

Thorium Power News Update
January 31, 2008
Letter from the CEO

Dear Stockholders:

We are pleased to share this latest news update, which includes company news as well as industry-related developments.

Latest Company News

We were excited to see the recent coverage in *World Nuclear News*, the leading trade journal. In a January 7th article, WNN noted our new formal agreement with the Kurchatov Institute relating to the irradiation testing program for our nuclear fuel designs. The article included a statement by Thorium Power's executive vice president Andrey Mushakov, who noted that the "agreement formalizes our rights to valuable technical data necessary for regulatory licensing of our commercial fuel designs." Elsewhere, MSN Money recommended Thorium Power in a January 11th article titled "Britain Goes Nuclear: How to Cash In." The reporter examined the benefits of thorium as well as the problems facing the nuclear industry before making the following recommendation: "[Given] that the biggest worry with nuclear power is the waste issue, this little stock is one of the few ways to play a potential solution."

Industry Developments

From India to the Middle East, we observed a number of major developments. In regard to the US-India deal, we continue to see positive progress: The Nuclear Suppliers' Group announced that it was optimistic about giving a waiver to New Delhi before March to allow nuclear commerce with India, thus completing a crucial step towards operationalization of the India-US civil nuclear deal. Furthermore, India's External Affairs Minister Pranab Mukherjee recently noted that the negotiations with the IAEA on a safeguards treaty might be completed in the near term. France's pursuit of a civil nuclear agreement with India also generated attention and cemented India's importance a key player in the industry.

On the institutional front, the World Economic Forum's *Global Risks Report 2008* highlighted the need for new thinking and concerted action on a number of global issues, including energy supply, and an international "nuclear fuel insurance fund." Meanwhile, the European Commission echoed this sentiment by announcing its "20 20 by 2020" initiative, which aims to cut Carbon-dioxide emissions by 20% while securing 20% of EU energy from alternative energy sources. Finally, US Energy Secretary Sam Bodman acknowledged the importance of nuclear energy in future global energy strategies during a five-nation tour of the Middle East.

Once again, these latest developments support our unique positioning as a source of solutions to address the major industry concerns – how to solve proliferation, reduce waste and improve profitability.

Very Truly Yours,
Seth Grae
Chief Executive Officer

Thorium Power in the news

MSN Money – Britain Goes Nuclear: How to Cash In (1.11.2008) – The online news source reports on the recent developments in the nuclear industry, particularly in Europe and Britain. In examining the “nuclear bonanza,” the reporter focuses on the nuclear potential, the problems facing the industry, and the benefits of thorium fuel. The final recommendation is as follows: “[Given] that the biggest worry with nuclear power is the waste issue, this little stock is one of the few ways to play a potential solution.”

World Nuclear News – Agreement on testing of thorium fuels (01.07.2008) – The industry news source reports on Thorium Power’s December 31st announcement that it had reached a new formal agreement with Russia’s Kurchatov Institute relating to the irradiation testing program for Thorium Power’s thorium-based nuclear fuel designs. The article quotes Thorium Power’s executive vice president Andrey Mushakov, who noted that the “agreement formalizes our rights to valuable technical data necessary for regulatory licensing of our commercial fuel designs.”

India-US nuclear agreement

World Nuclear News – India secures approval from Britain, France said to be next (01.23.2008) – The trade reports on PM Gordon Brown’s recent dialogue with PM Singh of India. Brown voiced his support for the US-India civil nuclear deal and said that he would work with his Indian counterpart to agree to a civil nuclear cooperation deal.

Press Trust of India – Indian atomic body chief supports civilian nuclear deal with US (01.20.2008) – The news source reports that India’s former Atomic Energy Commission Chairman M.R. Srinivasan said that the country “should go ahead” with the civil nuclear agreement with the US as “India cannot remain out of the nuclear club.” Srinivasan also noted that efforts should be made to boost civil nuclear power generation, which was as low as three percent of the total electricity production.

Press Trust of India – Nuclear Suppliers' Group "optimistic" about India waiver before March (01.13.2008) – The news source reports the Nuclear Suppliers' Group announced that it is optimistic about giving waiver to New Delhi before March to allow nuclear commerce with India, thus completing a crucial step towards operationalization of the India-US civil nuclear deal. The source notes that countries like Switzerland and New Zealand, which had been resisting the move, had softened their stand and were working towards making a written draft on the exemption to enable trade in nuclear material and technology with India.

Press Trust of India – Nuclear pact with US will help India achieve "energy security" (01.10.2008) – The news source reports on Indian External Affairs Minister Pranab Mukherjee’s comments on January 9 at the sixth Pravasi Bharatiya Divas, the annual conference of overseas Indians. The article notes that Mukherjee spoke in favor of the India-US civil nuclear agreement saying that it would help India achieve energy security.

Press Trust of India – Government "working on" US nuclear deal – India minister (01.04.2008) – The newspaper reports on comments by India’s External Affairs Minister Pranab Mukherjee who said that the government had not “given up” on the India-US nuclear deal and noted that he hoped negotiations with the IAEA on a safeguards treaty would be completed by the end of the month.

General nuclear news

World Nuclear News – India, France sign civilian nuclear agreement (01.25.2008) – The industry trade journal reports on Indian Prime Minister Manmohan Singh’s announcement that India and France have finalized negotiations for a bilateral agreement on cooperation in civil nuclear energy.

Boston Globe – Sarkozy seeks civil nuclear deal with India (01.25.2008) – The newspaper reports on French President Nicolas Sarkozy's recent visit to India and his aims to "boost civil nuclear cooperation and defense deals." The article notes that Sarkozy announced his support for India's bid to become a permanent member of the United Nations Security Council and for the India-US civil nuclear agreement.

World Nuclear News – Proposal for global nuclear fuel insurance fund (01.25.2008) – The nuclear industry trade journal reports that the World Economic Forum (WEF) has published the *Global Risks Report 2008*, which highlights the need for new thinking and concerted action on a number of global issues, including energy supply, and specifically, an international "nuclear fuel insurance fund".

World Nuclear News – Second reading of energy bill (01.24.2008) – The industry trade journal reports that the UK energy bill received a second reading in the country's lower house on January 22nd where business and enterprise minister John Hutton said he hoped for a nuclear renaissance in the country. Hutton also announced new legislation which stipulates that any new nuclear power reactors in the country must be paid for by private enterprise which "will ensure that all operators have in place a robust financing arrangement, in the form of a funded decommissioning program, before operation of a power station commences."

