FINANCING NUCLEAR TIMES

EUROPE Tuesday June 7 2011

For sale: One discredited nuclear industry. Will ship anywhere. Finance available Analysis, Page 7

ECA's: stuck in a nuclear rut and deaf to the alternatives Noriko Shimizu, Page 8

World Destroying Guarantees

News Briefing

Switzerland: The Swiss federal government has agreed to gradually decommission the country's nuclear power stations. Under the plan, the five nuclear installations will not be replaced when they reach the end of their lives. A final decision and timeline should be agreed by the Swiss parliament in mid-June.

Germany: The German government has agreed on a roadmap for the phase out of nuclear power. The country's 17 plants will go offline by 2021. The government largely followed the recommendations of an ethics commission which said it was possible to end nuclear power in Germany within a decade.

Italia: The Council of Ministers has approved a moratorium of at least one year on construction of nuclear power plants in the country.

Finland: The flagship EPR project at Olkiluoto, managed by the largest nuclear builder in the world, AREVA NP, has turned into a financial fiasco. The project is four years behind schedule and at least 90 per cent over budget, reaching a total cost estimate of €5.7 billion ($8.3 billion) or close to €3,500 ($5,000) per kilowatt.

Nuclear – a publicly subsidised love affair

By Regine Richter in Berlin

Nuclear power is not only the most controversial and dangerous method of generating energy, it is also one of the most expensive. The technology would never have achieved the geographical penetration it has today without massive public funding. While, in the 1960s, enthusiasts predicted that electricity from nuclear power would be too cheap to meter, in fact, to survive, the industry has always depended upon manifold forms of public subsidy. Greenpeace Germany documented all the subsidies for German nuclear technology. In their report of October 2010, they revealed that, between 1950 and 2010, nuclear technology in Germany benefited from at least €203 billion of support. This figure comprises: research funding; the running costs of the unstable and problematic waste disposal sites at Asse and Morsleben; the decommissioning of East German nuclear power plants; and contributions to Euratom and other international nuclear organisations. Another form that subsidy takes is tax breaks: accruals (the money nuclear companies have to set aside for decommissioning) are not liable for tax; the company can nevertheless use the funds in the meantime for enterprise purposes. Finally, until 2006, unlike other energy sources, nuclear fuel was not taxed, meaning that energy companies did not have to pay taxes on the fuel rods they used.[1] These subsidies have been essential to the growth of the industry, as enormous cost overruns have been the rule, not the exception, for the construction of nuclear power plants, in all countries and every decade. A 1986 study by the US Department of Energy looking into 75 of the country's 104 reactors found that they had a total predicted cost of US$45 billion, while the actual cost turned out to be US$145 billion — three times higher than the initial estimates.[2] Two decades later, in 2005, an assessment of the Indian nuclear programme showed that the completion costs for their last 10 reactors have been, on average, 300 per cent over budget.[3]

New Nuclear – Economics Say No

Nor does the future look bright: Citigroup Global Markets published a paper in November 2009 entitled, "New Nuclear – The Economics Say No". The paper examines the situation in the UK, where the government wants to build several new NPPs and has announced a fast-track planning process for these new stations. However, Citigroup identified five big risks: planning; construction; power price; operational; and decommissioning. Of these they identify three "corporate killers": construction, power price and operational risks. Each of them, they predict, could "bring even the largest utility company to its knees financially". The authors stress that nowhere in the world have nuclear power stations been built on the basis that the private sector will shoulder the three main risks (construction, power price and operational) unaided. Their conclusion is that new nuclear power plants will only be commissioned in the UK if public funding is provided. As they put it: "Financing guarantees, minimum power prices, and/or government-backed power off-take agreements may all be needed if stations are to be built." However, even with this kind of state support, it is a moot point whether the projects are financially viable, as the US experience illustrates: "The proposed nuke plants in our country are promised billions of dollars in loan guarantees from the government, and additional support from the export credit agencies (ECAs) of Japan and France. And yet still they cannot manage to finance them — it's just too risky, therefore too un-economical," explains Doug Norlen of the US environmental organisation Pacific Environment. One has to bear in mind that the profitability will only become worse as, post-Fukushima, safety requirements become more stringent.

Nuclear export promotion

State aid has not only underpinned national nuclear programs. Governments with a domestic nuclear industry have been busy helping their companies to find new markets, and supporting their exports. In the 1960s and 1970s, this was done, fairly blatantly, using overseas development budgets, sometimes combined with export credits. When aid money for nuclear became a more problematic issue, the ECAs became a very important tool for promoting nuclear exports. They provided either export credits or export credit guarantees, the latter allowing the company to obtain lower interest rates on the money markets. Towards the end of the 1970s, some countries began to complain about the very generous support schemes that some other states provided to their domestic companies, claiming that this was distorting the market. At the OECD, the industrialised countries negotiated a framework of conditions for "the orderly use of officially supported export credits"[4] the so-called Arrangement. It aims to foster a level playing field for officially-supported export credits and guarantees. It is a gentlemen's agreement between the participants.

Pay back later, and later, and later

The importance of ECAs for nuclear development is illustrated by the special provisions for the industry in the OECD Arrangement. It allows longer repayment terms for nuclear power stations than for conventional power stations. The justification given was that the longer repayment terms reflected the fact that nuclear power plants needed a longer period before generating enough income to pay off the debt.The nuclear industry suffers from a structural handicap. It seems that it is not following a "learning curve" that you would expect to observe in technology-based industries as they mature: learning how to minimise problems and thus being able to produce at lower cost, so improving the rate of return. This lack of a learning curve was taken into account during the last amendments to the Arrangement in 2009, when the maximum repayment period for nuclear power plants was prolonged from 15 to 18 years.

And so continues this semi-concealed system of subsidies for a dangerous and expensive technology, that obstructs and distracts from the desperate need to make a systemic, strategic move to a decentralised, efficient and renewable energy system.

1 "Subventionen der Atomenergie", Greenpeace, Oktober 2010
2 "The economics of nuclear power", Greenpeace, November 2007, p.3
3 "Nuclear Banks, no thanks", Banktrack, Greenpeace, urgewald, CRBM et al, May 2010, p.8
4 "Arrangement on officially supported export credits", OECD, July 2009 revision, p.5

What are Export Credit Agencies?

Export Credit Agencies, commonly known as ECAs, are public agencies and entities that provide government-backed loans, guarantees and insurance to companies from their home country seeking to do business overseas in developing countries and emerging markets.

Export guarantees work like any other form of insurance, only in this case is being insured the risk that a company will not be paid for the goods that it has exported. In return for a premium, the ECA undertakes to ensure that the exporter gets paid should the buyer default.

Because exporting to many developing countries is considered to be high-risk business, private sector insurers are often unwilling to cover exporters – or charge premiums that would make the export deal unprofitable. In such circumstances, and only in such circumstances, official ECAs are allowed to offer support from the public purse.

Export guarantees are critical to financing trade with the developing world. A recent report estimates the top ECAs backed more than $260 billion of business in 2008. Without ECA support, many deals would not go forward – or would be lost to competitors. ECA business increased by a third in the immediate aftermath of the credit crunch, saving many exporters.

ECAs are collectively the largest source of official financing for developing countries. They are implicated in environmental, social and economic problems ranging from climate change, unsustainable debt, corruption and other problems plaguing countries where they do business.
http://www.eca-watch.org/

Gift RAPP: Canada's support for nuclear power and proliferation in India and Pakistan

By Deborah Lambert-Perez in Brussels

From very early in Canada's nuclear programme, their technology was exported to the Indian subcontinent, supported by state loans, aid packages, and export credit guarantees. It was this access to Canadian nuclear technology that allowed both India and Pakistan to subsequently develop their nuclear weapons programmes.

The Douglas Point Nuclear Generating Station was Canada's first full-scale nuclear power plant and the second CANada Deuterium Uranium (CANDU) Pressurised Heavy Water Reactor, a design first developed in the late 1950s.

Built and owned by Atomic Energy of Canada Limited (AECL) and operated by Ontario Hydro, the station was in service from 1968 to 1984. Douglas Point put Canada on the world nuclear map and, when a duplicate station was commissioned, it put them in the international export field too.

Canada's first reactor sale was to India in 1963. The Rajasthan Atomic Power Plant-1 (RAPP-1) was a 200-megawatt CANDU built at Rawatbata, in Rajasthan, modelled on the Douglas Point reactor. AECL reported that finance was provided by the Export Credit Insurance Corporation (ECIC — predecessor of the Export Development Corporation) "for the purchase of services, material and equipment from Canada up to a value of US$37 million out of the total estimated cost of US$76 million for the station".[1] Another estimate of the total cost put it at US$79 million, of which US$35 million was to be spent in and financed by Canada.[2] The plant's first criticality accident (an accidental increase of nuclear chain reactions) was in August 1972, when drums of radioactive heavy water were dumped into the river by mistake

A second deal between AECL and the Indian Department of Atomic Energy (DAE) provided free exchange of information on heavy water reactors for a period of eight years. This gave India the design and specifications of the Douglas Point reactor, allowing its full commercial use. This information was valued at US$5 million by India, but was provided freely by Canada as part of an aid programme.[3] The Douglas Point reactor design would subsequently become the basis of most of India's nuclear capacity. Unlike RAPP-1 and RAPP-2, these so-called 'CANDU clones' would not be subject to IAEA safeguards. In 1966, another agreement was signed by Canada and India for construction of a second 200-megawatt reactor (RAPP-2), with some improvements, at the same site as RAPP-1. AECL suggested that ECIC would provide US$38.5 million financing for the project's Canadian services and equipment.[4] It has also been suggested that the Canadian government financed half of the US$140 million cost of RAPP-1 and RAPP-2 payable over fifteen years at 6 per cent interest with about six years' grace.[5] The DAE was involved with the construction and commissioning of the two RAPP reactors, and also fabricated some fuel.

