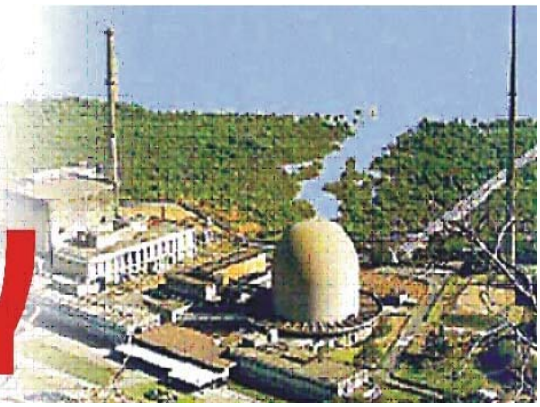
NUCLEAR SECURITY



A FORTNIGHTLY NEWSLETTER ON NUCLEAR DEFENCE, ENERGY AND PROLIFERATION FROM CENTRE FOR AIR POWER STUDIES

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OPINION- Sheel Kant Sharma and Shyam Saran

Deterrence is Not a Fantasy

India's nuclear posture has evolved in the context of both regional and global nuclear threats. Nuclear weapons by their very nature are weapons of mass destruction (WMD), which recognise no national or regional boundaries. The interactive web of multiple nuclear-weapon capable states also creates a dynamic far more complex and unpredictable than that which prevailed during the Cold War, with an essentially binary nuclear equation between the two superpowers. India's nuclear posture not only takes account of an adverse nuclearised threat environment regionally, it also takes cognisance of the impact on its security of global developments in this regard. To frame India's nuclear posture in relation to Pakistan and/ or China and then to pick holes in it, is to miss the strategic calculus that underlies it.

India's nuclear weapons are for deterring a WMD attack against India. It has never been argued in this country that acquiring nuclear weapons would save money by substituting conventional capabilities with nuclear assets. The contention that India has neutralised its conventional superiority vis-a-vis Pakistan by going overtly nuclear has no basis in fact. India's conventional superiority did not deter Pakistan from repeated acts of aggression against India in 1947, 1965 and 1971, when nuclear weapons were not a factor. Even later misadventures like Kargil, as revealed in Benazir Bhutto's memoirs, were planned years before the overt nuclear transition of 1998. India will require capabilities to meet both conventional and nuclear threats from Pakistan.

With respect to credible minimum deterrence, it is not necessary to specify the "minimum" in numbers. This will be determined in the light of a continually evolving nuclear security environment, both in India's own neighbourhood and globally. India does not have one minimum for Pakistan and another for China. Our nuclear planning does not take place in such tightly separate compartments.

Given the multiple dimensions ofthe nuclear threat, a limited nuclear weapons freeze between India and Pakistan will not enhance India's security. India is the only nuclear weapon state to categorically declare that a world free of nuclear weapons would enhance and not diminish its security. However, as long as nuclear weapons remain, India's security requires that it maintain a "credible minimum deterrent". This posture is not specific only to Pakistan and China. Additionally, India's development imperatives and its commitment to rapid socio-economic transformation require an enabling security environment free from nuclear threat or blackmail.

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specify the "minimum" in numbers. This will be determined in the light of a continually evolving nuclear security environment, both in India's own neighbourhood and globally. India does not have one minimum for Pakistan and another for China. Our nuclear planning does not take place in such tightly separate compartments.

Concerning China, India does not need a matching nuclear arsenal or delivery capability. A "credible minimum deterrent" is adequate vis-a-vis China or any other nuclear-armed adversary. We will need a "vastly enhanced conventional capability in terms of weapon systems, infrastructure, etc" in addition to prevent a possible war with China, major or minor. This is sought to be addressed by successive Indian governments, but regrettably at a pace not commensurate with what is required.

When its nuclear weapons and delivery capabilities were in a nascent stage, soon after the 1998 tests, the criticism against India was that its force posture did not match the requirements of its nuclear doctrine and hence lacked credibility. Now, when the force is being modernised and upgraded, the argument is that such developments are destabilising and even contrary to India's declared no-first-use doctrine.

India's nuclear force modernisation is to enhance the credibility of its nuclear doctrine, which requires a triad of land-based, air-launched and submarine-based nuclear assets and delivery systems. The survivability of these assets is a necessary condition for assured retaliation. The acquisition of additional assets, the upgrade of technological capabilities and associated command and control systems must be evaluated in that context.