World Nuclear News – Bodman wraps up Middle East odyssey (01.24.2008) – The industry trade journal reports that US Energy Secretary Sam Bodman acknowledged the importance of nuclear energy in future global energy strategies during a five-nation tour of the Middle East. The source notes that while none of the countries that Bodman visited have nuclear energy, even the most Oil-rich of the Gulf states are now giving serious consideration to the nuclear power option.

World Nuclear News – '20 20 by 2020' says Europe (01.23.2008) – The industry trade journal reports that the European Commission has made long-awaited proposals on energy and climate change including a goal to cut carbon dioxide emissions by 20%, and a goal to have 20% of the EU regions' energy to come from renewables.

World Nuclear News – Poll shows increased support for new nuclear in Sweden (01.22.2008) – The industry trade reports that a new public opinion poll suggests that almost half of Swedes support the construction of new nuclear power plants in the country, despite Sweden's policy for phasing out nuclear energy. The survey indicated widely varying opinions according to political affiliation.

World Nuclear News – University's nuclear chair inaugurated (01.18.2008) – The news source reports that the drive to create a new national nuclear training network in Britain has advanced with the inauguration of the Lloyd's Register Educational Trust Chair in Nuclear Engineering and Decommissioning at Lancaster University.

Reuters – Canada's AECL agrees on nuclear study in China (01.10.2008) – The news wire reports on an agreement reached by the Atomic Energy of Canada Ltd. and the Nuclear Power Institute of China to study nuclear technology that uses less uranium in response to a possible future shortage of the fuel. The article notes that China is one of the world's top three nations in terms of reserves of thorium.

World Nuclear News – Russian push for new business continues (01.03.2008) – The nuclear industry trade journal reports that Russian diplomats and officials have continued their push for nuclear power contracts worldwide, addressing Bangladesh, Uruguay, Turkey, Morocco, Egypt and even the UK.

Britain goes nuclear: how to cash in

By John Stepek
MSN Money
January 11, 2008

At last, the government has finally got round to giving the green light for building new nuclear reactors in the UK. John Hutton, the business secretary, announced that nuclear power is "clean, secure and affordable."

It looks like we'll have our first new nuclear power station by as early as 2017, if Luc Oursel, the chief executive of French group Areva, has anything to do with it. The new stations are likely to be built on or close to existing sites, to make planning easier to push through (people are less likely to object to living next to a nuclear power station if they already live next to one).

Of course, the row over nuclear will continue to rage - campaigners such as Greenpeace aren't happy about the decisions and there's also the big question to consider of where all that waste is going to go. I have to say, the waste issue is something that concerns me. But Mark Henderson, the science editor of The Times, makes a very good point on this problem. Apparently, the country "already has enough [nuclear waste] to fill five Albert Halls" so "we will just have to dig a slightly bigger hole that will have to be dug anyway".

Why we need nuclear power

More to the point, there's the big problem of what we'll do if we don't turn to nuclear.

Nuclear accounts for roughly a fifth of our power generation just now, but the trouble is, most of the current generators are due to shut by 2023. And we don't have any alternatives to plug the gap - at least, not if we want to cut carbon emissions and enjoy at least some level of energy security.

Already, the price of oil is at \$100 a barrel, at a time when our domestic supplies in the North Sea are rapidly running low. At the same time the UK has moved from being a net exporter of gas to a net importer.

Meanwhile, many coal-fired power stations are also nearing the end of their lives - we've got plenty of coal left here in the UK, but if we want to cut down on our carbon emissions then we can forget about increasing the amount we burn for energy.

And then of course, there are renewables like wind and solar power - all very nice in principle, but still not functioning well enough in reality (though that's not to say they never will).

Nuclear bonanza

In any case, plenty of companies are looking for the opportunity to pile in. As well as Areva, we've got French peer EDF, British Energy and Centrica from Britain and Germany's E.ON and RWE all looking for a shot at building or funding new plants.

But what does all this mean for the overall nuclear investment picture - which is something I've covered here in the past? Well, not much really. While the government has been twiddling its thumbs, plenty of other countries have cheerfully been looking to nuclear power as the solution to their energy problems.

The Chinese are a good example. They're keen on nuclear power and, like us, it's partly down to environmental reasons. Not carbon dioxide emissions of course - they have a much more

pressing problem. Their reliance on coal as a power source means massive and dangerous air pollution in the country, so anything that provides a viable alternative looks good to Shanghai. In fact, one concern is that our government may have taken too long to make its decision. As Tony Ward of management consultants Ernst & Young told The Telegraph, projects in other countries have already sucked in much of the available funding appetite for nuclear power stations: "There is great competition for resources, components and capital - the UK will need to work hard to remain an attractive option."

And because there's been no investment in the industry for so long, there's likely to be a shortage of home-grown talent to run these power stations. After all, who in the 80s and 90s said they wanted to be a nuclear engineer when they grew up?

Against that backdrop, the government's decision is just a drop in the ocean as far as the nuclear industry is concerned.

Is there anyone left to invest in?

One stock that might still be worth a look for those who have yet to invest in uranium or one of the nuclear engineering groups such as Areva, is US-listed Thorium Power.

What's that, you may well ask? Well thorium is a potential alternative to uranium as nuclear fuel. The mineral has several big advantages over uranium - for one thing, it's more abundant and in easily accessible locations, with the largest deposits in Australia and India. More importantly, it's less radioactive than uranium and the waste has a much lower half-life (in the hundreds of years, rather than the tens of thousands).

Better yet, thorium could be a solution for disposing of old plutonium stockpiles - these are a real security hazard, in that ex-weapons plutonium is the sort of thing terrorists would love to get their hands on. If you burn the plutonium in a reactor with thorium, then the leftover waste is no longer weapons-grade.

Thorium Power is developing fuel designs for use in nuclear reactors. It's still at a pre-commercial stage, but the company's designs would be usable in currently existing types of reactor, so it wouldn't necessarily be a huge transition to swapping from uranium to thorium.

I would point out that this is a very speculative company. But given that the biggest worry with nuclear power is the waste issue, and this little stock is one of the few ways to play a potential solution, I think it's certainly worth the more adventurous investor investigating it further.