In 1974 India exploded a nuclear bomb fuelled with plutonium made in the CIRUS reactor. CIRUS was not financed by export credits, but was given to India as direct aid and was controversial because the Canadian government did not require a guarantee that it would not be used for plutonium production for nuclear weapons. Motivated by the opportunity to establish a commercial nuclear beachhead in the developing world, Canada chose to ignore the nuclear proliferation risk. After the explosion, Canadian personnel stopped work on RAPP-2. Canada's nuclear non-proliferation safeguards were subsequently strengthened, and after the failure of negotiations, Canada ended nuclear assistance to India, delaying commercial operation of RAPP-2 until 1981. The second RAPP reactor was completed by India with no Canadian assistance.

Meanwhile, in Pakistan in 1964, an agreement was made between Canadian General Electric and Pakistan to build a 137-megawatt CANDU reactor near Karachi. The reactor, known as the KANUPP (Karachi Nuclear Power Project) cost US$63 million, US$51 million of which was financed by Canada. Half came as external aid at 0.75 per cent interest over 40 years, with 10 years' grace; the other half at 6 per cent over 15 years with five years' grace.[6] The ECIC provided the 6 per cent financing, and the concessional financing came from the External Aid Organisation (EAO). Wallace described the terms of the EAO loan somewhat differently: "Between 1966 and 1978 a total of US$12.4 million was provided in export credits, and US$29.4 million was loaned through the EAO/ Canadian International Development Agency (CIDA) account … Its terms included a 10-year period of grace followed by a 50-year repayment schedule with no interest charges."[7] The EDC took over the accounts of the ECIC in 1969, and the EAO's account was taken over by the CIDA.[8]

Canada ended nuclear cooperation with Pakistan on 1 January 1977, shortly after its December 1976 decision that nuclear trading partners with Canada must sign the Non Proliferation Treaty. Despite this, loan payments continued.

1Atomic Energy of Canada Limited Annual Report 1963-64, p. 23.
2 Gordon Sims, The Evolution of AECL, MA Thesis, Institute of Canadian Studies, Carleton University, Ottawa, August 1979, p. 123.
3 Atomic Energy of Canada Limited Annual Report 1963-64, p. 23.
4 Atomic Energy of Canada Limited Annual Report 1966-67, p. 13.
5 Robert Morrison & Edward Wonder, Canada's Nuclear Export Policy, Carleton University Press, Ottawa, October 1978, pp. 17-18.
6 Robert Morrison & Edward Wonder, ibid.
7 T.W. Wallace, ibid., p. 312.
8 T.W. Wallace, ibid., p. 312.

Crippling losses and corruption: nuclear exports Canadian-style

By Deborah Lambert-Perez in Brussels

Export Development Canada (EDC) guarantees have underwritten the export by Atomic Energy of Canada Ltd (AECL) of nuclear technology in deals based on bribery and backhanders.

Bribes and losses in Argentina

In 1972, Atomic Energy of Canada Ltd (AECL) submitted a bid to Argentina's Comision Nacional de Energia Atomica (CNEA), in partnership with the Italian company Italimpianti, to build a 600-megawatt turnkey CANDU plant in Argentina, now known as Embalse. Italimpianti was to handle marketing and the plant's conventional equipment, and AECL was responsible for the nuclear side. The total estimated cost was US$420 million, of which about US$150 million went to AECL.[1] EDC initially provided a loan of Canadian $124.05 million in April 1974.[2] The loan was payable over 25 years, with repayment starting only when the reactor entered service. This was a 'Canada Account' loan, made on the grounds that it was 'in the national interest'.[3] The original contract was for a 25-year period, and had a 25 per cent ceiling on inflation.[4] With the 1973 OPEC oil embargo and a period of high inflation, by 1975 AECL was heading for a substantial loss.[5] Subsequent attempts to renegotiate the contract were interrupted in March 1976 by a bloody military coup in Argentina. The contract was subsequently amended in February 1977, but in that same year AECL made provision for a loss of US$130 million on the deal.[6] In other words, the possible loss was as much as the original contract. After further renegotiations, AECL claimed that there was no loss on the sale.[7] The Embalse deal was not just complicated by inflation and underpricing — defective boilers costing US$15 million were also supplied by Babcock & Wilcox Canada.[8] Repairs delayed the project for over a year and the sale was controversial because bribes in the form of 'agent fees' were paid to secure the contract.[9] An Argentine investigation in 1985 revealed that José Ber Galbard, then Argentine Minister of Economic Affairs received US$2.4 million, plus another US$1.1 million in May 1974, and an additional US$300,000 two years later.[10]

Bribery in South Korea

In January 1975, AECL and the Korean Electric Power Company (KEPCO) signed a deal for a 600-megawatt CANDU.[11] The total cost of the reactor was US$576.5 million, of which US$430 million was arranged by the EDC. This initially included a Canadian$250 million loan under the Canada Account and Canadian$50 million under the Corporate Account. A further loan of US$112.5 million was made under the EDC Corporate Account in May 1979.[12] The loans were to be repaid in 30 semi-annual repayments over 15 years, starting no later than six months after the commissioning of the reactor, which took place in November 1982. The interest rate on the loans has never been revealed.[13] The Wolsong-1 deal was odd in two ways: first, Korea had not issued a call for international bidding; second, it was a dramatic shift in nuclear technology for Korea. The reason for this surprising change in approach is that AECL influenced the decision through bribery. AECL President Lorne Gray had agreed to pay an 'agent' (Shaul Eisenberg of Tel Aviv) a fee of US$17 million plus another US$3 million at a rate of US$500,000 a year for six years.[14] Despite the public outcry over this blatant corruption, Eisenberg's 'commission' was only reduced to US$18.5 million, and AECL retained him to negotiate the sale of a second reactor.

1 Ron Finch, Exporting Danger: A History of the Canadian Nuclear Energy Export Programme, Black Rose, Montreal, 1986, p. 52.
2 Letter from D, Ward, EDC to Dave.Martin, Sierra Club of Canada, May 16th 2001
3 Letter from D, Ward, EDC to Dave.Martin, Sierra Club of Canada, May 16th 2001
4 Gordon Sims, ibid.,1979, p. 139.
5 Finch, ibid., p. 52.
6 Atomic Energy of Canada Limited Annual Report 1976-77, Note 3, pF9
7 Letter from Bruce Howe to David H. Martin, Nuclear Awareness Project, October 26, 1992
8 Finch, ibid., p. 55, and FN 14, pp. 163-163.
9 Finch, ibid., p. 54.
10 (AP), "US$4 million bribe given on Candu Argentina says", Toronto Star, June 13, 1985. See also: Joel Ruimy, "RCMP should probe bribery scandal in Candu sale to Argentina, Tory says", Toronto Star, June 14, 1985.
11 Gordon Sims, ibid., 1979, p. 142.
12 Letter from D, Ward, EDC to Dave.Martin, Sierra Club of Canada, May 16th 2001
13 Finch, ibid., p. 61.
14 Finch, ibid., pp. 58-61.

Hermes' support for dictatorship deals in the 1970s

Regine Richter

The 1970s saw increasing public resistance to the use of nuclear power. Tens of thousands of people were mobilised to protest against a plant at Wyhl Germany, and forced an end to the project. In Austria, a referendum voted against the Zwentendorf facility and it was moth-balled without producing a single megawatt of power. However, despite the emerging protest movement, thanks in part to contiued ECA support, the future looked bright for nuclear power globally. For the governments of the time, civilian energy production was not the only perceived benefit in developing a domestic nuclear power industry. Opening the door to the possibility of an atomic weapons programme was an added incentive. Not surprisingly, states with nuclear ambitions turned to those countries with existing nuclear programmes, seeking to import their technologies and expertise. So it was that in the 1970s Germany signed nuclear cooperation treaties with Brazil, Argentina and Iran.

Germany: midwife to Iran's Busher baby

Iran and Germany signed a treaty in 1976, which included an agreement to build the Busher nuclear power plant. Kraftwerk Union (KWU), a joint venture including Siemens and AEG-Telefunken, planned to build a Pressurised Water Reactor with two units of 1300 megawatts each, using the same design as Biblis in Germany. In 1977, this project was supported by a Hermes guarantee, but after the 1979 revolution, the nuclear cooperation treaty was cancelled before the building was finished. The construction site was partially damaged during the ensuing 1980s Iran-Iraq war.[1] Later, construction was restarted and a new agreement was signed between Iran and Russia, under which the Russian company Atomstroyexport would finish the reactor. After many delays it finally went online in early May 2011. The Busher plant is part of the same Iranian nuclear programme now at the centre of intense international fears about arms proliferation.

Brazil – Nukes for the Generals?

