

Reactors for China

US agreement signed, not sealed

Washington

PRESIDENT Ronald Reagan's success in negotiating a nuclear sales agreement with the government of the People's Republic of China has lifted the spirits of the United States' embattled nuclear power industry. But its euphoria may be premature. For one thing, it is far from clear just how many US reactors the Chinese will eventually purchase. For another, the agreement has yet to be finalized and will face serious hurdles in Congress.

Before Congress gets a chance to see the small print of the agreement initialled by President Reagan in Beijing, the document must be cleared by a number of federal agencies, notably the Nuclear Regulatory Commission and the Arms Control and Disarmament Agency. Their job is to ensure that the agreement complies with the law on nuclear transfers enshrined in the Atomic Energy Act and the associated Non-Proliferation Act. But there is little question of either agency objecting to the agreement, which is the fruit of six rounds of talks held over more than two years. A senior administration official insisted last week that the agreement complied fully with both laws.

The agreement will have a much more difficult time in Congress, however, where it must remain for 60 consecutive legislative days before it can take effect. That means that even if it enjoys an untroubled passage through the House of Representatives and the Senate, it cannot come into force until the end of the summer. An untroubled passage is unlikely. The agreement will face considerable opposition from an unusual alliance forged between congressmen who worry about nuclear proliferation and those who object on ideological grounds to any deal with communist China.

One reason for opposition to the agreement is China's ambiguous record on proliferation. Washington's Nuclear Control Institute has been noisily reminding Congress that China is one of only two nuclear power states (the other is France) not to have signed the Non-Proliferation Treaty. The institute has also complained of reports that China has helped Pakistan's bomb programme, and provided enriched uranium to South Africa and heavy water to Argentina.

Paul Leventhal, the institute's president, argues that because of China's symbolic importance in the less developed countries, the United States should seek a model agreement rather than content itself with obtaining minimum compliance with US law. A "good" agreement, the institute maintains, should include a written guarantee from the Chinese that they will

not help other nations to acquire nuclear weapons, and a firm commitment to use its civilian nuclear power programme for strictly non-military purposes. China should also agree to prior US consent to the separation of plutonium from US fuel or from any fuel used in reactors supplied from the United States.

Administration officials have made it plain that China has indeed agreed to seek prior US consent, one of the thorniest requirements of the Atomic Energy Act and one that had threatened to scotch the agreement until the very last moment (see *Nature* 19 April, p.677). It has also promised not to help other countries to manufacture nuclear weapons and to apply International Atomic Energy Agency safeguards to its own nuclear exports. But many in Congress are concerned by administration hints that agreement on the prior consent issue had been reached through "clever" drafting designed to appease Chinese national sensibilities.

The degree of political opposition will depend largely on what is contained in the full text of the agreement initialled in Beijing. Under present law, Congress

Poland

Jaruzelski urges discipline

MORE spending on science from 1986 onwards, increased cooperation with scientists in capitalist countries and annual meetings between leading scientists and politicians are among General Jaruzelski's recommendations for the development of Polish science. Addressing an eve-of-Mayday meeting at the Staszic Palace in Warsaw, the headquarters of the Polish Academy of Sciences, Jaruzelski delivered what was, formally, a plea for scientists to come to the rescue of the economy in the current socioeconomic crisis. His speech, however, can equally well be considered as a preview of the forthcoming legislation that will revise and update both the statutes of the Academy of Sciences and the research institutes belonging to the various "production" ministries.

Thus, although Jaruzelski noted that "for understandable reasons" the academy focuses its attention on basic research, his comment that "basic sciences are foundations for building practical solutions" suggests that priority in research funding may still go to those projects expected to have a major economic pay-off. Moreover, although he expressed sympathy with the scientists' anxiety over recent cuts in science spending, he noted that even in the

German deal too

THE West German cabinet last week approved an agreement with the People's Republic of China for the peaceful application of nuclear energy. The agreement, signed formally on 9 May, originates in a Chinese initiative of December 1982. It covers research, development, safety and planning as well as the construction of power plants and research installations. West Germany is acting in accordance with its membership of Euratom and the European Economic Community and as a signatory of the convention on non-proliferation. China, however, is not yet a member of the International Atomic Energy Agency and there will therefore be no outside control to ensure that it keeps to the terms of non-proliferation and that neither technology nor materials are diverted into military channels. Sarah Tooze

could not block the agreement without enacting legislation, although an amendment to the Export Administration Act could require Congressional approval for nuclear transfers. For the US nuclear power industry, however, the principal uncertainties may reside in Beijing rather than Washington. The Chinese are expected to approach the commercial negotiations with the same shrewd patience that they have shown politically. Peter David

academy and its institutes, available resources were not always used economically and "the discipline of the research process" left much to be desired.

Jaruzelski was echoing the current concern in the Polish press that the loss of contact with Western science might cause Poland to fall irrevocably behind the leading edge of science. In such disciplines as microelectronics, bioengineering and genetic engineering, "whose development will determine our place in the world", it was essential, Jaruzelski said, not to lose contact with world science.

All these issues, Jaruzelski promised, would be included in "appropriate timetables" for implementation by the government and the academy. The scientists, for their part, will be expected to contribute to the economic recovery not only by their research work, but also Jaruzelski suggested, by providing regular briefing lectures for the party and state leadership. The academy scholars, moreover, will be expected to review their own attitudes to their work. Their task, according to Jaruzelski, is to "strengthen our place in the socialist community, to restore Poland's position in Europe and the world". Vera Rich