India's nuclear force modernisation is to enhance the credibility of its nuclear doctrine, which requires a triad of land-based, air-launched and submarine-based nuclear assets and delivery systems. The survivability of these assets is a necessary condition for assured retaliation. The acquisition of additional assets, the upgrade of technological capabilities and associated command and control systems must be evaluated in that context. The pursuit of R&D in Ballistic Missile Defence and MIRVing of delivery vehicles are not inconsistent with a no-first-use posture. It could be argued that both enhance the survivability of assets and the credibility of India's nuclear doctrine. Official thinking in this respect remains to be ascertained.

The development and deployment of dual-use delivery assets is not peculiar to India. This is a challenge that all nuclear-weapon states confront. This does add to uncertainty and unpredictability in relations among such states, which are best addressed through multilateral negotiations, focusing on confidence-building measures (CBMs) in the first instance. India and Pakistan have bilaterally concluded several nuclear CBs, including non-attack on each other's nuclear facilities, requiring annual exchange of lists of such facilities; the advance reporting of missile launches within a certain range of each other's territories and a mutually declared commitment to a moratorium on further nuclear tests. India has advocated and is willing to join in the negotiation of nuclear restraints and CBMs at the multilateral level. These include an international convention on prohibition of the use or threat of use of nuclear weapons and formal agreement among nuclear-weapon states on global no-first-use of nuclear weapons.

Questions have been raised about the safety and security of India's nuclear assets. This is a classic case of equating the absence of information — so-called opacity — with the absence of systems and procedures to deal with such critical issues. India should be more transparent about and welcome public debate on its nuclear deterrent. There ought to be an annual nuclear posture review. However, the nuclear domain is a sensitive one and more transparency may not necessarily enhance deterrence stability. The criticism of the DRDO's alleged penchant of overpromising and underdelivering is well taken for this reason. In this case, a little less transparency and more modesty would be welcome.

Source: The Indian Express, 03 October 2013.

OPINION-Bharat Karnad

Nuclear Effects of Agni-V

The Advanced Systems Laboratory (ASL), Hyderabad, along with the other project in mission-mode, Advanced Technology Vehicle (the nuclear-powered ballistic missile-firing Arihant submarine, SSBN), are the two jewels in the DRDO crown. Under high-class chiefs R N Agarwal, Avinash Chander (recently promoted to head DRDO), and now G K Sekharan, ASL has rescued DRDO's reputation, of course. But it has, with the second launch of the Agni-V intermediate range ballistic missile on 16 September 2013, also saved the credibility of India's strategic deterrent with thermonuclear pretensions from being completely

eroded.

But, first, why is India's claim to thermonuclear status mere pretence? Well, because, Dr R Chidambaram, the one-time chairman of the Atomic Energy Commission and, for the last decade, adviser on science and technology to the PM, despite being a scientist doesn't believe in collecting empirical data! Along with strategic enclave stalwarts like the late K Subrahmanyam and the school of thought the latter spawned, he urged the Narasimha Rao government in the mid-90s, for instance, to sign the CTBT, arguing that the data collected from the single 1974 8-12 kiloton (KT) nuclear test was quite enough for the country to have an adequate deterrent and that India need never test again.

After the BJP government ordered the 1998 Shakti-series of nuclear tests anyway, and consistent with his previous advocacy, Chidambaram averred that the obvious malfunctioning of the thermonuclear weapon design tested in 1998 notwithstanding, India can rectify the flawed design and even update the weapons inventory by simply using computer simulation. By this standard, the IAF ought to operate combat aircraft entirely computer designed but never test-flown, and the army to induct an artillery piece that came out of a computer-assisted design shop but not test-fired. His unexplained and incomprehensible antipathy to nuclear testing has made a mockery of the country's strategic wherewithal. On this issue, however, it is difficult to know where Chidambaram's counsel ends and PM Singh's inclination to stick with the "no testing" central predicate of the nuclear deal with the US, begins.