Another joint nuclear venture was agreed between Germany and Brazil in 1975. The two governments (in Brazil it was still a military regime) signed an ambitious agreement for nuclear development, foreseeing the construction of eight nuclear power plants, a uranium enrichment plant, a reprocessing plant and the exploitation of Brazilian uranium deposits. For their part, the Germans would deliver nuclear technology and expertise and support the programme through guarantees. Fears were voiced that the programme was a means for the military government to achieve the necessary know-how for building nuclear weapons — a suspicion subsequently confirmed by later Brazilian administrations, acknowledging that a nuclear weapons programme had been initiated, even to the extent of preparations for a testing area in the state of Amazonas.[2] However, of all the projects in the agreement, only one nuclear power plant ever produced electricity: Angra 2. The plant was widely criticised, as the site was ill-chosen: the area were it is built is called "rotten stone" by the local people due to the unstable terrain. This instability resulted in the sagging of a supporting building at Angra 1 during construction works for Angra 2. Furthermore, the area is threatened by landslides and the emergency management plans have been strongly criticised as there is only one road for evacuation. The building process itself took 25 years instead of the scheduled eight. The costs are thought to have been US$7-10 billion, and to have contributed greatly to the Brazilian national debt. The project was supported through a Hermes guarantee in 1976,[3] and as it is standard practice with export credit guarantees that the exporting country seeks a counter guarantee from the purchasing country, it is likely that Hermes will have requested compensation from the Brazillian government. In January 2010, in response to a question asked in parliament, the government stated that compensatory damages demanded for the Angra 2 guarantee amounted to €1.4 billion.

Argentine: Atucha: Generating maximum debt, minimum energy

The same ministerial response revealed another nuclear power plant that led to huge debts under the terms of a Hermes guarantees: Argentina found itself liable for €1.5 billion of compensatory damages for the Atucha 1 and 2 reactors. The main difference is that while Brazil has paid back its debts in full, as of January 2010 €950 million of Argentine debt to Germany remained unpaid. Atucha was the first nuclear contract that KWU secured in Latin America, in 1969. It was not only supported by export credits and export credit guarantees, but these were blended with development money in order to support KWU's entry into the Latin American market. Argentina at the time was ruled by a military dictatorship, but this did not appear to halt the German government's desire to promote German exports. Atucha 1 is a Pressurised Heavy Water Reactor with a capacity of around 357 megawatts. It went online in 1974 and was expected to produce energy for 30 years. However, with the support of Hermes' guarantee, upgrades and reparation work were undertaken in 2000 in order to prolong the lifetime of the reactor. Planning for Atucha 2 started in 1976. This plant was supposed to be bigger, with a capacity of 745 MW, but by the time the project reached the construction phase at the beginning of the 1980s, the onset of the debt crisis and the Falklands war delayed the project enormously. The latest plans are that the plant could go online commercially in 2012. All things considered, Argentina has paid a high price for a poor return.

1 "Financing Disaster", Amis de la Terre, CRBM, EU Enlargement Watch, urgewald et al 2001, chapter on Russia, p. 71

2 "Kein gutes Geschäft – Die Schattenseiten der KfW-Export- und Projektförderung", urgewald 2004, p.34

3 "Financing Disaster", Amis de la Terre, CRBM, EU Enlargement Watch, urgewald et al 2001, chapter on Russia, p. 72

Ex-Im Bank and Nuclear Tourism

By Maris dela Cruz in Philippines and Doug Norlen in USA

The mothballed Bataan Nuclear Power Plant (BNPP) should be converted into a novel tourist attraction, and adjacent beaches and coastal areas transformed into an ecotourism destination, says Herminia Roman, a representative from the district of Bataan where the nuclear power station is located. The proposal represents a reversal of Roman's earlier proposed legislation for the rehabilitation and commercial operation of BNPP. Ronald Tiotuico, Regional Director of the Department of Tourism, says the unused nuclear plant could provide a "learning experience," and educate visitors on the causes of accidents like the Fukushima nuclear disaster in Japan and how to avoid them.

The tourist attraction would likely strengthen Philippine public opposition to nuclear power, yet there is still a "slim chance" that the industry's supporters will continue to try to revive the country's nuclear programme, according to Amalie Obusan, Climate and Energy Campaigner at Greenpeace. Despite the catastrophe at Fukushima Daiichi nuclear plant, the government has not yet shown firm action to lay to rest plans of reviving BNPP as officials continue to have differing positions. For instance, the President has been quoted as saying that he does not support the revival of the BNPP project. However, the Secretary of Department of Science and Technology still believes BNPP is safe and should go online, and this view is shared by others such as former representative Mark Cojuangco who opposes the total abandonment of BNPP. Perhaps the BNPP museum should include an exhibit on ECAs' marked lack of accountability on environmental, economic and corruption issues. The US Export-Import (Ex-Im) Bank provided loans worth US$277 million in January 1976 and guaranteed worth US$367 million for BNPP, supporting the participation of US construction firm Westinghouse in a project, which soon became a white elephant because of technical, environmental and corruption problems. Built between 1977 and 1984, the 640-megawatt BNPP is located between major earthquake faults and near the Mount Natib volcano. The nation-wide Nuclear Free Philippines Coalition, established in 1981, grew out of organised opposition to BNPP. The nuclear power plant was originally approved by then-President Ferdinand Marcos, but the project was subsequently scrapped by President Corazon Aquino, due to safety concerns and an earlier investigation that revealed 4,000 safety defects.

The damage from a nuclear disaster at Bataan could be extensive—similar in scale to Fukushima. A study by Roberto Verzola of the Philippine Greens shows that if an 80-kilometre danger zone were declared around the BNPP similar to the one the US Nuclear Regulatory Commission put in place in Japan, it would cover six provinces (Zambales, Tarlac, Pampanga, Bulacan, Cavite, and Batangas) and the National Capital Region in Luzon.

In 2004, Philippine officials revived corruption charges against a Marcos associate amidst charges that he received US$17 million in bribes to help Westinghouse secure engineering and design contracts for the project.

BNPP's questionable financing arrangements resulted in massive debt for the Philippines, and in fact, the project is one of the country's largest sources of foreign debt, according to the Freedom from Debt Coalition. In its position paper submitted to the Congress in February 2009, the coalition described BNPP as a "glaring representation of the country's fraudulent, wasteful, and useless debts... a symbol of the Philippines' struggle against a debt-driven development strategy – often peppered with rent seeking and cronyism – that different administrations, including the current disposition, have espoused." Further, over-projection of demand and over-pricing of energy have worsened the debt load.

Ex-Im Bank should shoulder responsibility for the negative impacts of the project on the Philippine government and the Filipino people. The debt from costs of building the plant has been partly to blame for the impoverishment of millions of Filipinos. The government is spending at least 40 millions Phillipine Pesos (US$1 million) a year to maintain it says Engineer Mauro Marcelo Jr, head of the group maintaining the BNPP.

Ironically Ex-Im Bank could now help finance the Bataan eco-education tourism attraction through the Bank's Environmental Exports Program. However, given Ex-Im Bank's ignoble history with Westinghouse on the project, project organisers might want to look elsewhere for financing this time around.

Elsewhere in the world, meanwhile, it is business-as-usual for Ex-Im Bank. Recently, they have underwritten nuclear fuel exports to the Laguna Verde nuclear plant on the Gulf of Mexico, despite long-standing demands by Greenpeace and local environmental organisations to close the plant due to safety concerns.

News digest

Be the first, book now your trip to Bataan. Or pitch on Chernobyl itself!

If you can't wait for the Bataan attraction to be opened or want to be given a good fright you can pitch on Chernobyl itself!
The monument to humankind's incompetence have become a ghoulish tourist attractions open to anyone ready to spend the equivalent of about €110 for a day trip. You also will have to sign a waiver, exempting the tour operator from all responsibility in the event that you later suffer radiation-related health problems.
The Ukrainian government legalised such tours for the first time in January, and is now developing plans to attract more tourists to the area ahead of the 2012 European football championship in Ukraine.
You will be told not to touch any of the irradiated vegetation or metal structures, and you will be able to briefly inspect the stricken number four reactor from a short distance.
More exciting than the ruined plant, you will be invited to wander in the ghost town of Pripyat. Imagine walking around the debris-strewn corridors of the Palace of Culture, the crumbling Olympic-sized swimming pool, and most impressively through the eerily empty classrooms of one of its biggest schools. Hundreds of discarded gas masks still litter the floor of the school canteen!
The visit includes of course a free photo with the Geiger counter amazingly high!

The European Union needs your money

A further €740 million is needed to ensure that the Chernobyl site is made stable and environmentally safe by 2015. It will be used for nuclear safety, but also on programmes to help the local population and provide affected families with access to quality healthcare.
The scale of the project, known as the "New Safe Confinement" is immense. A giant arch will cover the damaged Chernobyl unit 4 – it will be long enough to cover almost two football pitches and high enough to house the Statue of Liberty!
Donate now, it's your chance to enter history!