Agreement on testing of thorium fuels
World Nuclear News
January 07, 2008

Thorium Power of the USA announced on 31 December that it had reached a new formal agreement with Russia's Kurchatov Institute relating to the irradiation testing program for Thorium Power's thorium-based nuclear fuel designs. The program has been ongoing since 2002. The agreement assigns to Thorium Power the worldwide rights, title and interest in and to the technical data generated from the ampoule irradiation testing of seed and blanket fuel samples in the Kurchatov research reactor over the past two years. Thorium Power executive vice president Andrey Mushakov, said: "Ampoule irradiation testing is a critical long lead time activity in our comprehensive program of technology testing and demonstration activities and it is a vital process that new fuel designs must perform as part of a fuel qualification and regulatory licensing process. The ampoule irradiation testing work continues as expected at the Kurchatov Institute, and this agreement formalizes our rights to valuable technical data necessary for regulatory licensing of our commercial fuel designs."

India secures approval from Britain, France said to be next
World Nuclear News
January 22, 2008

UK prime minister Gordon Brown has said he supports the US-India deal and that he would work with his Indian counterpart, Manmohan Singh, to agree to a civil nuclear cooperation deal.

A joint statement said: "The UK supports the India-US nuclear cooperation initiative with all its elements, including an appropriate India-specific exemption to the Nuclear Suppliers Group (NSG) guidelines."

The prime ministers met during Brown's tour of India, during which UK firms are to sign some GBP10 billion (\$19 billion) in contracts.

The joint statement said that the two countries would "work expeditiously" towards a bilateral agreement on civil nuclear energy.

According to a report in *The Hindu*, France has already negotiated a civil nuclear cooperation deal with India which is being kept under wraps until specific IAEA safeguards are agreed for Indian nuclear sites. The report said both agreements could be concluded at the end of this month during a visit by French President Nicolas Sarkozy. It remains unclear whether Sarkozy's girlfriend, supermodel Carla Bruni, will attend.

Singh would now be able to count on French and British support at the NSG in addition to that of the Americans, Russians and Chinese. German chancellor Angela Merkel said last year that she envisaged her country could do much nuclear trade with India if trade agreements could be made.

Presently nuclear trade is restricted by the 45-member NSG, which issues strict guidelines for doing business. One rule is that countries that have not signed the Nuclear non-Proliferation Treaty (India, Pakistan, Israel and North Korea) are off limits. The initiative to change the rules for India was started in 2005 by President George Bush, but the cooperation agreement he agreed with Singh is currently stalled in the Indian parliamentary system.

Indian atomic body chief supports civilian nuclear deal with US
Press Trust of India
January 20, 2008

Bangalore, 19 January [Saturday]: Although the Indo-US deal is not "the best" for India, India should go ahead with the deal while protecting its interests, former Atomic Energy Commission Chairman M.R. Srinivasan said here Saturday.

"India cannot remain out of the nuclear club. It has to be within it if it has to protect its interest and call shots", Srinivasan said while speaking at a discussion on the deal, organised by the Karnataka Chapter of Indian Institute of Public Administration here.

"The option of remaining out of the nuclear regime will not help the country. We can be part of it, engage in it", he said.

"I know this is not a best deal for India. Even in the US, they say it is not best for them. But this is an agreement we should go ahead with", Srinivasan said.

He said efforts should be made to boost civil nuclear power generation, which was as low as three percent of the total electricity production, quite meagre when compared to 75 to 80 per cent in countries like France.

He said the argument of Left parties that nuclear energy production costs were high, was unfounded. He said the cost of production was less compared to other sources of energy.

Srinivasan, who is also the member of the Atomic Energy Tariff Committee, said the energy that would be produced at Koodankulam nuclear power plant in Tamil Nadu was expected to cost 2.40 rupees per kilo watt hour.

The cost is less than one rupee at Tarapur [nuclear] plant, he said.

"India should aim at increasing its nuclear power production to the level of 25 per cent to 30 per cent by 2050", Srinivasan suggested.

Srinivasan said the US, France and other countries which are in the nuclear club call the shots just because "they are into it".

"If we are out of it, nobody will listen to us. This point is not understood by the Bharatiya Janata Party [BJP] and the Left parties", he said.

Srinivasan wanted India to import more number of light-water reactors to boost nuclear power generation.

Under the existing 123 agreement based on Hyde Act, it will not be possible for India to conduct nuclear test, he said, while pointing out that the country had not attempted one after the Pokhran-II test in 1998 during the National Democratic Alliance regime.

After the 1998 test, the then prime minister A.B. Vajpayee had announced a moratorium on tests, he said and opined that "the present government has no option but to observe voluntary moratorium".

In a word of caution, Srinivasan said "what is the guarantee that the US or China will not conduct nuclear tests. The US itself is talking about replacing nuclear weapons with more reliable ones".

Commenting on BJP's claims that the agreement will affect India's strategic relations with the US, Srinivasan said "it is an unfair reading of the agreement".

Nuclear Suppliers' Group "optimistic" about India waiver before March
Press Trust of India
January 13, 2008

Vienna, 13 January: Ahead of a key meeting between India and International Atomic Energy Agency (IAEA) on a safeguards agreement for the implementation of the Indo-US civil nuclear deal, the 45-member Nuclear Suppliers' Group (NSG) is apparently optimistic about giving waiver to New Delhi before March to allow nuclear commerce with it.

It is learnt that even countries like Switzerland and New Zealand, which had been resisting the move, had come around and softened their stand and in fact were working towards making a written draft on the exemption to enable trade in nuclear material and technology with India.

The Nuclear Suppliers' Group members, who met here last week, were optimistic about completing the process of giving waiver to India without much opposition before March, sources said.

The draft paper on exemption to India by NSG was a crucial step towards operationalization of the Indo-US deal, they said.

India has been demanding a "clean and unconditional" exemption from NSG.

Meanwhile, India and the UN nuclear watchdog, International Atomic Energy Agency (IAEA) are working towards readying an "agreed text" of the India-specific safeguards at a meeting next week here.

The Indian team will be leaving for Vienna on January 16 and according to External Affairs Ministry this consultative meeting could possibly be the final one.

"(It is) possibly the final round. The draft has to be discussed by the United Progressive Alliance-Left committee in India and should be ready to be placed before the Board of governors of IAEA in March," IAEA sources said.

India has said it hopes to wrap up the safeguards agreement with IAEA later this month before approaching the Nuclear Suppliers Group (NSG).

