No season to be jolly

David Spurgeon reports from Ottawa on recent nuclear developments in Canada

CANADA'S nuclear programme has been in something of a turmoil lately. Certainly for officials of Atomic Energy of Canada Ltd. (AECL), the Crown corporation charged with nuclear R&D, exports and technical aid, the season has definitely not been jolly—quite the reverse. The opponents of nuclear power have stepped up their attacks in public, in AECL's eyes sometimes quite unfairly. The auditor-general has questioned their accounts. And that has led the House of Commons' Public Accounts Committee to investigate what looked like highly unusual and extraordinarily large payments to agents in such unlikely places as Panama and Liechtenstein; these had apparently been made as commissions on CANDU reactor sales to countries like Korea and Argentina, which many thought should never have been sold reactors at all.

The auditor-general's report then added insult to injury by revealing that AECL lost \$100 million on one of these deals, though it was later disclosed that this loss could be reduced to \$25 million by yet another sale now being negotiated with the same country, Argentina. It was shortly after all this appeared in front-page newspaper headlines that the Minister of External Affairs, Mr Donald Jamieson, announced a new nuclear export policy which because of its stringent requirements for safeguards will probably restrict overseas sales of reactors in the future.

This was less a direct result of the foregoing events, however, than a product of India's detonation of a nuclear device in May, 1973, with the help of a Canadian research reactor. But it has already had a paradoxical effect: since Pakistan would not agree to the terms of the new policy, Canada's nuclear aid programme with that country will be cut off, in spite of the earlier contention of the Prime Minister, Mr Trudeau, that Canada should not withhold nuclear technology from developing countries. Mr Jamieson has admitted to the press that there is a real possibility that the nuclear policy decision will cause electrical brownouts in Karachi.

To some people, all this seems to strengthen the suggestion made not long ago by John Shepherd, executive director of the Science Council of Canada, that AECL should give up its export sales programme of CANDU reactors and concentrate on exploiting

what could be a huge domestic market. To do this properly, he proposed that AECL should revert to its R&D function and help form a consortium with private nuclear industry and the provincial power companies.

Long and complicated

The story of the commissions on CANDU sales is a long and complicated one not yet revealed in its entirety to the Canadian public. One commission, on the Korean sale, amounted to \$18.5 million. The company involved, United Development Inc. (UDI), reported that it paid \$1.3 million of this to the Triangular Trading Company of Panama as a portion of the \$8.1 million it claimed for expenses in the deal.

UDI, whose headquarters are also listed as being in Panama, also paid fees totalling more than \$1 million to firms in Hong Kong and Frankfurt for technical and economic studies of CANDU compared with other nuclear systems. AECL agreed to pay the fees after it had renegotiated the agent's contract and reduced the commission from about 5% to 1%, plus documented expenses.

UDI is headed by Shaul Eisenberg of Tel Aviv, and it was the inadequate

documentation for the \$8.1 million expense account paid to him that prompted the auditor-general, J. J. Macdonell, to report it to parliament. Mr Macdonell made it clear that AECL officials tried to persuade him not to make the matter public, and AECL's chairman, Ross Campbell, admitted this but said he was concerned not about the facts but about the innuendos that would damage AECL's reputation and those of the companies it dealt with. In fact, a special study of AECL's financial management on behalf of the auditor-general was strongly critical of its overall handling of expenditures. This study, unrelated to the Korean sale, was part of a continuing review of Crown corporation's management.

The second commission case involved a joint sale by AECL and Italmimpianti of a CANDU reactor to Argentina. The Italian firm obtained an agent for this sale and then asked the Canadian government to pay half the cost. Canada responded by having \$2.4 million deposited into a Swiss bank account held by a trading firm in Liechtenstein, as requested, but never learned the name of the agent or whether it was the Liechtenstein firm.

The Italian firm stalled on providing the answer, moving the Canadian Energy Minister, Alastair Gillespie, to wonder publicly if "there may be Canadians involved." He said the Royal Canadian Mounted Police had been asked to find out who received the \$2.4 million, if they could.

Fuelling a CANDU reactor: no shutdown is needed

Exports restricted

The new nuclear policy announced by Mr Jamieson just before Christmas means that Canada will restrict its exports of nuclear equipment and materials to countries that either have signed and ratified the Nuclear Non-Proliferation Treaty or have "full-scope" nuclear safeguards. In addition, these countries will have to accept the kinds of additional bilateral safeguards announced by Canada two years ago. The alternative to adherence to the NPT means that a country must accept equivalent international safeguards on its complete nuclear programme (outside military aspects if it has nuclear weapons already). This is what Pakistan refused to do.