No power to the people despite attempted Russian revolution in India's nuclear industry

By Regine Richter in Berlin

Driven by ambitions to become a global player, in 1984 India made plans to boost its nuclear programme. The Department of Atomic Energy announced their intention to create 10,000 megawatts of extra capacity by the year 2000. However, India was not a signatory to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), making it difficult for Western nuclear companies to trade with them. Perhaps because of this, the long history of cooperation between India and the USSR in the scientific, military and economic fields was now extended to the nuclear sector. In November 1988, an agreement was signed for the construction of Kudankulam nuclear power plant, containing two VVER-1000 nuclear reactors (the standard soviet VVER-1000/320 pressurised water reactor having been adapted for Indian requirements). To facilitate the deal, the Russian state-owned Vnesheconombank agreed to provide export credit loans to the Indian government covering approximately 50 per cent of the construction costs.[1]

The initial estimate for the costs was 6,000 crore (about US$1.2 billion) with the option of repayment in rubles.[2]

Delays and additional protocols

The collapse of the Soviet Union brought a halt to the project and delayed it for over a decade. In 1998, Russia and India signed an additional protocol covering issues of storage and reprocessing of the spent nuclear fuel: India was to keep the nuclear material from Russia on its own territory for reprocessing. Russia offered a loan of US$2.5 billion for the construction of the two reactors.[3] 2001 saw another update to the agreement, with costs now estimated at US$3.5 billion. This time, repayment was expected in dollars.[4] Meanwhile, in 1999 the Comptroller and Auditor General of India produced a highly critical report on the progress achieved by the Department of Atomic Energy, which had responsibility for India's nuclear programme. The Comptroller noted that in the 15 years since the plan for 10,000 extra megawatts had been agreed, not one megawatt of capacity had been delivered, despite over US$1 billion having been spent.[5]

Problems in Kudankulam

In the meantime, in Tamil Nadu, progress at the Kudankulam nuclear plant was no better. Very little is known about any of the environmental, social or technical licences provided for the project. Since nuclear plants are treated as issues of national security, none of the studies for the project have been released to the public.[6] Concerns have been expressed that the thermal pollution may destroy marine life along the coast from Kanyakumari to Ramanathapuram and have an impact on Sri Lanka.[7] Even before construction started, public groups protested against the project, which is located in an earthquake zone. Other concerns have been raised by reports that the loan package for the reactors was to be linked to defence deals with Russia: the purchase of T-90 tanks, SU-30 fighter aircraft, the Russian aircraft carrier Admiral Gorshkov, and the possible purchase of a nuclear submarine.[8] The compensation paid to the communities for the land on which the rectors will be built, which was often the sole asset held by families, was approximately US$43 per acre with a payment of US$2 per cashew tree.[9] Given Kudankulam's location in an earthquake zone and by the coast, one might expect the tragedy at the similarly-positioned Fukushima power plant to give cause for concern. However, when Sergej Kirijenko, the head of Russia's state-held nuclear energy corporation, Rosatom, visited India in April 2011 he was quoted as saying that Kudankulam would meet not only the safety requirements of today but also of tomorrow; and that he was confident that the facility would go online as planned, with initial tests starting in March 2011. The 2,000 megawatts this will add to Indian nuclear capacity falls a long way short of the 1984 target of an additional 10,000 megawatts by the year 2000. However, it may contribute to the new target of 40,000 megawatts by 2020, which the Ministry of Power hopes will be the fruit of a new US-Indian nuclear deal.

1 Vnesheconombank, a Russian state-owned bank acts "to establish efficient governmental mechanisms to promote Russian exports. Based on the world's practice, specifically, the experience of OECD member-states and with due regard to all WTO requirements and standards, VEB is developing mechanisms designed to help Russian export companies to gain access to the world market. Vnesheconombank owns 95 per cent of Roseximbank – an institution charged with putting these mechanisms into effect." The Mumbai office of the bank is one of the most active offices worldwide. 1999 Annual Report, also VEB website.

2 "A Brief Overview of Export Credit Agencies in the Asia-Pacific Region" Stephanie Fried/ Environmental Defence and Titi Soentoro/ Nadi, 2004, p. 19

3 "Financing Disaster", Amis de la Terre, CRBM, EU Enlargement Watch, urgewald et al 2001, chapter on Russia, p. 109

4A Brief Overview of Export Credit Agencies in the Asia-Pacific Region" Stephanie Fried/ Environmental Defence and Titi Soentoro/ Nadi, 2004, p. 19

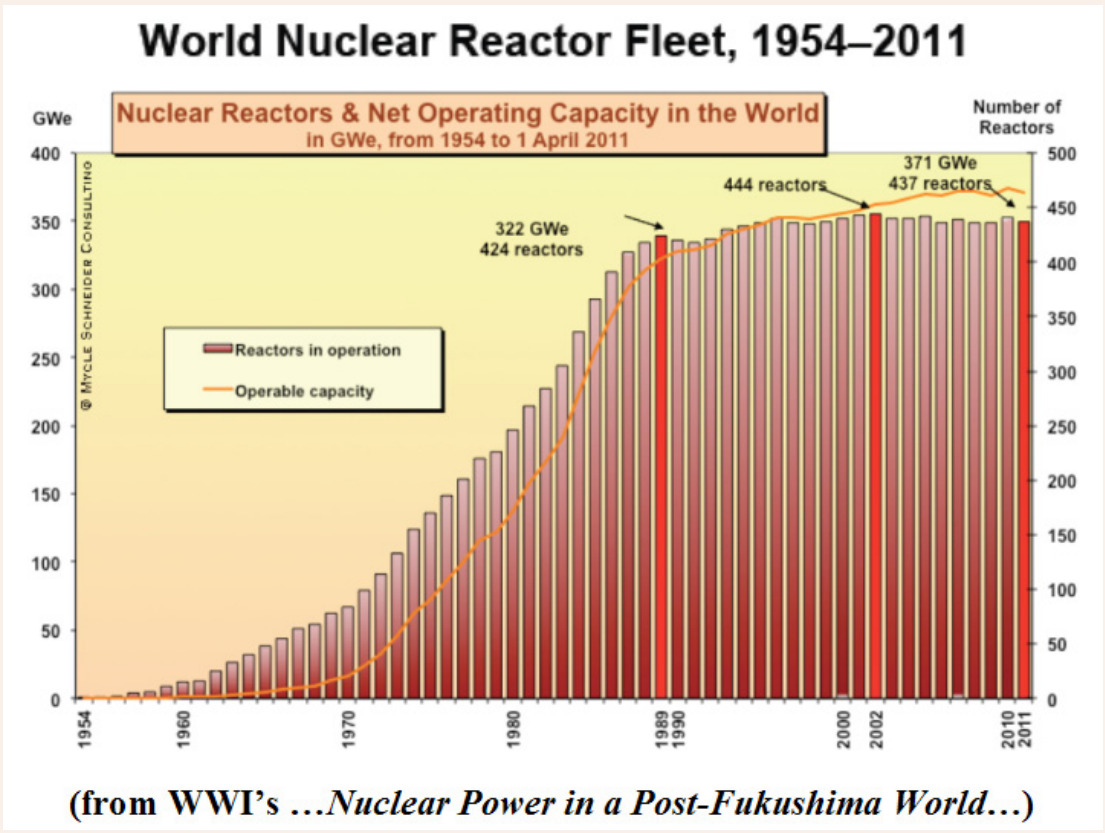
5 "Nuclear Growth Projections, Imports and Exports" M.V.Ramana, in Dainik Janambhumi, 21 December 2008

6 Rediff.com interview with S P Udayakumar, Rediff.com, November, 2000

7 Vigourous campaign against Koodankulam project planned, The Hindu, November 12, 2001

8 The Russian Connection, rediff.com, November, 2000

9 India's interest is not electricity, but nuclear bombs, rediff.com, November, 2000



(from WWI's …*Nuclear Power in a Post-Fukushima World*…)

Exports credits for Apartheid

GLOBAL INSIGHT

For a quarter century, the French nuclear industry was happy to do business with the South African apartheid state; meanwhile the French state was prepared to flout UN resolutions, and to underwrite export credits with public money, in order to facilitate this trade.

In 1964 France and South Africa signed an agreement for the the long-term supply of natural uranium. In 1976 the two countries agreed on the construction of the two 900 megawatts commercial light water reactors in Koeberg. Construction started the same year. The French government and the construction company Framatome showed no reluctance to deal with the apartheid regime. The French administration counted on the driving effect the market attribution would have on French exports. Framatome's official history records: "Lady Luck smiled at the company: the consortium that was in the first place, headed by General Electric, soon ran into insurmountable political difficulties. So Framatome was called to the negotiating table, and finally won the contract."[1]

The contract was signed only two weeks before the Soweto uprising of 1976. France found itself under pressure from a growing international anti-apartheid movement to apply sanctions against South Africa. Although the UN Security Council passed a resolution calling for a compulsory embargo of military material, nuclear equipment and oil products,[2] the European Foreign Affairs Ministry ruled these out in favour of a voluntary code of conduct for European companies trading in South Africa. Unsurprisingly, the French Foreign Economic Relations Department opposed the embargo,[3] as to break the terms of the contract could have meant COFACE having to pay very high levels of compensation. The potential risk to the public purse was, in 1977, an estimated FF1.5 bn.[4]

The Koeberg construction site was bombed by the ANC in 1982 and the control rod mechanisms were destroyed. The start-up was delayed, but by less than anticipated, because Électricité de France (EDF) diverted components destined for another project. South Africa sent numerous technical staff to France for training, prior to the commissioning of the two Koeberg units in 1984 and 1985.

In 1985 a new UN security council resolution was adopted asking Member States to impose new sanctions, such as suspending export credits or the embargo of any new contracts in the nuclear industry. The French media will not hesitate to highlight the administration's lack of eagerness to apply the UN recommendations.

After the fall of the apartheid regime, the collaboration on nuclear projects continued. In addition to the ongoing reactor project, in 1996 France and South Africa agreed to cooperate on molecular laser isotope separation, a precursor to separating out the most fissile isotopes.

1 Framatome, "Framatome – An Industrial and Business Success Story", 1995

2 4 November 1977, resolution 418

3 PPBLM, CE1, sous doss. Afrique du sud, DREE/IV-B, Politique de crédit sur l'Afrique du sud, Mars 1978

4 PPBLM, CE1, sous doss. Afrique du sud, DREE/IV-B, Politique de crédit sur l'Afrique du sud, Mars 1978

Book Review

New Worldwatch Institute Report, shows nuclear industry was in decline even before Fukushima

"Amid the hype and PR, the smoke and mirrors, of the 'nuclear renaissance', the Status Report offers a hard-edged reality check."
Walt Patterson, Associate Fellow, Chatham House, London

The nuclear power sector faces a rapid decline with spiralling costs that will only be exacerbated by a Fukushima backlash, claims a study funded by the Worldwatch Institute. Despite predictions in the United States and elsewhere of a nuclear "renaissance," the report concludes that the role of nuclear power was in steady decline even before the Fukushima crisis. The disaster will make the construction of new nuclear plants and extensions to the lifetime of current plants even more unrealistic. Its findings, backed by Green MEPs, show that cost estimates have increased six-fold in the past decade. Renewable energy is a more attractive investment because it is cheaper and can be more quickly deployed and decommissioned. Annual renewable capacity additions have been outpacing nuclear start-ups for 15 years.