The two sides had failed to reach an "agreed text" in the last round earlier this month with the issue of India's right to hold its strategic reserve to cater to lifetime supply to its civilian nuclear plants being a sticking point.

There was also no meeting point on the issue of corrective measures to be undertaken in the event of stoppage of fuel to power plants, sources said.

"We hope to do another round (of negotiations) in the middle of January in Vienna. We hope to wrap it up. The discussions are proceeding smoothly," Foreign Secretary Shivshankar Menon told reporters in New Delhi Friday.

Only when IAEA prepares a final agreed text which has to be cleared by its Board of Governors, the US could go ahead with its talks with the 45-member Nuclear Supplier's Group to get a clean and unconditional exemption for India to do nuclear commerce internationally.

Once the IAEA agreed text and the draft on waiver for India by NSG, one of the pre-requisites for operationalization of the deal first mooted in July 2005, are ready, they have to be finally approved by the US Congress.

The US lawmakers are silent on the issue due to hectic campaign here for the next presidential elections.

Nuclear pact with US will help India achieve "energy security"
Press Trust of India
January 10, 2008

New Delhi, 9 January: As uncertainty looms over the Indo-US nuclear deal, External Affairs Minister Pranab Mukherjee on Wednesday [9 January] strongly spoke in its favour saying the pact would help India achieve energy security.

"The India-US civil nuclear energy cooperation is precisely intended to address our concerns on energy security," he said at the sixth Pravasi Bharatiya Divas, the annual conference of overseas Indians here.

Seeking to underscore the importance of nuclear energy, he said India should make all possible efforts to build energy stocks, explore alternative avenues of energy and leverage multilateral and bilateral frameworks to secure energy supplies for long term.

"Today, a barrel of oil has touched 100 US dollars and this has sent shock waves across the world. For India, it means additional resource allocation of millions of dollars in our national plan," Mukherjee said.

Mukherjee was the chief guest at a session on "Developmental challenges of the states" at the conference where he shared the dais with Chief Ministers Narendra Modi (Gujarat), Sheila Dikshit (Delhi), Bhupinder Singh Hooda (Haryana) and Madhu Koda (Jharkhand).

He underlined the need for inclusive growth and balancing "the rights and needs of the populace with the growing demands of industrialisation".

"Sustainable economic growth is more than a buzzword. It is the reality on which our society has to be built," Mukherjee said.

Government "working on" US nuclear deal - India minister
Press Trust of India
January 4, 2008

New Delhi, 4 January: Government has not "given up" on the Indo-US nuclear deal and dismissed any link between recent electoral defeats of Congress and progress with left on the issue.

External Affairs Minister Pranab Mukherjee also discounted the possibility of mid-term polls to Lok Sabha [lower house of parliament] in the wake of differences with the supporting left parties on the deal.

During an interaction with PTI editors here, Mukherjee, the key government negotiator with the left on the deal, agreed that "time is running out" for completing the processes in executing it.

"But one cannot help it."

"No, I have not given up. We are working on how we can proceed," he said.

He was replying to a question whether government has not given up on the deal because of the stiff opposition from the left parties.

He dismissed suggestions that the deal would now be on the backburner as the left may step up pressure in the wake of Gujarat and Himachal Pradesh [states] poll outcome, saying "their position is not linked with electoral successes and reverses".

Making light of a question on the possibility of snap polls, he said: "So long as you go on talking about mid-term poll... [ellipsis as published] ultimately we will reach the day when polls will be held in time."

Mukherjee sidestepped repeated queries on a specific time frame for operationalizing the deal, but hoped that negotiations with the IAEA on a safeguards treaty should be completed by this month end.

Agreeing that time was running out for concluding the deal, the senior Congress leader said if the government loses majority the international community will not come forward to have an agreement with a minority government.

"Of course time is running out. But one cannot help it. Either you lose majority, and if a government loses majority nobody is going to have an arrangement with a minority government," he said.

On the other hand if similar agreements were to be entered into with other countries like France and Russia, the same process of agreements with IAEA and the 45-nation Nuclear Suppliers' Group was needed.

The minister said the left leaders have no objection to the IAEA as they appreciate and know it well that India was one of the founder-members of the global nuclear watchdog and had been a member of its board for several times.

"The left leaders have also made it clear that they have no quarrel with IAEA," he said.

He said the left has "problem with the US" and had been opposing the civil nuclear cooperation agreement as soon as the amended act was passed by the US Congress last December, which was an enabling legislation to the 123 agreement.

"Left's opposition is with the US. But we are having some arrangements. We bought some reactors from Russia, we bought some materials from France and some nuclear energy programme is going on in this country," the external affairs minister said.

Asked whether Congress would continue cooperation with the left parties after the next Lok Sabha polls, he said the question was hypothetical as "democracy is a game of numbers". The Congress has always opposed the left. The cooperation with the left had started from 2004 and was working till date.

"Before that there was no formal or informal cooperation. Last alliance with the Communist Party of India (CPI) in Kerala [state] in the seventies. But that was broken in 1977 after our defeat... [ellipsis as published]. We are carrying on (now)."

To a question on Bharatiya Janata Party (BJP) [opposition party]'s decision to project L.K. Advani as its prime ministerial candidate, Mukherjee said there was nothing wrong in political parties projecting their leaders.

Asked whether Congress was planning to have a majority on its own, he said every political party will aspire to come to power on its own.

"So far as Congress is concerned, it is not a pipedream. Forty-five years out of 60 years Congress ruled with an absolute majority... [ellipsis as published]. But currently we are going through a coalition. For Congress it is for the first time we have entered into a coalition government... [ellipsis as published]. We would like to observe coalition dharma [ethics] in letter and spirit."

India, France sign civilian nuclear agreement
Press Trust of India
January 25, 2008

NEW DELHI: Giving a new impetus to strategic ties, India and France have finalised negotiations for a bilateral agreement on cooperation in civil nuclear energy, Prime Minister Manmohan Singh announced on Friday.

The two sides also decided to bolster their defence cooperation and take it "beyond a buyer-seller" relationship, Singh said at a joint press conference with French President Nicholas Sarkozy.

During the talks, Sarkozy, who arrived here on a two-day visit, reaffirmed France's support to India's bid for a permanent seat in the expanded UN Security Council.

Singh, who held extensive talks with Sarkozy on his maiden visit to India, said the two sides have agreed to strengthen cooperation to fight terrorism.

