 towards its cost and is responsible for the provision, construction, installation and testing of all the equipment in the station. In other words, Canadian General Electric is also acting as the prime contractor for the project.

The Hydro-Electric Power Commission of Ontario is doing the engineering for the conventional part of the station (steam generator, turbine and electricity generator) and is pay-

ing for this equipment. The Commission has provided the station site and will operate the plant as part of its Ontario power system.

Atomic Energy of Canada Limited is supplying the funds and the nuclear information for the reactor. Atomic Energy of Canada Limited made available a number of key personnel with considerable Chalk River experience for the Civilian Atomic Power Department set up by Canadian General Electric at Peterborough.

The NPD station will not produce electricity at a cost as low as that produced by conventional power plants because of its experimental and pioneering nature. It will, however, provide valuable technical data and information on the economics of this type of plant. This information, which will be available to power companies throughout Canada, is needed for the design of and for estimating the costs of larger atomic power plants. A preliminary design and feasibility study for a large power reactor (in the range of 100,000 to 200,000 kilowatts) is being carried out at Chalk River by a Nuclear Power Branch which consists of Atomic Energy of Canada Limited staff and representatives of various power companies across the country.

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**PERMANENT THEATRE:** His Excellency, the Rt.-Hon. Vincent Massey, C.H., Governor General of Canada, will lay the foundation stone of the Stratford Shakespearean Festival's new permanent theatre on January 26.

The permanent theatre which will replace the former theatre tent for the 1957 drama season, has been under construction since September this year. The canvas walls and roof of the tent are being replaced by a steel and concrete structure built around the existing auditorium and apron stage. A gallery is being added which will increase the seating capacity to over 2,100 and a promenade, offices, dressing rooms and back stage space will also be included.

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**ARCHAEOLOGICAL FIND:** A nameless Indian farmer in North America tossed away a lima bean pod, a squash and the rind of a gourd. That was 82-centuries ago. He may not have been the world's first farmer, but now he has become the first farmer known to our modern world. He gathered his crops some four thousand years before the Pyramids were built.

An archaeological expedition headed by Dr. Richard S. MacNeish, Chief Archaeologist of the National Museum of Canada, searching for the birthplace of world agriculture, uncovered the finds in a cave in the state of Tamulipas near Ocampo, in north-eastern Mexico and, thereby, the earliest record of man as a farmer. They also brought home evidence that some

thirty-five hundred years later Indian farmers were increasing the size of their corn by plant cross-breeding (hybridisation) and cultivating cotton. About the year 200 A.D. their descendants--relatively modern farmers--were smoking filter tip cigarettes. Of course, they were growing the tobacco.

The collection of plants and seeds, remarkably preserved and easily identifiable, were sent to the Randall Laboratory of Physics, University of Michigan, where dates were supplied by Professor H.R. Crane. The determinations were sponsored by the Guggenheim Foundation.

Announcing the finds, Resources Minister Jean Lesage termed them "a startling new light on the development of agriculture and of the history of man in North America. They show," Mr. Lesage said, "that the Indian's greatest contribution to his civilization and ours lies in the field of agriculture. These finds indicate that, so far as our present data go, Indian farmers not only contributed the most important food plants--potatoes, corn, beans--but they appear to have been the first to domesticate them. What we may learn from the foods that have been found may help increase the productivity of the world's food supply. The fact that the materials were found in Mexico by a Canadian-led expedition in which United States scientific bodies took part, gives this knowledge continent-wide significance."