

## PRIVATE AND PUBLIC INVESTMENT

Mr. Wallace McCutcheon, Minister of Trade and Commerce, recently announced the results of his Department's annual survey of capital-spending intentions for 1963. These results are contained in the report "Private and Public Investment in Canada - Outlook 1963".

Capital expenditure plans for all sectors of the economy, as outlined in this report, involve outlays in 1963 of \$9,088 million. Such a capital programme would be the largest on record, exceeding the previous peak of \$8,738 million of 1962 by four per cent.

### BUILDING

Expenditures for new construction are expected to total \$6,060 million, an increase of four per cent over the \$5,842 million spent for this purpose in 1962. Within the total, outlays for non-residential construction are likely to rise by more than five per cent, while house-building activity may continue at about the same rate as last year. Outlays for machinery and equipment are expected to total \$3,028 million, five per cent more than the \$2,896 million spent last year.

### BUSINESS INVESTMENT

A higher level of business investment is expected to account for \$260 million of the \$350 million increase anticipated in total capital expenditures. Increased outlays for new electric-power generation and gas-distribution facilities provide an important part of the additional strength expected in 1963. Such expenditures will increase by about 30 per cent. Capital spending for new manufacturing plant and equipment is also expected to show a further significant increase in the current year. Higher levels of expenditures in the paper, chemical and equipment-

producing industries account for much of the increased strength in this sector. Present plans also call for a stepped-up capital programme in the transportation and communications industries. The only areas of business investment where intentions suggest a lower level of spending in 1963 are the mining industry and office buildings.

Capital outlays for new government facilities and for non-profit institutions are also expected to be higher in 1963, though the rate of increase will be much less than that of last year. Increased expenditures of universities and hospitals, and for provincial and municipal government improvements account for the increase.

### PROVINCIAL INTENTIONS

In addition to investment plans for the country as a whole, the report provides information on capital-spending intentions in the provinces and the major metropolitan areas. The greatest variations from the 1962 capital programme occur in British Columbia and Newfoundland. In British Columbia, an increase of 21 per cent is expected, with sharply-increased outlays for new power facilities and additional pulp-and-paper making capacity. In Newfoundland, lower levels of expenditures for the Labrador iron-ore developments will result in a decline of 26 per cent in capital spending. Changes in the other provinces are expected to be moderate, ranging from a 12 percent increase in Manitoba to a two percent decline in Prince Edward Island.

Mr. McCutcheon said that the further increase planned in capital spending for 1963 reflected the continued confidence of businessmen in the market outlook. In addition, the larger capital programme gives promise of another active year in construction and equipment-producing industries.

\* \* \* \* \*

## HEAVY-WATER PLANT FOR CANADA

Mr. Gordon Churchill, Chairman of the Committee of the Privy Council on Scientific and Industrial Research, has announced that the Government is prepared to consider detailed proposals for the construction in Canada of a plant for the production of heavy water. Atomic Energy of Canada Limited has invited Canadian companies that have already expressed an interest in establishing such a plant to submit detailed proposals.

The Government has not undertaken to accept the most advantageous proposal, or any proposal as yet, but has indicated that proposals might be based on the assumption that it would underwrite the sale of up to 1,000 tons of heavy water at a delivery rate of approximately 200 tons *per annum* over a five-year period beginning in 1965-66.

### TECHNICAL NOTE

In nuclear-power stations, such as the Nuclear Power Demonstration Station near Rolphton, Ontario, which began producing electricity last June, heavy water is used as a "moderator" to slow down

neutrons given off when uranium atoms split. Heavy water will be used in the Douglas Point Nuclear Power Station now under construction near Kincardine, Ontario. India has announced it will build a station similar to the Douglas Point Nuclear Power Station if satisfactory arrangements can be made with Canada.

In the Canadian nuclear-power stations, heavy water is also used to transfer the heat generated in the reactors to the steam generators.

The Nuclear Power Demonstration Station uses a total of 80 tons of heavy water and the Douglas Point Nuclear Power Station will use 200 tons.

The uranium fuel in these plants is surrounded by heavy water. When uranium atoms split and give off neutrons, the heavy water slows them down to a speed at which they will split other uranium atoms and thus make possible the continuous release of heat. The heat is used to make steam which drives the turbine generator that produces electricity.

Whereas ordinary water consists of hydrogen and oxygen, heavy water consists of a heavy form of hydrogen (called "deuterium") and oxygen. Heavy water, which is about 10 per cent heavier than

(Over)