Describing his discussions with Sarkozy as "very productive and wide-ranging", Singh said both the sides "reaffirmed our strong mutual desire to further strengthen our strategic partnership."

"This partnership is long standing and rests on shared values and similar approaches to regional and global issues." Singh said.

Singh said both sides agreed to further consolidate the multi-faceted cooperation in the fields of trade and investment, technology transfer, space, defence, culture and education.

"The initiatives that we have take reflect our mutual strength and growing potential of our two countries to contribute to each others' development and national priorities," he said.

Contrary to media speculation, Sarkozy landed here without his girlfriend and former supermodel Carla Bruni. There was suspense on both sides on whether 40-year-old Bruni will accompany 52-year-old Sarkozy on his brief visit to Taj Mahal.

Singh said the two sides have agreed to intensify business-to-business contacts and establish an Indian Cultural Centre in Paris.

He said Sarkozy indicated to him during the talks his intention to facilitate travel of large number of Indian students to France for higher studies.

In the area of defence cooperation, "we have agreed to go beyond a buyer-seller relationship. We will increasingly focus on joint research and development projects, transfer of technology and greater military exchanges," Singh said.

"We have finalised negotiations in regard to reaching a bilateral agreement on cooperation in the field of civil nuclear energy," he added.

Sarkozy seeks civil nuclear deal with India

By Emmanuel Jarry

Boston Globe

January 25, 2008

NEW DELHI (Reuters) - French President Nicolas Sarkozy visited India on Friday to cement ties with a booming Asian economic power, trying to boost civil nuclear cooperation and defence deals.

Sarkozy also echoed Britain's recent support for India's bid to become a permanent member of the United Nations Security Council, where Britain, China, France, Russia and the United States have wielded exclusive veto power since 1945.

Sarkozy voiced support for India's controversial nuclear deal with the United States. If finalized, the deal would allow civil nuclear technology exporters like France to participate in a billion-dollar business with India.

The deal aims to give India access to U.S. nuclear fuel and equipment for the first time in more than 30 years, even though India has tested nuclear weapons and refused to join non-proliferation agreements.

"France will be an advocate for India over access to civilian nuclear (technology)," Sarkozy told reporters.

A joint declaration between the two governments said that "France and India have finalized negotiation in regard to reaching a bilateral agreement for civil nuclear cooperation."

In a possibly controversial move, France also announced on Friday that the government will give a prestigious award, the Prix Simone de Beauvoir, to Taslima Nasreen, a Bangladeshi author exiled in India who recently sparked riots by Muslims offended by her books.

Threats against her have forced authorities to indefinitely house her in a secret security facility in New Delhi, which she has described as "solitary confinement." The Indian government came under attack by the Hindu-nationalist opposition last year for failing to give her enough vocal support.

The French government asked India to take "all measures" needed to help her travel to France for the award.

MILITARY PARADE

Sarkozy, accompanied by a business delegation, met with Prime Minister Manmohan Singh on Friday. He will attend a military parade on Saturday with India's president to mark Republic Day.

His visit comes after British Prime Minister Gordon Brown's visit earlier this week, another leader drumming up support for business with the growing economic powerhouse, which is also increasingly playing a more important diplomatic role in Asia.

The nuclear deal, opposed by the Indian government's leftist allies, needs the support of the 45-nation Nuclear Suppliers Group (NSG), whose members work to prevent nuclear exports for peaceful purposes from being used to make atomic weapons.

It must agree unanimously on an exemption for India if the deal is to go ahead, as New Delhi has not signed the nuclear Non-Proliferation Treaty. Many think the deal could be dead after leftist opposition, but the government still hopes to seal it.

"We will pass the operational phase as soon as India concludes an accord with the IAEA and that the international rules of the suppliers' group are changed," Sarkozy said.

India has forged strong defence ties with France in recent years, with deals for Mirage jets and Scorpene submarines to modernize its military, the world's fourth-largest.

Officials say the revival of the Eurocopter deal for 197 military helicopters -- which was dumped by India last month -- could figure in Sarkozy's talks.

France's Dassault Rafale will also compete for a deal to provide India with the world's biggest fighter jet contract in years, expected to top \$10.2 billion for 126 fighters.

India's media was at first more interested in the possible visit -- later cancelled -- of Carla Bruni, a singer and former model who was reported to be near to marrying Sarkozy.

Indian newspapers had been full of stories of how a visit by his girlfriend could upset protocol in the deeply conservative country.

(Writing by Alistair Scrutton; Editing by Jonathan Allen and Sanjeev Miglani)

Proposal for global nuclear fuel insurance fund
World Nuclear News
January 25, 2008

The World Economic Forum (WEF) has published *Global Risks 2008* in cooperation with Citigroup, Marsh & McLennan Companies, Swiss Re, the Wharton School Risk Centre and Zurich Financial Services, highlights key areas of risk that will be a focus of discussions by business leaders and public policy-makers at the World Economic Forum Annual Meeting which is currently taking place in Davos, Switzerland. The report is based on input from a network of more than 100 top business leaders, decision-makers, scientists and other leading academics convened throughout 2007 as part of the World Economic Forum's Global Risk Network.

The report focuses on four emerging issues which will impact the world economy and society in the decade ahead: systemic financial risk; food security; supply chain vulnerability; and energy.

Global Risks 2008 says that the availability of energy resources is key to the global economy, but guaranteeing a safe, secure and sustainable supply - and doing so in line with global commitments to reduce greenhouse gas emissions - is increasingly problematic. With the dollar price of oil at record highs, the report recommends an improved approach to securing viable energy supplies in the years ahead. According to the report, "the incentives in place to reform the global energy economy in a way which reduces global risk holistically are not in place."

The report notes that "concerns over climate change and long-term energy security have put nuclear power firmly back on the 2007-2008 global agenda. As a non-carbon-based energy source with a much-improved safety record since Three Mile Island and Chernobyl, nuclear technology has a number of attractions in an era of uncertainty."

The WEF suggests that some countries considering introducing nuclear energy as part of their energy mix (including Turkey, Vietnam and Egypt) may be deterred due to concerns about access to enriched uranium. It says that such countries fear being "blocked in the future by the six states which currently produce enriched uranium on a commercial basis: France, Germany, the Netherlands, Russia, the United Kingdom and the USA." To avoid this, they may decide to start their own uranium enrichment programmes, which would raise proliferation concerns.