China has embarked on a new round of nuclear arsenal modernisation and US weapons designers have warned that without new tests the performance of American nuclear arms cannot be guaranteed. New Delhi, in contrast, has all but sworn off nuclear testing, whence its boast of the Indian deterrent featuring high-yield thermonuclear weapons in the 125KT-275KT categories risks an enemy calling India's bluff and borders on foolhardiness.

Consider this: China has conducted over 80 tests to India's six tests in all. It has advanced technology such as inertial confinement fusion (to replicate thermonuclear explosions in miniature) and a Dual-Axis Radiographic Hydrodynamic Testing facility (to simulate and study the implosion of an atom bomb triggering the combustion of the thermonuclear fuel), which India lacks. Chinese computing speeds will reach some 100 petaflops (million-billion functions per second) by 2015 while Indian super computers at present are at the 250 terraflop (trillion functions per second) level. With all these advantages, China has embarked on a new round of nuclear arsenal modernisation and US weapons designers have warned that without new tests the performance of American nuclear arms cannot be guaranteed. New Delhi, in contrast, has all but sworn off nuclear testing, whence its boast of the Indian deterrent featuring high-yield thermonuclear weapons in the 125KT-275KT categories risks an enemy calling India's bluff and borders on foolhardiness. So, that's the problem: An Indian 275KT fusion bomb may, by fluke, reach the full yield or, as is more likely, produce yields anywhere between the high figure and the fission trigger level of 20KT! It's this appalling uncertainty about the effects of the Indian thermonuclear weapons that's created a real operational dilemma for the Strategic Forces Command.

The ASL retrieved this intolerable deterrence situation somewhat with the accurate, lightweight, Agni-V missile. This Agni will eventually be all-composite, including the casing and rocket motors made of Kevlar-carbon-carbon, Guidance on Chip for terminal accuracy, and distributed communications nodes through the length of the missile to minimise wiring. As the two tests of this missile have proved, using the Russian Glonass GPS and the on-board inertial guidance system and ring laser gyroscope, 15-20 meter CEP (circular error probable — a measure of accuracy) at 5,500km range has been achieved. Moreover, armed with 4-8 MIRV (Multiple Independently-targetable Re-entry Vehicles) warheads — a technology permitting a single missile to carry multiple bombs for dispersed targeting that has been a "screwdriver's turn away" from being test-ready but whose testing has not been approved by Manmohan Singh, the Agni-V range can be extended to intercontinental distances.

In any case, even before this precision targeting capability was proved, official strategists trying to justify the test-moratorium began claiming that Agni missiles with single or MIRVed 20KT fission warheads will be just as daunting for any adversary, and that the strategic credibility and clout of India's deterrent is,

therefore, not in doubt. MIRVed Agni missiles do afford the strategic forces certainty of impact and versatility but 20KT warheads are not prime dissuaders.

Missile accuracy at extreme range is fine but it is only the high-yield, preferably, high-yield thermonuclear armaments that really matter. The sheer scale of destruction promised by a single incoming megaton (MT)-warheaded missile can be guaranteed to induce the worst sort of dread in, and impose immense psychological stress and pressure on, the adversary state's leadership, something the relatively small yield 20KT bomb simply cannot do. In any test of wills, the country armed with the 20KT weapons will fold before a state with MT weapons, call off the confrontation and, whatever is at stake, accept a compromise on the former's terms.

Then again, the Indian government has little understanding of conventional and, even less, nuclear deterrence when dealing with a powerful foe. In fact, India is so self-damagingly Pakistan-fixated on both counts it does not see the folly of training strategic weapons on a tactical-level threat. India is also an exception to the rule of NWS nursing high-yield fusion arsenals. The standard issue warheads for the long range Dong Feng missiles being one megaton or 3.3MT, China can deter America. Weak-kneed Indian governments have not shown the gumption to resume thermonuclear testing to obtain a host of safe, proven, and reliable fusion weapons including the MT type to deter China.

Source: http://newindianexpress.com/, 04 October 2013.

OPINION- Jaideep Prabhu

India's Nuclear Millstone

The India-US nuclear deal ratified, amidst scandal, in 2008 gave great hope to the country's hopelessly inadequate energy sector. For the deal to be operationalised, however, India needed to create a nuclear regulatory framework for security and safety as well as liability. Such a framework consists of ex ante and ex post components, neither of which can stand alone. Ex ante legislation concerns itself with strict regulatory mechanisms to improve safety of nuclear operations and hopefully prevent a nuclear incident, while ex post legislation deals with compensation in the rare case of an accident. Security has been addressed by the Atomic Energy Act (1962), while the question was only recently considered and addressed in the Civil Liability for Nuclear Damage Act (CLNDA).