However the study also laments the "large direct and indirect" subsidies for nuclear which make it harder for renewables to compete.

Cernavoda: Ceaucescu's poisonous legacy

From Antonio Tricarico in Italy

When Romanian dictator Nicolae Ceaucescu was deposed in 1989, his nuclear ambitions survived him, thanks to ECA support for his long-term plan to construct five reactors at the Cernadova nuclear power plant. Work continued under the new regime, which halted construction of reactors 2, 3, 4, and 5 in 1991, in order to concentrate on reactor 1. Ever since the fall of the communist regime, ECA-underwritten financing has been cruial to the development of Cernadova.. In September 1991, the Canadian government announced a new agreement to form the AECL/ Ansaldo Consortium, a joint venture located in Italy. The consortium was responsible for finding financing. The salvage package included: a loan of CAN$315 million through the Canadian EDC; the takeover of project management by AECL and Nuclear Construction Managers; and the provision of services and components from other Canadian companies. The other partners in the consortium included Ansaldo of Italy (balance of plant), and the then Romanian Electricity Authority, RENEL (now CONEL). The Italians came up with US$135 million in funding through the Mediocredito Centrale – at the time, an Italian public export credit agency. Reactor 1 was finally commissioned in 1996 almost 20 years after negotiations first started, costing the state US$2.2 billion. Cernavoda 2, commissioned in October 2007, is the latest nuclear power station to begin operating in Europe. Cernavoda 2 is not being used to supply electricity to Romanian consumers. It instead primarily exports electricity to neighbouring countries. Again, ECA support has been crucial to the development of this plant. In April 1998 a consortium headed by the Canadian company AECL in partnership with Ansaldo, was awarded a contract worth US$142 million by RENEL to continue work on Cernavoda 2. The contract was to be financed by RENEL funds (US$40million), bank loans, and loans from ECAs. Furthemore, Euratorm lent € 233 million to the Romanian government in 2003. ECA support has helped to deliver a dubious legacy for Romania. The Cernavoda 1 and 2 reactors, already built with ECA support, and the planned 3 and 4 reactors, are all based on the Canadian CANDU6 design. Cernavoda is the first example of a Western-designed nuclear power plant being exported to an Eastern European country. AECL of Canada, who develop, design and market CANDU power reactors, have always portrayed this technology as innovative compared to others. However, serious doubts remain about the safety of the reactor, the design of which, according to the Western European Nuclear Regulators Association, has not changed since 1979, and which shares the same design flaw as the reactor which caused the Chernobyl disaster in 1986. Cernavoda — a small town of just over 20,000 residents — is located in southeastern Romania

Black Sea. The plant has had a negative effect on public safety and quality of life. Water from the Danube is used for cooling the reactor. Traces of tritium, a radioactive isotope of hydrogen, have been found in the water that is released back into the river from the reactor. Recommendations have been made to relocate pregnant women and mothers with very young children, and local residents have been advised not to eat produce grown in local gardens. On average, 60 per cent of tritium releases occur in the Danube and 75 per cent in the atmosphere. This risk of exposure will become even higher should the two new planned reactors come on stream. Furthermore, the power station is located in an area of seismic activity (the 'Vrancha Breach') which has recently seen heavy earthquakes, causing damage in the area surrounding Cernavoda. The CANDU 6 reactor also lacks sufficient protection against terrorist attack. Cernavoda 2 financing was approved despite clearly inadequate public consultation in the affected areas by the Romanian government. They did not release a full Environmental Impact Assesment and related project assessment studies. They did not properly consider the alternatives to nuclear, including energy-efficiency projects. Recent public consultations about the construction of planned reactors 3 and 4 took place in a climate of intimidation for those, including environmental groups, who opposed the project.

Dirty Old Towns: Full of Eastern Promise for Western Companies

Regine Richter

When the Berlin Wall came down, the old and unsafe nuclear reactors of Russian design, in Slovakia, Czech Republic, Lithuania and Bulgaria, became a headache for the policy makers of the West — but a golden opportunity for Western firms to make a profit, supported as ever by the deep pockets of their ECAs.
In the course of negotiations for EU enlargement, some applicants for membership had to agree to shut down their old reactors, like Lithuania's Chernobyl-type Ignalina NPP and Bulgaria's old Kosloduj 1-4 reactors. Other reactors (existing and planned) had to undergo upgrading procedures that effectively prolonged their life and were a lucrative opportunity for Western nuclear power companies like Siemens (Germany), Framatom (France) or Westinghouse (USA).

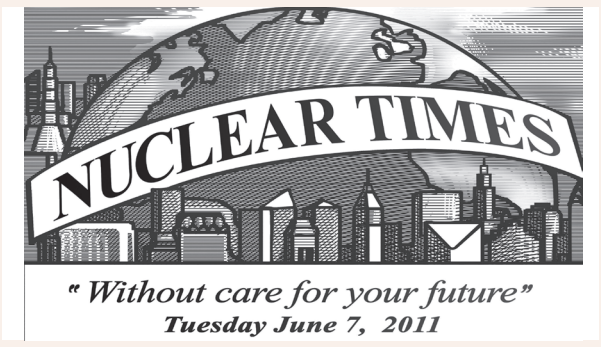
Temelin
A good example is Temelin in the Czech Republic: in the late 1970s to early 1980s the government drew up plans to build a power plant consisting of four pressurised water reactors of the VVER-1000/320 type, a Russian design. They started building in 1987, but after the Velvet Revolution of 1989, they dropped plans for two of the reactors, and had to accept that the Soviet design would not meet Western standards. Thus some components had to be re-designed , for which the the government went to international tender. The American company Westinghouse was chosen, "convincing the Czech government that it could effectively take an unfinished Soviet reactor, improve its safety margins, and bring it in at budget. Westinghouse could not and did not" says Michael Mariotte of the US Nuclear Information and Resource Service. The plant was finished years late and some US$ 1 billion over budget and the reactors experienced several technical problems after going online (Temelin 1 in 2000 and Temelin 2 in 2002). Westinghouse's bid was supported by a finance package from the US ECA Ex-Im, worth US$317 million.[1]

Kosloduj
Westinghouse was also involved in upgrading the Bulgarian nuclear complex at Kosloduj. Decomissioning four of the reactors was a pre-requisite to EU membership, but they were allowed to keep the two newest reactors online, with safety upgrades. Modernisation and Western technology was supposed to improve the safety of the reactors. Their bid was supported by Ex-Im in 2000 with a US$77 million package.[2] However, Kosloduj became infamous in 2006, when after a loss of coolant, the emergency shutdown function failed, and it took operators over six hours to close down the reactor. Under different circumstances, i.e. a loss of coolant in one of the reactor's vital parts, this failure of the central safety system would have led to a catastrophic melt-down of the reactor core. The Bulgarian authorities, however, did not deem this incident important enough to register it with the International Atomic Energy Agency in Vienna, until Georgui Kastchiev, the former head of the Bulgarian nuclear safety authority, made it public.[3] Sofia then saw itself forced to upgrade the incident to INES (International Nuclear Event Scale) Level Two, indicating an incident with consequences for plant safety.

Ignalina
Having been part of the Soviet Union, Lithuania was the only EU-member-in-waiting to have a Chernobyl-type NPP, being the two RBMK reactors in Ignalina. As a condition of EU membership, reactors 1 and 2 had to be switched off by the end of 2004 and 2009, respectively. In the preceding years, however, Western companies were contracted to provide safety upgrades. New computers were installed in the nuclear complex in 1999, a deal supported by Ex-Im with nearly US$20 million US$.[4] In 2000, Siemens provided a new concrete facility for liquid waste, supported with a Hermes guarantee of over 14 million DM (€7 million) in 2000.[5]

Mohovce
In the early 1990s the Slovakian government planned to finish the partially-built Mohovce 1 and 2 reactors, both of the VVER 440/213 design. The original design was agreed in 1978; construction began in the 1980s; but halted after running into financial difficulties. The government turned to the European Bank for Reconstruction and Development (EBRD) for refinancing. However, the EBRD loan offer was conditional on certain criteria, including: an assessment that the nuclear power plant would be the least-cost option; international safety standards being met; and closure of the aging Bohunice NPP once Mohovce became operational. As the Slovakian government would not agree to these conditions, negotiations ended unsuccessfully. In 1996 Siemens signed a contract for the completion of Mohovce and obtained a Hermes guarantee of over 153 million DM (€76.5 million) for a contract to provide instrumentation and master controls.[6] Unlike the EBRD, Hermes attached no conditions to the guarantee.
Siemens was not the only business to win contracts for Mohovce: the French nuclear company Framatome also secured contracts worth estimated 495 million FF (around € 80 Euro) with support from the French ECA, Coface.[7]
Ironically, Mohovce is of the same design as reactors that had been operating in Eastern Germany and were shut down after reunification – due to safety concerns. It seems that what Western Europe will not tolerate in its own backyard, it will happily build in the East - for a profit.