The report suggests that one solution could be to develop an international "nuclear fuel insurance fund". It says, "Turning the risk of the spread of nuclear technologies into an opportunity to create a sustainable framework for the production of safe, clean and secure electrical power should be a major objective of global policy." The report adds, "The innovative use of financial markets may offer a way to achieve it."

The WEF says that a "truly innovative concept", known as "insure to assure", has been proposed by a joint team from the Wharton Business School and Harvard's Kennedy School. The proposal - complementary to the efforts of the International Atomic Energy Agency (IAEA) and others - imagines a partnership between financial industries and governments to create the world's first international nuclear fuel insurance fund.

Under the concept, premiums collected from all member countries would be deposited in a mutual insurance company (MIC) which, in turn, would use some of the money to build a cash reserve and to purchase supply options. Residual funds would go to a consortium of insurers and reinsurers that would provide layered financial protection to all participating countries.

The IAEA member governments would serve as a financial backstop for the consortium. In the event of a fuel disruption, the MIC would exercise its options and work with fuel suppliers, energy producers and transporters to arrange timely fuel delivery or alternative electricity purchases off the energy grid (if available). The insurance consortium would compensate member countries and others involved in replacing fuel for any loss of efficiency as previously contractually agreed.

The report says that the concept is based on "a key principle of mitigating global risks: while everyone is looking to ensure energy security through energy independence, the 'insure to assure' concept might help improve energy security by creating a clear framework for 'energy interdependence'."

According to the WEF, "the proposal is now being studied by different stakeholders" It says that the proposal "would bring together two worlds that rarely talk to one another: the worlds of international security and international finance." The report states that the proposal currently only deals with nuclear fuel supplies, but says that there is "no reason why a larger mutual insurance company could not help turn wider global energy interdependence from a source of perceived vulnerability to a source of systemic coherence and security."

Second reading of energy bill
World Nuclear News
January 24, 2008

On January 22, UK business and enterprise minister John Hutton expanded at length on new energy legislation, accepting many interventions from other lower house members. He rejected ideas that the possibility of new nuclear meant plans for onshore wind farms could be scrapped. Hutton said: "I'm afraid there are no easy choices... but making no choice at all is not one of them." He then reminded MPs of what is seen as the main driving force behind energy policy review: "The UK currently imports about 20% of its gas requirements, but that is projected to increase to well above 50% by 2020."

The nuclear issue of most concern for MPs was assurance on the finance of radioactive waste management - and that it must not be subsidised by the state for new nuclear power plants. This comes in the context of an existing GBP73 billion (\$143 billion) clean-up legacy from the UK's drive for atomic weapons and the world's first full-size nuclear power plants.

Any new nuclear power reactors in the country must be paid for by private enterprise under the new legislation that "will ensure that all operators have in place a robust financing arrangement, in the form of a funded decommissioning program, before operation of a power station commences."

"If there is to be a renaissance for nuclear power in this country - and I very much hope that there will be - it is important that we establish new ground rules that comply with the existing energy market principles on which this country operates."

"The bill will require every operator to have a fully costed technical plan for each new nuclear power station that sets out in detail how the station's nuclear waste will be dealt with safely, and how the station will eventually be decommissioned. The bill will also require all operators to have a financial plan that describes how they will provide the necessary funds to meet those costs. Both plans will form a funded decommissioning program that will be subject to approval by the secretary of state."

It will be a criminal offence to operate new nuclear power stations without having an approved program in place, while failure to comply with an existing program will also be an offence.

Hutton said that the government would ensure investor confidence by establishing a "fixed price for disposing of new nuclear waste. That will be based on expected costs, with a significant risk premium built in to safeguard the public purse. Further details of how the system will work will be available later this month." A consultation on radioactive waste finance plans is scheduled.

With regards to Scotland, Hutton conceded there could be no new nuclear power stations in that nation if the devolved administration - currently headed by the anti-nuclear Scottish National Party - did not grant planning permission. Hutton said: "I think that the Scottish Executive are making a huge mistake. As I have said before, I think that they are playing politics with the situation, and that is regrettable." The Hunterston B and Torness nuclear power plants currently provide around half of Scotland's electricity, but are due to close in 2016 and 2023 respectively. Scottish leaders hope to replace that capacity with renewables.

Bodman wraps up Middle East odyssey
World Nuclear News
January 24, 2008

At the outset of US Energy Secretary Sam Bodman's Middle East tour, the Department of Energy (DoE) described its purpose as enhancing US relationships with oil-producing nations, while promoting sustained investment in conventional and alternative energy sources, and encouraging improvements in global energy efficiency. Bodman's itinerary took in Jordan, Saudi Arabia, the United Arab Emirates (UAE), Qatar and Egypt.

While in the UAE, Bodman addressed the Masdar Future Energy Conference in a keynote address focusing on the energy challenges facing the world and the huge investments needed to meet burgeoning primary energy demand over the coming decades. "The world needs safe, reliable, clean, affordable, and diverse energy supplies - and in considerably greater numbers than it now has," he told the audience. Beyond hydrocarbons, he went on to say, the world "absolutely" needed new energy options including increased nuclear power. Masdar is an initiative founded by the UAE in 2006 as a "global cooperative platform" addressing issues including energy security, climate change and sustainable development.

Bodman again mentioned nuclear's role in a meeting with Egypt's President Hosni Mubarak, noting that any global energy strategy "must include efforts to expand access to emissions-free nuclear power in a way that responsibly manages waste and dramatically reduces proliferation risks." He highlighted Egypt's participation in the US-led Global Nuclear Energy Partnership (GNEP), and when in Jordan praised that country's decision to sign up to the partnership under which so-called 'fuel-cycle' nations would provide assured supplies of nuclear fuel to client nations, which would generate electricity before returning the used fuel. Participating countries would not have to establish their own fuel cycle facilities and nuclear materials would be able to remain under the strictest of non-proliferation controls. Unlike Jordan, Egypt has not yet signed up to become a member of GNEP, but did participate as an observer at the second ministerial meeting of the partnership in September 2007. The country has announced an intention to employ nuclear power at the El Dabaa site, near Alexandria, and is preparing legislation to facilitate this.

None of the countries in Bodman's itinerary yet have nuclear energy, although even the most oil-rich of the Gulf states are now giving serious consideration to the nuclear power option. Indeed, just prior to the US energy secretary's visit, France's President Nicolas Sarkozy took the opportunity of his own tour of Middle Eastern countries to sign a cooperation agreement on the peaceful uses of nuclear energy with the UAE, and French companies signed a partnership agreement to submit a nuclear power project to the UAE authorities.