The CLNDA has succeeded in upsetting all sides involved - some are insulted by the paltry liability limit of Rs 1,500 crores, while others insist that allowing nuclear power plant operators right of recourse against suppliers will hamstring a nascent industry. Both are right... sort of.

India's CLNDA applies to nuclear installations owned and/or operated by the Government of India [Art. 1(4)]. This includes all of India's fleet of reactors, but a larger role for the private sector in the future will have to see this clause modified. Furthermore, the operator is not liable for damages caused by acts of personal negligence, war, terrorism, or the gods [Art. 5]. As far as the victims of a nuclear accident are concerned, the operator is solely liable for all damages [Art. 4]. This means that victims need not prove fault, merely that an accident has happened, to receive compensation. It also channels all responsibility for compensation to one source, the operator, so the victim is not burdened by following up with many players.

Presently, India's CLNDA applies to nuclear installations owned and/or operated by the Government of India [Art. 1(4)]. This includes all of India's fleet of reactors, but a larger role for the private sector in the future will have to see this clause modified. Furthermore, the operator is not liable for damages caused by acts of personal negligence, war, terrorism, or the gods [Art. 5]. As far as the victims of a nuclear accident are concerned, the operator is solely liable for all damages [Art. 4]. This means that victims need not prove fault, merely that an accident has happened, to receive compensation. It also channels all responsibility for compensation to one source, the operator, so the victim is not burdened by following up with many players.

So far, so good. However, Articles 6 and 7 of the CLNDA caps operator liability to varying amounts depending upon the facility at which an accident may take place - nuclear power reactors Rs1,500 crores, reprocessing plants Rs 300 crores, and research reactors Rs 100 crores. A Nuclear Liability Fund, set up by levying contributions from each operator - in this case, the government-owned NPCIL and BHAVINI - will help defray liabilities beyond the operator caps, and the Central Government stands in as the guarantor last resort up to a limit of 300 Special Drawing Rights (SDR). The government has reserved

the right to raise these limits at any point in the future.

The Rs 1,500-crore cap on operator liability has been considered low by most experts. In the event of a Level 7 INES (International Nuclear Event Scale) nuclear accident, damages could easily reach into the billions of dollars. The cap is undoubtedly low, but it must be understood in its context. International experience has been that a higher limit is built gradually as the industry expands and the insurance asset base increases. Actuaries calculate insurance limits and premiums based on the number of people covered, frequency of claims, insurance pool, safety protocols, operating track record, and other factors. Unlike other industries, nuclear insurers have few customers – in India, the government is presently the only client, but even in countries with private nuclear utilities, the number is still small.

The US nuclear industry, regulated by the Price-Anderson Act, increased liability coverage from an initial $60 million operator liability and $500 million government guarantees to a liability pool of nearly $13 billion today that includes an operators' indemnity above private insurance and no government coverage. In France, the limit was set at •91 million but is now being raised to •700 million; in the UK, the limit has been in a phased increase from about •150 million in 1994 to the present •1.2 billion; Sweden has also seen its operator liability cap increase from around •350 million to •700 million; in Canada, a 1976 limit of $75 million has been raised to $650 million in 2008.

Insurance companies will also hesitate to insure single reactor facilities because a serious accident would probably render the main source of income, the reactor, worthless. Insurers therefore prefer to pool the risk of all facilities to create a larger asset base and allow a greater coverage while simultaneously lowering the cost. Thus, a large nuclear industry presents a greater asset base and will allow for a higher liability limit. India presently has only 14 civilian reactors, making a small collective pool. By comparison, South Korea, approximately the size of Bihar, has 23 reactors. It is only with the growth of India's nuclear industry that operator liability will rise to reflect the actual cost of damages.

It must be noted here that India signed the Convention on Supplementary Compensation for Nuclear Damage (CSC) in 2010, allowing it access to a supplement of 300 million SDRs for damages beyond the first tier operator liability. As per Article IX of the CSC, 50% of this shall be for damages within the installation state and the remaining 50% for damages without.