1 "Financing Disaster", Amis de la Terre, CRBM, EU Enlargement Watch, urgewald et al 2001, chapter on US, p. 127
2 ib
3 "In letzter Minute", Tagesspiegel, April 24, 2006
4 "Financing Disaster", Amis de la Terre, CRBM, EU Enlargement Watch, urgewald et al 2001, chapter on US, p. 127
5 "Financing Disaster", Amis de la Terre, CRBM, EU Enlargement Watch, urgewald et al 2001, chapter on Germany, p. 74
6 ib. p. 73
7 "Financing Disaster", Amis de la Terre, CRBM, EU Enlargement Watch, urgewald et al 2001, chapter on France, p. 55



2001: Germany decommissions its nuclear exports programme

The late nineties brought a wind of change to Germany and after 16 years of conservative–liberal rule, a red–green government took power in 1998, raising hopes for changes in environmental and development policy. The Greens won with a manifesto commitment to phasing out Germany's nuclear power plants, and soon after the elections, began negotiations to make this a reality. At the time, a broad coalition of more than 100 organisations working on issues around debt, development and the environment called for a reform of the way guarantees were issued by the German Export Credit Agency, Hermes. Their demands included: improved transparency; clear environmental standards; an end to countries increasing their debt burden through export credit guarantees; and exclusion of support for certain types of project, including nuclear. As Germany is a country very much dependent on exports, industrial and commercial interests threw their weight behind a counter-campaign, protesting that strengthened guidelines would lead to a significant loss of trade for German companies. This position found a sympathetic ear at the economics ministry, which has the leading role in export credit matters. And so, while parliament began debating the reform of Hermes, actual decisions about export credit guarantees remained in the hands of an interministerial committee, representing the foreign office, with the economics, finance and development ministries. The economics ministry watered down the proposed Hermes reforms, which therefore delivered little progress in standards or transparency.

Nuclear Exports? Nein Danke!

However, the Hermes guiding principles, published in April 2001, delivered on one important NGO demand: they explicitly excluded support for nuclear exports: "Exports of nuclear technology designed for the building of new or conversion of existing nuclear power plants are excluded from support by the Federal Government." The logic behind this was that it would make no sense to phase out nuclear power in Germany because of the inherent dangers, while still promoting its export to other countries. However, the guiding principles left some room for ECA support — for instance, safety upgrades and support for decommissioning — as long as exports were not classified as "nuclear technology". NGOs welcomed the exclusion criterion while warning that interpretation of what exactly constituted "nuclear technology" would prove controversial. "We foresaw that companies like Siemens, being important clients of Hermes and being active in the nuclear business, would think of clever ways around this term," explains Heffa Schücking of environmental organisation, urgewald.

Finnish Off?

These new principles were soon tested when, in 2003, Siemens tried to obtain an export credit guarantee for a turbine for the new Finnish reactor, Olkiluoto 3. They argued that the turbine was not nuclear technology, despite the fact that a turbine is an essential part of a nuclear power plant. The government signalled that it was ready to accept Siemens' argument and was minded to issue the guarantee. In the meantime however, plans for the sale of a German plutonium plant to China were leaked and generated a public outcry. The plant, designed for reprocessing used nuclear fuel, was built but never switched on, and an earlier attempt to sell it to Russia failed due to concerns about the possibility that it could be used to produce plutonium for nuclear weapons. In the public mind, both exports (the Finnish turbine seeking Hermes support, and the export to China) became linked, putting the reputation of the red–green government at risk. For the Greens, the sincerity of their anti-nuclear stance was thrown into doubt. This gave those members of parliament who had been against the Hermes guarantee for Olkiluoto 3, enough clout to force their parties to remove support for the guarantee altogether. The Greens, in particular, made a strong public statement stressing that they would stick to the nuclear exclusion criterion and block a guarantee for Olkiluoto. To avoid the bad publicity that a rejected guarantee request might bring, Siemens withdrew its application at the last minute. While there seem to have been further enquiries regarding possible support for nuclear projects like the Bulgarian Belene facility, they met with a negative response even before the formal request stage was reached, effectively ending all nuclear export promotion while the Hermes guiding principles remained in place.

Letters

Who will pick up the tab for the Olkiluoto 3 fiasco?

From Sophia Majnoni d'Intignano, Greenpeace France

Finland's Olkiluoto 3 reactor was supposed to herald a new dawn in nuclear energy. Using 'third generation' EPR (European Pressurised Reactor) technology, it was the most powerful ever approved, yet due to its 'modular' design it would supposedly be safer and quicker and cheaper to build than previous generations of reactors. It was hoped that construction of identical plants would swiftly follow, right across Europe. But instead of a showpiece project for third generation nuclear production, Olkiluoto 3 has become an enormous embarrassment. Bedevilled by construction problems, years late in delivery (and predicted to be at least several years more) and spectacularly over budget, the project is now embroiled in a massive public row about who is responsible for the mistakes and who will pick up the tab. And the whole affair was only made possible in the first place via massive underwriting by the French ECA, Coface.

The plant was sold to the Finnish energy utility Teollisuuden Voima Oy (TVO) in 2003 by AREVA NP (a joint enterprise between French company AREVA, and Siemens) the first to be sold in Europe following the Chernobyl accident of 1987. Financing was a challenge for this project, not least because of the costly increase in safety standards following Chernobyl and the earlier accident at Three Mile Island. The EPR came with a price tag of €3 billion, and this capital was raised through: a capital increase by the purchaser; a shareholders' loan ; a promise of a syndicated loan by a consortium of international banks; a number of bilateral loans between Finland and other countries; and a loan delivered by the same consortium of international banks but guaranteed by the French state (€570 million).

€570 million was the second-biggest guarantee ever delivered by Coface[1] and the first time it had ever underwritten a guarantee for a nuclear reactor.[2] Due perhaps to this lack of experience with nuclear technologies, Coface failed to undertake any of the necessary safety analysis required for a nuclear project. They engaged an environmental consultancy which carried out a standard impact assessment, not taking into account the specific safety issues inherent in nuclear projects. Having learned their lesson the hard way with Olkiluoto 3, however, Coface subsequently engaged improved safety expertise for the more recent Taishan and Jaitapur projects.

Coface's €570 million guarantee cleared the way for a new kind of state support for the French nuclear industry — one which displeased many. In 2007, Greenpeace and the European Renewable Energies Foundation (EREF) submitted a complaint to the European Commission[3] concerning the granting of the guarantee. However, the commission ruled that it does not constitute state aid, either to the nuclear industry or to the banks. They came to the conclusion that the French state did not play the role of lead investor, citing that: first, the guaranteed loan was small compared to the overall cost of the project; and second, that the €570 million guarantee was agreed in March 2004, four months after financing for the entire €2.5 billion project had already been secured from the banks. Many observers were puzzled at the basis for this ruling, as at €570 million, the guaranteed loan was equivalent to nearly 30 per cent of the total €1.9 billion loan, hardly a small amount compared to the overall cost. They also felt that the presumption that there were no discussions between Coface and the banks, prior to their decision to fund, verged on the naive.

As of May 2011, Olkiluoto 3 remains unfinished, with many years to go before it produces its first kilowatt of energy. After nearly six years[4] of construction problems and delays, the project has already run over budget by €2.7 billion and may leave TVO with losses of €2 billion. TVO and AREVA NP have engaged in public and quite acrimonious arguments about who will foot the bill. The question is, will the French state honour the guarantee and cover AREVA NP's losses? Seemingly not: in 2006, replying to a question asked by Member of Parliament Dominique Voynet, the French economic minister said that the cost of the delays at Olkiluoto 3 were not covered by the Coface guarantee, but must be borne by the industrial consortium.[5] The irony is that due to "commercial confidentiality," the details of Coface's guarantees are unknown. Even if the French government were to pay the €570 million, no-one would be any the wiser.

1 In 2010, Coface delivered a €1.5 billion guarantee to AREVA NP for the Chinese EPRs (Taishan 1 and 2).
2 Compagnie française d'assurance pour le commerce extérieur
3 C(2007) 4323 final ; Commission decision of 25 September 2007 on measures implemented by France in connection with the construction by AREVA NP of a nuclear power station for Teollisuuden Voima Oy.
4 Construction started in September 2005.
5 JO Senat du 14/09/2006 - page 2402

For sale: One discredited nuclear industry. Will ship anywhere. Finance available.

By Noriko Shimizu in Japan

This year all eyes have been on Japan as it struggles to overcome a national tragedy in the wake of March's devastating earthquake and tsunami. The drama unfolding at the damaged and leaking Fukushima plant has re-opened debate about the safety of Japan's domestic nuclear power programme, but behind the scenes and virtually unnoticed, another controversial nuclear policy has been pursued by the government — using ECAs to finance the export of Japanese nuclear technology around the world.

The 1990s

Between 1991 and 2000, the Japan Bank for International Cooperation (JBIC) supported six nuclear projects in three countries (China, Indonesia and Mexico) and one international institution, the Korean Peninsula Energy Development Organization (KEDO), with loans and guarantees to a total of almost 145 billion yen.

In China, JBIC gave support to three projects; in 1991 a loan agreement with the Mitsubishi Corporation (up to 0.3 billion yen for purchase of an electric transformer for a plant at Guangdong); and in 1997, financing for the Qinshan II and III reactors. In Indonesia, in 1993, a 700 million yen loan was provided to NEWJEC Inc, a subsidiary of Kansai Electric Power Co Inc, for an initial feasibility study for the 4million-kilowatt Muria Nuclear Power Plant. Initially slated to begin operating in 2016/17, as of May 2011 the project remains at the planning stage, delayed by the Asian economic crisis of 1997 and opposition from local communities who cite the lack of public participation; the location of the plant in a quake zone; and increasing foreign debt (particularly to Japan) as reasons the project should be halted. Nevertheless, the project remains on the cards.