US-Turkey deal resuscitated

Turkey's plans for nuclear power are still at an early stage but nevertheless are more advanced than those in the countries closer to the Gulf. US President Bush has this week given his approval to a US-Turkey cooperation agreement on the peaceful use of nuclear energy. The agreement was originally signed in July 2000 by then President Bill Clinton, but stalled immediately when 'US agencies received information that called into question their conclusions'. The White House said that certain 'private entities' in Turkey had been involved in activity 'directly relating to nuclear proliferation'.

Since that time Turkish authorities have taken corrective action, and the 'US secretary of state, the secretary of energy, and the members of the Nuclear Regulatory Commission are confident that the pertinent issues have been sufficiently resolved'.

Bush told Congress: "In my judgment, entry into force of the agreement will serve as a strong incentive for Turkey to continue its support for nonproliferation objectives and enact future sound

nonproliferation policies and practices. It will also promote closer political and economic ties with a NATO ally, and provide the necessary legal framework for US industry to make nuclear exports to Turkey's planned civil nuclear sector.

If passed into law, it will permit the transfer of nuclear technology, materials and equipment - including nuclear power plants - from the USA to Turkey.

Turkey has not yet signed up to GNEP, and recent reports suggesting it is planning to set up its own nuclear fuel cycle facilities were greeted with dismay by the USA. However, the reality could be very different: the *World Tribune* reported that although Turkey has trained an estimated 1300-1400 nuclear scientists between 1960 and 1990, the vast majority of these have either left the country, changed fields or are now retired. Realistically, the country would need to embark on a massive training exercise and draw on significant amounts of overseas help if it were to launch its own program.

'20 20 by 2020' says Europe
World Nuclear News
January 23, 2008

"Europeans want a vision, and a plan of action," said European Commission President Manuel Barroso when announcing the 'package'.

The draft legislation follows on from a March 2007 agreement outlining the same aims. The new proposals contain five main strands: the imposition of "specific, binding national targets" for each of the 27 European Union member countries for greenhouse emissions; mandatory targets for the percentage of renewables in each country's total energy consumption; an overhaul of the existing carbon dioxide emissions trading scheme; a proposed law on carbon capture and storage (CCS); and new state aid rules.

Europe should cut its own emissions by 20% by 2020, and be ready to "step up to 30% with international agreement," Barroso said.

The renewable energy targets, is to reflect each country's economic potential to produce energy from sources such as wind, solar, geothermal or hydropower. The targets are for shares of consumption, not installed capacity, and countries will be able to purchase renewable energy from other EU countries to help meet their targets. Nuclear energy is not included in the list of renewables, which begs the question: what will happen in countries that already generate a large proportion of their energy from carbon-free nuclear? Reports prior to the EC announcement have suggested that France would face a requirement to achieve a 23% share of renewable energy by 2020, Germany a likely 20% target and Sweden a 50% target. France already generates some 78% of its electricity by nuclear and Sweden close to 50%.

A statement from Scandinavian generator Fortum said increasing renewable shares from a high starting point would be "challenging" and that "the targets cannot be achieved without considerable support." Cost for the society and energy consumers will be high and consequences for the fuel and energy market remain unclear. "Therefore, it is crucial to design the support schemes so that they are market based and efficient," concluded Fortum CEO Mikael Lilius.

With respect to a 10% target for biofuels use, Barroso made clear his commission had "fully respected the other side of the mandate" - "the need for environmental sustainability." Biofuels have come under fire recently because the demand for land to produce biofuel has harmed food supplies and even affected forestry.

Levelling the playing field

The change to a system of auctioning all carbon dioxide emissions allowances, currently distributed to industry free of charge, would come into force for seven years from 2013. Richer member states would be expected to carry a heavier burden than poorer countries, with some central and eastern European countries being allowed to increase their emissions.

The cost of this, according to Barroso would be Eur3 per week for every European - less than 0.5% of GDP. Italian MEP Alessandro Foglietta put this at Eur60 billion (\$87 billion) and, noting the details of the proposals were not yet known, complained that measures did not cover transport or housing. Foglietta said that Europe's leading role in the fight against climate change was beyond question and he wanted that role to be reflected in the actions of Europe's global rivals.

In favour of nuclear energy spoke Jana Bobsikova of the Czech Republic, who said that Europe should work to promote awareness of what nuclear energy can do in generating baseload power without carbon dioxide emissions. She said "reasonable governments like Finland and the UK are doing this." Gunnar Hokmark of Sweden said that although today's announcement was on

renewables, it was his belief that if Europe makes full use of them, it must not phase out nuclear power and "consume its [nuclear power's] achievements in the fight against carbon dioxide." He concluded: "We need both."

Capturing carbon

The new directive brings carbon capture and storage (CCS) to the fore. Carbon dioxide that is captured and stored will be credited as not emitted under the emissions trading scheme, and all EU members will have to ensure that new carbon-emitting power plants will have suitable onsite space for the storage of compressed carbon dioxide. Whether CCS on a large scale will be technically or economically viable within the timescale of the legislation is a moot point.

Poll shows increased support for new nuclear in Sweden
World Nuclear News
January 22, 2008

A public opinion poll conducted by Synovate Temo on behalf of newspaper *Dagens Nyheter*, found that 48% of respondents back the construction of new reactors, while 39% are opposed and 13% were undecided. The poll was conducted between 14 and 17 January, with 1026 people questioned.

Dagens Nyheter noted that support for the construction of new nuclear power plants in Sweden has never been above 35% in previous polls. However, the newspaper said that comparison with earlier polls is difficult because of differences in how past surveys were conducted. The new poll marks the first time that voters were asked the question directly on whether or not they support nuclear new build.

A breakdown of the results of the poll by political affiliation show that of the four ruling parties, three are strongly for nuclear power and one is firmly against. In the governing Alliance parties (a centre-right coalition), support for new plants is high among respondents identifying with both the Moderate Party and the Liberal Party, while about half of Christian Democratic voters support nuclear new build. However, 69% of Centre Party voters are opposed to new plants. The Centre Party has traditionally been more opposed to nuclear energy but has in recent years shown some softening of its stance.