The second bugbear in the CLNDA is the GoI's decision to allow the operator to have a right of recourse against the supplier. While the operator's right of recourse against the supplier in case of i) the nuclear incident arising out of an act or omission by the supplier with an intent to cause damage or ii) a contractual right of recourse has been well-established in international law, Article 17(b) of India's CLNDA extends the scope of such a right of recourse to consider "consequence[s] of an act of [the] supplier or his employee, which includes supply of equipment or material with patent or latent defects or sub-standard services." In addition, Article 46 states that the CLNDA provisions "shall be in addition to, and not in derogation of, any other law...and nothing contained herein shall exempt the operator." This exposes the operator, and thereby the supplier, to additional proceedings under Indian law.

Sections 17(a) and (c) of the CLNDA are standard provisions under international law too, and can be compared directly with Article X of the Vienna Convention on Civil Liability for Nuclear Damage, Article 6(f) of the Paris Convention on Third Party Liability in the Field of Nuclear Energy, and even Article 10 of the Annex to the CSC. However, the expanded right of recourse against the supplier mentioned in Section 17(b) of the CLNDA has been objected to strenuously by international nuclear vendors on grounds that it violates international law and India's treaty obligation to the CSC.

Supplier liability is an interesting notion that has been suggested in other countries too, with proponents arguing that exemptions are a hidden subsidy to nuclear vendors; given that the nuclear power industry has grown since the 1950s, it no longer needs such subsidies. This logic betrays a lack of understanding of nuclear economics - suppliers will pass on the additional costs of liability to the end consumer, the taxpayer, but the insurance industry will have to allocate funds to cover entities other than the operator. By making only the operator liable, the amount of coverage insurers can make available, via the operator, to the victims of a nuclear incident is maximum.

A second reason floated to pass liability on to suppliers is that there would be no incentive for them to improve their reactor designs otherwise. This is fear-mongering for two reasons: 1. regulatory requirements can force them to consistently improve on their designs, and 2. operators, cognisant of the liability they face, will veer towards safer designs and

even a minor accident can affect the sales of a product line adversely.

The CLNDA has raised flags in France, Russia, and the US, three of the world's largest nuclear suppliers and important to India's military and economic growth. While state-owned or nuclear firms or firms with a large government stake such as Areva and Rosatom have expressed strong dissatisfaction with India's liability law, private concerns such as General Electric and Westinghouse have declared that they would not enter the Indian market on such onerous terms. The impact of the CLNDA can already be seen - at Kudankulam, when India decided to retroactively apply liability to Russian-supplied reactors provided under a 1988 agreement, Moscow raised the price of the reactor, thereby passing the cost on to the consumer…

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While a plain reading of Section 17 may suggest that clauses (a), (b), and (c) are distinctive and separate, they are interlinked. For example, if a contractual understanding between an operator and a supplier as per 17(a) can invalidate supplier liability in case of accident, can the same contract be extended to exonerate willful damage too? Furthermore, the Supreme Court of India (SCI) has declared in Krishna Bahadur v. Purna Theatre that a statutory right in favour of a party can be waived as long as no public interest or policy is adversely affected. In addition, Section 23 of the Indian Contract Act clearly stipulates that clauses of a contract would be unlawful if they go against the law or declared public policy. This was upheld by the SCI in Rattan Chand Hira Chand v. Askar Nawaz Jung in 1991.

Although Article 45 give the Government of India discretionary powers to waive liability for some nuclear facilities, it stipulates that this power exists only in cases where the amount of nuclear material is insignificant.

The liability limits are admittedly small, but these must be continually raised as India's nuclear industry develops. It is unrealistic to expect the country's insurance sector and nuclear industry to perform at European levels when they are half a century behind.

In sum, the CLNDA appears to be a piece of legislation framed in the shadow of Bhopal than by pragmatism. The supplier liability clause and the vague additional torts clause will keep foreign vendors out of India - with the UAE, Saudi Arabia, and China pushing hard on nuclear energy, India's disorganised market, despite its size, is not a draw. These clauses do not make economic sense either; safety must be balanced by costs, probability and scale of accidents, and affordability - the reason everyone does not commute in tanks.