In Mexico, JBIC provided ongoing support between 1997 and 2006 to the Comision Federal de Electricidad for turbine generator components at the Laguna Verde Nuclear Power Plant. Thirteen loan agreements were made, amounting to 480 million yen. It was in 2000 that an unsecured loan of up to 116.5 billion yen was agreed between JBIC and KEDO. The loan was to finance the construction of two light-water reactors (1 million kilowatt) in North Korea. (continued on page 7)

German nuclear exports 2009-2011: Back to square one!

In September 2009, a conservative liberal government came to power in Germany, with a policy of overturning the nuclear phase-out negotiated in 2000. In the face of a vocal anti-nuclear lobby and with upcoming elections in federal states, they waited a whole year until announcing that the lifetime of existing nuclear plants would be extended. But they were much quicker off the mark with another pro-nuclear initiative: supporting German nuclear exports via Hermes export credit guarantees. Only a month after the federal elections, AREVA NP (then a joint venture, in which Siemens held a 34 per cent stake) requested a guarantee for the Brazilian nuclear power plant Angra 3. This was impossible under the 2001 Hermes guidelines as they explicitly excluded guarantees for nuclear exports. Therefore, in December 2009, the new government removed the Hermes guidelines, replacing them with the "OECD common approaches on the environment and officially supported export credits". The OECD standards do not refer to nuclear projects, and certainly do not exclude them in the manner that the Hermes guiding principals had done. This left the government entirely free to go ahead with the Angra 3 proposal, despite vociferous opposition in parliament, lead by the Greens, who pointed out Angra 3 has long been a subject of fierce criticism in both Germany and Brazil.

Ongoing problems for Angra…

Angra 3 is a project with inherent weaknesses. Its technology is already outdated before construction even starts. The plant is of a second-generation design, as the plans and contracts for the Angra 2 (online since 2000) and Angra 3 plants were drawn up back in the 1970s, but this is only one of many problems identified. The plans for the storage of radioactive waste are poor, provisional and inadequately advanced. The Brazilian nuclear regulator is not an independent body, but has direct commercial interests in the Angra 3 project.[1] The emergency-management plans have been strongly criticised, as there is only one road for evacuation, which is threatened by landslides. The environment minister awarded the plant a licence with the proviso of over 40 additional requirements; but experts doubt whether Electronuclear, (the utility managing the plant) is capable of fulfilling these requirements. The plant is not sufficiently well protected against plane crashes — a failing which was highlighted in an "independent" study, specially prepared for AREVA NP, ironically for the purpose of calming opposition to the project within Germany. "The study, which we obtained only through a freedom of information request, is quite poor and clearly written to give the project a rubber stamp", explains Barbara Happe of the environmental organisation urgewald. "However, even this poor study mentions quite a few problems and underlines the lack of protection against plane crashes. Their conclusion is outrageous though, as they say, since there are already two other nuclear plants (Angra 1 and 2) that have no protection against plane crashes, one could easily build a third one under the same conditions at the site."[2]

...cannot stop the guarantee

Despite these problems, the German government's enthusiasm for Angra 3 remains undimmed. As the requested guarantee was for €1.3 billion, the project had to go before the budget committee in parliament, where the conservative liberal majority welcomed it, paving the way for a guarantee in principle being agreed on the 1 February 2011. However, to finalise the deal, AREVA NP and its client, Electronuclear, had to secure loans with banks. They received offers from six private banks, mainly French ones, but when Electronuclear failed to deliver the reports conditional to these loans, they withdrew their offers. "Apparently the private banks were demanding stronger conditions than the German government. That's a disgrace!" says Happe.

After the 2011 nuclear disaster in Fukushima, debate again flared and environmental organisations, media and parliamentarians urged the government to call the guarantee off. The government says it is in talks with the Brazilian government about the plant and the problems around it. The Brazilian parliament, on its part, ordered a review of the security of the two plants already online in Brazil. Shockingly, the review revealed that Angra 2 has been running for ten years without a final licence, and the head of the nuclear regulatory body has been forced to resign. Despite all this, the German government has yet to refuse the guarantee and says it remains "in talks."

No second thoughts on nuclear export promotion?

So, while at home the German government is forced by the Fukishima disaster to rethink its pro-nuclear policies (an agreement to phase out nuclear power by 2022 was agreed on 30 May 2011[3]) the picture is far less clear when it comes to the promotion of nuclear exports. Since the removal of the 2001 exclusion criterion, 11 guarantees (in principle or finalised) for deliveries to nuclear projects have been issued in Brazil, China, Lithuania, Russia, Romania, Slovenia, South Korea and France; deliveries for China and South Africa await decisions; and initial approaches for guarantees have been made for the United Kingdom, Finland and Vietnam. While maintaining a policy of promoting nuclear exports to other countries, the phase-out in Germany can be considered only half-hearted at best.

1 Financing the Brazilian nuclear programme: a risky investment" Greenpeace 11/2009

2 'Angra 3 – Gutachterliche Stellungnahme zur Erfüllung von Umwelt- und Sicherheitsstandards als Voraussetzung einer Export-Kredit-Versicherung' ISTec, März 2009, p. 38

3 http://www.endseurope.com/26392/germany-to-phase-out-nuclear-by-2022-at-latest?referrer=bulletin&DCMP=EMC-ENDS-EUROPE-DAILY

For sale: One discredited nuclear industry. Will ship anywhere. Finance available. following previous page

The motivation was political: in return for the financing and construction of the reactors, the government of North Korea agreed to freeze and ultimately dismantle its nuclear weapons programme. However, the deal collapsed in 2005 as it became apparent that North Korea did not intend to comply. As well as JBIC, there is another Japanese ECA: Nippon Export and Investment Insurance (NEXI). NEXI's involvement in the nuclear sector during the 1990s is undocumented, mainly because it retains its contract information for only three years after the insurance period ends.

The 2000s

From 2001 to 2008, the export of nuclear technology was not a prominent part of Japanese policy. JBIC continued to support Laguna Verdein Mexico, and the limited information available from NEXI indicates a total loan value of 55.73 billion yen, to countries in Asia, Europe North America and Central America. Since the Democratic Party took office in 2009 however, the policy has changed. In June 2010, the government announced that nuclear energy was a key plank of its 'New Growth Strategy' of 'green innovations' to combat climate change.

The Ministry of Economy, Trade and Industry (METI) has calculated that each new nuclear power plant built is equivalent to a reduction of six million tons of CO2 emissions. They hope to use bilateral carbon credits for nuclear new-build as part of their Kyoto carbon-reduction targets. METI has already conducted feasibility studies of two nuclear power plants in the Ha Tinh and Quan Ngai Provinces of Vietnam, followed by an agreement that Japanese businesses will be awarded the contracts to build two nuclear power reactors there.

In implementing the new pro-nuclear policies, the government has made good use of JBIC and NEXI to promote nuclear exports. Japanese NGOs have argued that the current process followed by ECAs when financing nuclear-related projects is flawed. Under the current system, METI reviews the projects on behalf of JBIC and NEXI, focusing on issues particular to nuclear power. The NGOs argue that METI's review is not adequate or appropriate, and the government has responded by agreeing to establish new guidelines for ECA-funding of nuclear projects. The guidelines will stipulate that 'JBIC will not finance a nuclear project, if the information regarding safety, measures of nuclear accident and nuclear waste are not disclosed to local people'. In January 2011, before the process of establishing these guidelines had begun, the JBIC website, announced the commencement of environmental and social screening process for two new plants at the South Texas Project Nuclear Power Station. More than 170 organisations from the US, Japan and other countries united in urging the Japanese government and JBIC not to support this project — citing cost overruns and the high potential in Texas for renewable-energy alternatives. But the debate was to be overtaken by events. In the wake of Fukushima, everything has changed. With new nuclear development in the US looking uncertain, one of the backers, NRG Energy, decided to write off its investment in the project. Then another potential investor, the Tokyo Electric Power Company, Inc. (TEPCO), the owner of the Fukushima facility, stated that it would be difficult for them to be involved in nuclear exports given the situation. The Texas project remains on the list of those "under consideration" by JBIC, but it now looks increasingly unlikely that finance will be made available.

It goes without saying that, against the backdrop of the stricken reactors at Fukushima, Japan's enthusiasm for nuclear power has been utterly thrown into doubt. The government says it will comprehensively review Japan's domestic energy policy. But will Japan's ECAs be asked to stop their support for nuclear exports to other countries? This remains unanswered.

FINANCING NUCLEAR TIMES

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ECA's: stuck in a nuclear rut and deaf to the alternatives

Noriko Shimizu
Friends of the Earth, Japan

On 11th March, all the old assumptions about the future of nuclear energy evaporated, as hard on the heels of the Japanese earthquake and tsunami came the world's worst nuclear accident for a generation. Two months later, the reactors have not yet been brought back under control; radioactive material is still escaping, albeit at a lower level than before. Fukushima has collapsed all the old myths about nuclear power: that it was a safe, low cost, and environmentally-friendly technology — myths which many believed, at least in part. Perhaps the most shocking thing about Fukushima is that it took a Level Seven accident to make us wake up and pay attention to the true costs of nuclear power.

The damage caused by the nuclear accident is socially, economically and environmentally immense. More than 200,000 people live within 30 km of the leaking reactor, many of whom have been ordered to evacuate their homes. Agriculture, fishery and many economic activities were also massively disrupted in Fukushima and the surrounding region. The level and scope of compensation for such losses are immeasurable and far beyond what Tokyo Electric Power Company (TEPCO) can afford, forcing the Japanese government to step in with public funds.