Among the opposition parties, just over half of Social Democratic voters said they favoured constructing new plants. However, 78% of Left Party supporters and 66% of Green Party voters said they strongly opposed building new nuclear reactors in Sweden.

Last week, the Liberal Party called for the country to build four new reactors in its preliminary climate strategy. According to a previous report in *Dagens Nyheter*, party leader Jan Bjorklund called for new reactors to be built soon after the next election, due in 2010, as well as replacing the country's ten existing nuclear reactors with new nuclear capacity in due course. This would mean abandoning the country's ban on nuclear construction and plans for a phaseout of nuclear power put in place by a previous government.

Sweden's decision to ban new nuclear build and ultimately phase out nuclear power was reached following a 1980 referendum. Originally the plans had been for all nuclear units to close by 2010, but although two reactors at the Barseback nuclear power station were closed in 1999 and 2005, the country's other operating units have since been reprieved. Since the referendum, nuclear operators have added the equivalent of an entire new reactor in output through capacity uprates.

University's nuclear chair inaugurated
World Nuclear News
January 18, 2008

Funding of GBP755,000 (\$1.47 million) has been agreed for the chair over five years with the Lloyd's Register Educational Trust, a charity connected to Lloyd's Register, the risk management organisation which provides assurance of the safety of nuclear facilities through independent verification. Trevor McMillan, vice chancellor of research at Lancaster described it as a "hugely generous award" during an event hosted yesterday by the Royal Academy of Engineering in London.

McMillan said that some 1000 nuclear graduates would be required each year for the next fifteen years to meet the UK's demand for manpower in power, defence and research. This figure could increase further if firms are successful in their plans to replace current nuclear power plants in coming years. An invitation to them to do so was announced by the UK government on 10 January.

In clean-up, the UK has put together a comprehensive program under the Nuclear Decommissioning Authority (NDA), worth a total of around GBP60 billion (\$117 billion). Already, some 50,000 workers are included in the supply chain for this work, said Ian Hudson, head of technology and skills development at the NDA.

The University of Lancaster is in the southern portion of England's northwest nuclear hub. The region includes the cities of Liverpool, Manchester and Salford as well as the Springfields uranium enrichment facility and Sellafield, the largest nuclear site in Europe. Lancaster believes its undergraduate course in Nuclear Engineering to be the only one of its kind in Britain.

Sue Ion was formerly head of technology at BNFL and president of the British Nuclear Energy Society. In a new role as chair of a nuclear subcommittee of the Northwest Regional Development Agency she said that nuclear power is "too important an issue to ignore" and that the region is "committed to the pursuance of excellence." There is "no way on earth" the region's nuclear capabilities would be allowed to slip - especially with new nuclear build on the agenda.

Canada's AECL agrees on nuclear study in China
Reuters
January 10, 2008

BEIJING (Reuters) - Atomic Energy of Canada Ltd. has agreed to cooperate with the Nuclear Power Institute of China to study nuclear technology that uses less uranium in response to a possible future shortage of the fuel.

China's plan to build 40 gigawatts of nuclear generation capacity by 2020 would require seven times the uranium that it can currently count among its proven reserves, said AECL's China representative Yang Q. Ruan. This has forced the country to redouble efforts to ensure uranium supply.

"China will need to develop its reserves domestically and invest overseas, or else develop low uranium consumption technology," Ruan said during a ceremony to mark the signing of the memorandum of understanding in Beijing on Thursday.

Government-owned AECL has built two reactors for Phase III of China's Qinshan nuclear power plant, in the eastern province of Zhejiang, using the CANDU pressure tube design.

CANDU uses about 15 percent less uranium for each megawatt of electricity produced than the pressurized water reactors (PWR) that China now favors.

AECL hopes the cooperation with the institute, in the southwestern city of Chengdu, will lead to future reactor contracts, said Simon Pang, vice president of special projects.

The cooperation will involve study advanced fuel cycles, using thorium as a fuel, and other technologies.

China is one of the world's top three nations in terms of reserves of thorium, a metal that along with uranium contributes to the heat of the earth.

CANDU, developed to burn lower grade natural uranium, is found in reactors in Canada, Argentina, South Korea, India and Pakistan. It can burn spent PWR fuel and recovered uranium, as well as plutonium.

Canada has so far taken a back seat to the United States, Russia and France in supplying nuclear technology to China, which also uses domestically developed models.

(Reporting by Lucy Hornby, editing by Anthony Barker)

Russian push for new business continues
World Nuclear News
January 03, 2008

On 31 December the Russian ambassador to Uruguay said the countries were considering limited cooperation in nuclear energy, despite Uruguayan law that prohibits its use. The Russian solution to this obstacle would be to supply Uruguay with a floating nuclear power plant which could power infrastructure on-shore via a cable. *RIA Novosti* reported this was the topic of a recent presentation at the Russian embassy which was "proactively discussed".

A floating unit would be similar to the one now under construction for the Archangelsk shipyard in northwest Russia. That plant will provide 70 MWe from two KLT-40S naval-origin reactors. A similar unit is also a possibility for Yakutia, while China, Indonesia, Malaysia, Algeria, Namibia and Argentina have all expressed interest in the plants.

In a Moscow press conference Sergei Shmatko, CEO of AtomStroyExport, said efforts to sell plants worldwide had been stepped up. "In the past we've simply stated our ambitions but in the last few months talks have really been active."

AtomStroyExport, part of the forthcoming giant AtomEnergoProm (AEP) is set to bid on nuclear projects in Morocco and Turkey. It signed a memorandum of understanding with Insaat Ticaret ve Sanayi in 2007 to promote its VVER-design pressurized water reactors in Turkey.

In Bangladesh, proposals have been prepared to resurrect the potential Roppur nuclear power plant, under discussion since the 1960s. After developing the plan over the last eight years, Bangladeshi officials have contacted their Russian counterparts on both technical and political levels for support in the project. However, a national debate would be required before a final decision to build could be made.

AEP even has the UK in its sights, despite its absence from ongoing pre-licensing activities and the UK public's marked prejudice against Russian nuclear technology since the Chernobyl disaster. In a *Times* interview, Sergei Novikov, spokesman for the Federal Atomic Energy Agency (Rosatom), said AEP would consider partnering with a Western manufacturer for UK new build. The newspaper included words from Kirill Komarov, deputy director of AEP, who said: "If Russia forms a strategic partnership, then that partnership will become the leader of the world atomic market."