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There is nothing stopping the GoI from setting an operator liability of Rs10,000 crores, but premia will be correspondingly high and nuclear power will become unaffordable. This is not something India can afford, environmentally or economically. Consider this: there are 115,000 premature deaths per year in India alone due to respiratory problems caused by coal, and there has been a shift for the worse in the climactic conditions over a startling 27% of the Indian landmass. The costs of myopia over the CLNDA are far greater than one realises.

Source: http://www.dnaindia.com/, 05 October 2013.

OPINION-Jon Harper

China's Nuke Buildup is a Concern, But a Nuclear-Armed Japan is Not the Answer

As China grows increasingly assertive on the world stage, the country is also aggressively expanding its nuclear forces. But this disturbing trend is being overshadowed by other issues. Most officials, analysts and media in the US and its allies are focused on the Chinese military's growing arsenal of sophisticated conventional weapons, such as stealth fighters, aircraft carriers, submarines, anti-ship missiles, anti-satellite missiles and cyber-attack capabilities.

A recent report by the US National Air and Space Intelligence Center tells us: "China has the most active and diverse ballistic missile development program in the world. It is developing and testing offensive missiles, forming additional missile units, qualitatively upgrading missile systems, and developing methods

to counter ballistic missile defenses."

And according to the US Defense Department, China is also developing and deploying new types of nuclear platforms, including road-mobile missile launchers and possibly "MIRV" technology that will enable China to put many nuclear warheads on a single missile. In 2012, the Chinese tested a new JL-2 ballistic missile that could be placed on submarines as early as this year—a step that will give the Chinese navy its first credible sea-based nuclear deterrent…

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One possible explanation is that China wants to be seen as a superpower, and achieving closer nuclear parity with the US would help it reach that goal. Chinese leaders may believe that being in the same atomic league as America will facilitate their efforts to establish the "new type of great power relations" that they are seeking.

Jeffrey Lewis, director of the East Asia Non-Proliferation Program at the Center for Non-Proliferation Studies, believes there's some validity to that argument. "I don't think that there's any evidence that they're tremendously interested in (numerical) parity as a goal," he told Asahi Shimbun. "(But) if you think about the increasingly implausible argument for why the Communist Party should run China, you know, it has a lot to do with making China a strong and prosperous country… I think there is a general tendency on the part of the Chinese leadership to seek the same advanced military capabilities that other big powers have."

Another possibility is that Beijing fears that its current deterrent force is insufficient as the militaries of the US and other countries improve their precision-attack capabilities. "China is in the middle of a development of several new quick-launch ICBMs specifically to get away from the increased targeting capabilities of US and Russian … forces," Hans Kristensen, director of the Nuclear Information Project at the Federation of American Scientists, said in an interview with Asahi Shimbun…. China's nuclear buildup could be seen simply as a defensive deterrence measure. But given the country's recent history of undertaking actions that many consider provocative and hostile, China's new nukes will not be welcomed by most countries in the region, including the US.

"The US… is watching closely the modernization and growth of China's nuclear arsenal. The lack of transparency surrounding its nuclear programs, specifically their pace and scope, as well as the strategy and doctrine that guides them, raises questions about China's long-term intentions,"…

One is that it could make it more difficult for the US and Russia to continue reducing the size of their arsenals without China's participation in multilateral negotiations. The exact size of the Chinese nuclear arsenal is unknown, but most estimates put it in the low hundreds. If that stockpile expands, it will raise the floor for how low the US is willing to go… According to Lewis, domestic politics in Washington and Moscow also play into these decisions. "The fact that the Chinese are increasing the size of their arsenal at a time when other people are coming down, that politically is a barrier (to further reductions) even if the overall Chinese numbers are not particularly high," he said.

The exact size of the Chinese nuclear arsenal is unknown, but most estimates put it in the low hundreds. If that stockpile expands, it will raise the floor for how low the US is willing to go…

Another major concern elicited by China's nuclear program is the possibility that it will spur nuclear proliferation, particularly in Japan, as Beijing and Tokyo are locked in disputes over the Senkaku Islands and other issues… And the Obama administration has also undertaken a strategic rebalance to Asia, largely to reassure Tokyo and other governments that are concerned about a rising China. Washington understands that the consequences of Japan going nuclear could be dire. "It is difficult to see how or why the US-Japan alliance would survive a Japanese decision to acquire nuclear weapons," warned Brad Roberts, the former deputy assistant secretary of defense for nuclear and missile defense policy in the Obama administration. And on a regional level, Roberts believes that Japan's acquisition of nuclear weapons would generate "significantly adverse reactions" in Asia. Nuclear experts also believe that getting The Bomb would be counterproductive for Tokyo.