Despite this tragic accident, and although enthusiasm for their domestic nuclear policies has taken a nose-dive, no national government, not even Japan, has yet announced the cancellation of their ECA-subsidised nuclear export programmes. The nuclear poison that their own electorate will no longer stomach is apparently still good enough for the impoverished populations of Eastern Europe and the developing world.

Worse still, some have already trivialised the catastrophe at Fukushima as being about mere "safety issues"; conveniently dodging the bigger question: where does nuclear sit in the energy mix, if at all. Whatever new high-tech precautions we take, there is no denying that inevitably accidents will happen. When they happen, the damage is irreparable.

The Intergovernmental Panel on Climate Change recently published a report[1] stating that, under the most optimistic scenarios, we could achieve 77 per cent of our global energy from renewables by 2050. If this is true, then the continued support by ECAs for nuclear development, to the detriment of the long-term health and sustainability of our environment and economies, can only seen as self-defeating, foolhardy and ultimately perplexing. Each successful nuclear deal made possible by an ECA is a pyrrhic victory we will regret for generations.

1 http://srren.ipcc-wg3.de/report IPCC (2011) 'Special Report on Renewable Energy Sources and Climate Change Mitigation'

Will France ignore safety warnings and fund the "next Fukushima" at Jaitapur?

By Sophia Majnoni d'Intignano in Paris

In 2008, the USA and India agreed a deal making possible, for the first time in three decades, civilian trade for nuclear technologies between the two countries. While the European market is closed for new reactors, India's energy needs are growing fast, creating a large market for American, Russian and French nuclear exports. Despite the fact that India has not signed the Nuclear Proliferation Treaty, and has developed a significant military programme, nuclear countries such as France are now at liberty to sell their civilian reactors there. America and France did not hesitate to exploit this new market. Indeed, India already plans to build, at Jaitapur in Maharashtra, what it boasts will be the biggest nuclear power plant in the world, importing from France six European Pressurised Reactors (EPR). Negotiations between the Indian electricity company, NPCIL, and Areva, for the first two EPR, began in 2009. This deal is expected to cost at least €5.4 billion — a surprisingly low estimate given the cost of the two EPRs currently under construction in Europe.[1] India expects the contract to be signed by mid 2011. Meanwhile the negaotiators occupy themselves with the logistics of financing the deal. The fiasco of the Olkiluoto 3 project in Finland has highlighted to private investors the very real risk they take when entering into these contracts.[2] Increasingly, private banks will not invest in nuclear reactors without significant underwriting from public funds: the public guarantee demanded for China's Taishan EPR project was three times higher than for Olkiluoto 3, despite comparable project costs for the two. Despite all official claims to the contrary,[3] financing is a crucial part of the contract negotiations, and discussions between ECAs, banks, buyers and sellers, start long before the point of signature. In 2010, the French bank BNP Paribas was mandated to be the financial advisor for the Jaitapur deal and several private banks (such as HSBC or Credit Agricole and Société Générale) were asked to be part of the future syndicated loan. Meanwhile the Indian finance ministry has been approached for, and rejected, an "in principle and over-arching" sovereign guarantee for the debt raised from European banks, unless, in the aftermath of Fukushima, further safety assurances are delivered. The French ECA Coface has engaged environmental and safety consultants to analyse the Jaitapur proposals. Their eight-week brief began just days before the Japanese accdent. It is not clear, now, how long their report might take to deliver. Local communities have been fighting the proposals for more over a year, and the Fukushima incident (in a country with supposedly the highest safety standards in the world) has heightened the level of local concern. The environmental licensing process for Jaitapur has violated both Indian law and the OECD guidelines for multinational enterprises, by denying affected communities access to the Environmental Impact Assessment Report, and beginning the forced acquisition of land without prior community hearings. The project has already led to massive social disruption as over 1,000 families will lose their farms and are being offered impossibly low compensation of 5 cents per square metre of agricultural land. As recently as December 2010 more than 1,500 people were detained during protests against Jaitapur. Human-rights activists including the former high court judge B.G. Kolse-Patil have criticised the government for using violence and fabricating charges against peaceful demonstrators. The heavy-handed state response led to a death in April 2011 when police opened fire on protestors. The progress of the Jaitapur proposal raises a crucial question: how competent are the credit agencies when it comes to analysing the safety of nuclear projects, and how much power (and indeed, inclination) do they have to demand improvements? NGOs have highlighted many safety and environmental issues at Jaitapur. For example, the plant will be sited in the only high-seismic-risk area of the west coast. Does Coface have the authority — and if so, is it willing — to demand a relocation to a safer site? Furthermore, the Indian regulator has a poor track record when it comes to safety issues. Does Coface have the power to ask for an international team of safety experts to oversee the construction of the reactors, to ensure that the highest standards are adhered to? If necessary, are the French government and Coface prepared to reject this deal, if environmental and safety short-comings are not addressed? Or will the profits of the French nuclear export industry always override all other concerns? Coface has given assurances that ECAs can and do improve the safety of the projects they fund. But given the enormous commercial interests at play and the lack of transparency in their decision-making processes, fundamental doubts persist about their real priorities, and therefore the safety of French nuclear exports.

1 The Finnish EPR will cost at least €5.9 billion instead of the 3.2 €billion announced; the French project has lready reached €5 billion (budget: €3.3 billion) , and only four years since construction began.
2 These risks are detailed in a 2009 Citi group report "New nuclear the Economics say no".
3 C(2007) 4323 final ; Commission decision of 25 September 2007 on measures implemented by France in connection with the construction by Areva NP of a nuclear power station for Teollisuuden Voima Oy.

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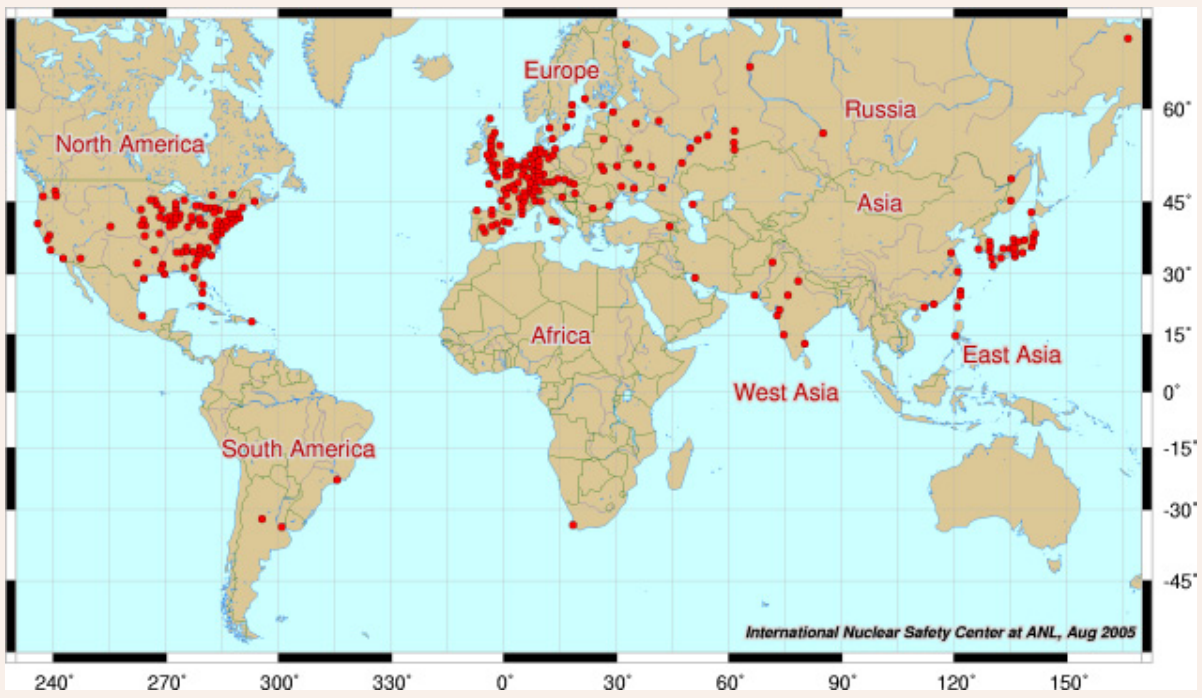

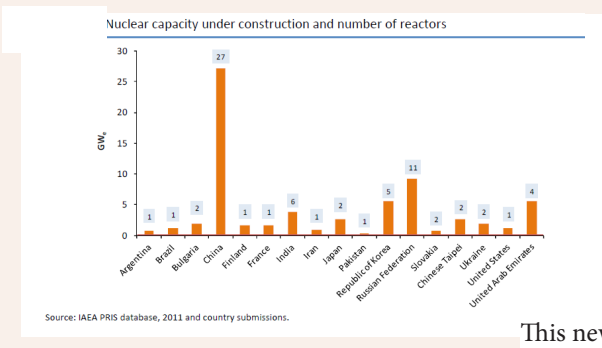

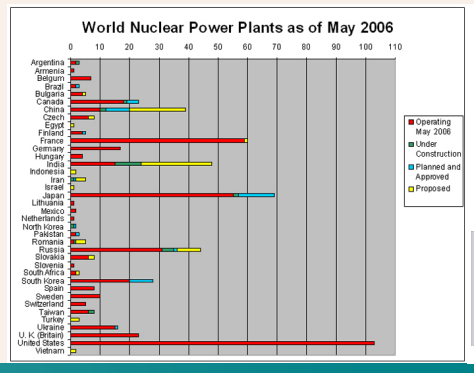

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