Announcing the policy at a press conference, Mr Jamieson claimed that Canada now has the toughest requirements imposed by any nation supplying nuclear materials. He said Canada decided on the policy only after it had failed to persuade other members of the so-called London Club to take similar steps together. Canada now hopes that these other nuclear-supplying countries will follow its lead, which is designed to prevent the proliferation of nuclear weapons. And he suggested that recent tightening of policies by the United States and France was a hopeful sign.

Canada's new policy is seen also as a reinforcement of a safeguards policy announced two years ago, which some uranium customers have not been observing closely. A number of countries, including Japan, Switzerland and the EEC countries, have not yet completed all the required safeguards. After allowing two six-month extensions of supplies, the Canadian government has announced that it will cease uranium shipments at the end of December, 1977, to force compliance with the policy. Mr Jamieson said he hoped that by that time the safeguards would be in place and supplies could continue uninterrupted.

In notes distributed before his press conference, Mr Jamieson said.

Nuclear export policy already requires binding assurances that what Canada provides will not be used for explosive purposes. Existing policy, however, does not cover what a country receives from other suppliers or what it might do on its own. The new policy will close this gap. We will have, therefore, assurance by treaty that Canada's nuclear customers will have been selected from amongst those countries which have made a clear and unequivocal commitment to the non-proliferation of nuclear weapons.

Mr Jamieson added that Canada recognises the legitimate energy requirements of its trading partners, but is determined to do all it can to avoid

Don Jamieson, External Affairs Minister

contributing to nuclear weapons proliferation. It was for that reason that Canada had unilaterally decided to strengthen further her safeguards requirements. As in the past, "We are prepared to accept the commercial consequences of being clearly ahead of other suppliers. This is the price we are prepared to pay to curb the threat to mankind of nuclear proliferation." □

Holland's nuclear problems

Casper Schuurings reviews a troubled year for nuclear power in the Netherlands

IF it had not been so before, nuclear energy became a major political topic in the Netherlands in 1976. The issue was alive as early as January when debates on the subject led to a government decision to postpone definite planning for three 1,000 MW nuclear power plants until after the next elections in May 1977. The Netherlands already has two existing smaller plants, of 447 MW and 54 MW.

Overcapacity in generating power and uncertainties regarding the nuclear fuel cycle were among the main reasons for the move, but political factors were important too. The small Radical Party (PPR), which takes part in the country's coalition government with Labour and Christian Democrats, has two ministers and an under-minister very much opposed to nuclear energy—one of whom is Fokele Trip, the Minister for Science Policy.

Labour, too, has doubts about nuclear power. The Christian Democrats are less perplexed. One of their

ministers, for Economic Affairs, had planned the three nuclear plants in his energy memorandum of September 1974. Construction of the first was to start in 1976. Following the government decision to postpone the building of the plants, a declaration signed by 1,200 scientists covering a range of disciplines expressed their concern at the rapid expansion proposed for nuclear energy—as 2,300 colleagues of theirs had done earlier in the United States. Published at the end of January and originally addressed to the government, the declaration was then directed to parliament, which was to discuss the memorandum in February. With the decision on additional nuclear plants pushed to the next government, however, the parliamentary discussions lacked excitement.

Calm doesn't last

The calm was not to last. A conflict soon arose over a credit guarantee to be given by the government for the

building and selling of components for two power plants in South Africa. The work was to be done by a group of industries participating in a consortium together with American and Swiss industries. The government had already indicated in mid-1975 that an export licence would be given, but in parliament a vote of censure was just passed covering exports of nuclear material and equipment to countries that had not signed the Nuclear Non-Proliferation Treaty. South Africa is such a country.

The consortium was originally to have built two reactor vessels; but with a change in arrangements the vessels were to be built by General Electric and the Dutch industries could still take part in the work, for which only an export guarantee was then necessary. Discussion went on so long that at the end of May the deadline passed and a French consortium won the South African order. The Dutch government itself just survived a long and critical period, and relations between government and industry sustained a good deal of damage.

During the summer the Steering Group for Energy Research issued its second report. This concluded that conservation of energy should form a considerable part of Dutch policy, and