"I don't think there's any circumstance in which it

would make sense for Japan to build nuclear weapons," Lewis said. "Ultimately, the only realistic security policy for Japan is one of close alliance with the US, and that precludes a nuclear weapons progrm." Darryl Kimball, executive director of the Arms Control Association, believes that even discussing the possibility of getting nukes is problematic for Tokyo. "It's absolutely not in Japan's interest in talking about declaring a nuclear arsenal. I mean, that would make Japan more vulnerable, less secure in the future," he told The Asahi Shimbun….

Source: Asahi Shimbun, 09 October 2013

OPINION - Thalif Deen

Banning Nukes Still a Political Fantasy

The General Assembly's first-ever high-level meeting on nuclear disarmament closed last week on a predictable note: the longstanding proposal for the elimination of nuclear weapons remains firmly in the realm of political fantasy. The one-day meeting, referred to by insiders as the HLM, provided no concrete assurances from any of the world's five declared nuclear powers – the US, Britain, France, China and Russia – for a world free of nuclear weapons.

Sheikh Hasina, the PM of Bangladesh, told delegates her country was perhaps the only country facing a triple nuclear threat literally at her doorstep. The South Asian nation lives in dangerous proximity to not one but three nuclear powers: India, China and Pakistan…Hasina called for the establishment, as an interim measure, of nuclear-free zones in South Asia and the Middle East. But a long-delayed international conference on the creation of a nuclear-weapons-free zone in the Middle East was postponed last year and remains in limbo, mired in the politics of the region.

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Asked if last week's high-level meeting produced anything concrete, Joseph Gerson of the American Friends Service Committee, a strong anti-nuclear advocate, told IPS "one cannot expect miracles or enormous breakthroughs at the HLM or similar multinational disarmament forums"… That said, the fact that the HLM was held, with 74 heads of state, foreign ministers, ambassadors and other foreign ministry personnel speaking, reflects the continuing commitment of the vast majority of the world's nations to achieve a nuclear weapons free world, as required by the NPT, Gerson pointed out. "These demands and the increasing isolation of the US and Israel in such forums is something those of us who are US Americans need to be teaching our compatriots," he added.

Until the HLM, he said, the US and other P5 states had boycotted such multilateral disarmament conferences, most recently the Oslo Conference on the Humanitarian Consequences of Nuclear Weapons… Jayantha Dhanapala, a former UN under-secretary-general for disarmament affairs, told IPS last month that unless disarmament becomes a priority for possessor states, "speeches and meetings alone are not going to change the stark dangers posed by this most destructive weapon of mass destruction".

A decision to outlaw nuclear weapons in the same way as biological and chemical weapons is essential, he stressed, and the time to start negotiations on a Nuclear Weapon Convention is not tomorrow but now… Firstly, an international conference on the humanitarian impact of nuclear weapons scheduled to take place in Mexico in February 2014. And secondly, a ministerial meeting of the Non-Proliferation and Disarmament Initiative (NPDI) to be held in Hiroshima, Japan in April 2014.

…Outside of the HLM, foreign ministers and high-level representatives from the 183 member states who are parties to the CTBT issued an urgent call last week to the eight remaining states China, North Korea, Egypt, India, Iran, Israel, Pakistan and the US to sign and ratify the CTBT. According to guidelines of the CTBT, ratification by these eight countries is necessary for the treaty's entry into force.

Source: http://www.nationofchange.org/, 06 October 2013.

OPINION - Alexander Yakovenko

Is Nuclear Disarmament Possible?

Russia is constantly advocating further limitations and reductions in nuclear weapon stockpiles along with strengthening international regimes of arms control and non-proliferation. At the heart of our approach is the need for responsible, pragmatic and gradual steps to be taken in this sphere aimed at finding effective ways

to reduce the nuclear danger.

Within this context promotion of the NPT is central to such efforts. We believe that the attention of the international community should be focused on the priority areas of nuclear non-proliferation, disarmament and peaceful use of nuclear energy established by the NPT. These are important tasks that should be further implemented, including within the framework of the Action Plan adopted at the 2010 NPT Review Conference. The Action Plan contains the list of "64 practical steps" that states are asked to take in support of these three pillars of the NPT, which could contribute to the strengthening of the Treaty and serve as a "scorecard" for measuring progress and ensuring there would be accountability in this sphere.

The practical contribution made by Russia to the limitation and reduction of nuclear weapons is well-known: the Soviet-American Treaty on the Elimination of Intermediate- and Shorter-range Missiles, which opened the way for disarmament, the 1991 START, the 2002 Moscow Treaty on Strategic Offensive Potentials, and the 2010 Treaty between Russia and the US on Measures for Further Reduction and Limitation of Strategic Offensive Arms.

The entry into force of the new Russian-American START Treaty presented a huge step in nuclear disarmament. The ceilings for the warheads established by the Treaty are one third lower than those of the Moscow Treaty, and for the means of delivery - half as much. It means that the nuclear arsenals of both countries will be reduced to the lowest level since the early 1960s. This is a huge achievement.

TThe practical contribution made by Russia to the limitation and reduction of nuclear weapons is well-known: the Soviet-American Treaty on the Elimination of Intermediate- and Shorter-range Missiles, which opened the way for disarmament, the 1991 START, the 2002 Moscow Treaty on Strategic Offensive Potentials, and the 2010 Treaty between Russia and the US on Measures for Further Reduction and Limitation of Strategic Offensive Arms.

Further reductions should be discussed after all necessary steps to implement the new START Treaty have been taken. Negotiations on strategic offensive arms reductions are only possible if all the factors influencing strategic stability are duly taken into account. First of all, it concerns the plans of unilateral development of a strategic missile defense system, development of non-nuclear strategic offensive arms, potential deployment of weapons in outer space, increasing imbalances in conventional armaments, uncertainty over entry into force of the CTBT, etc.

We also listen to the calls of those, who propose a serious and responsible dialogue on "general and complete" nuclear disarmament. The main efforts in this sphere, as we strongly believe, should be focused on creating conditions that enable phased movement towards nuclear disarmament while strengthening strategic stability on the basis of principles of equal and indivisible security for all states. Without this it is hard to imagine how nuclear disarmament could be brought about. Building up trust between major powers is also a factor, including through universal commitment to multilateral diplomacy, collective action and international rule of law, based on the UN system.

Source: Author was Deputy foreign minister (2005-2011). http://rt.com/, 04 October 2013.

OPINION- Manpreet Sethi

Short Call, Big Significance: The Obama-Rouhani Conversation

Historic détentes in the past have radically changed the course of international relations. Are we on the threshold of another such event in USA-Iran rapprochement? Going by the developments of last week, which have included a first telephonic conversation in 34 years and relatively constructive statements by Presidents Rouhani and Obama at the 68th session of the UNGA, things do look brighter than they have been in a long time. Indeed, both sides have expressed a strong desire to defuse the crisis that has now lasted over ten years since questions were first raised on the true intent of the Iranian nuclear programme after disclosures were made by Iranian dissidents.

However, an opening has certainly emerged with the election of a moderate leader as the Iranian President. He fired his opening salvo with the desire to alter the engagement parameters from what had been used by his predecessor. US President Obama, who currently enjoys the lowest approval ratings at home, and who is in search of opportunities that can help him earn the Nobel Peace Prize that he received in 2009, was

quick to seize the initiative. Can he now get some concessions out of Rouhani and can he offer any worthwhile compromises to Iran? To supplement the possibility of a nuclear rapprochement with the US, and by extension with the international community, Iran also entered into negotiations with the IAEA on 27 September 2013 with the stated intention to cooperate in "mutual confidence building and constructive interaction". Will this culminate with the IAEA being able to put an end to the Iranian dossier? It is too early to tell.

In fact, the answers to these questions depend a great deal on the domestic and regional dynamics for both nations. For Iran, while Supreme Leader Ayotallah Ali Khamenei appears to have given a long rope to Rouhani to undertake nuclear negotiations, there is no denying that the Iranian Revolutionary Guard Corps, which oversees the nuclear programme, is peering over his shoulder. The political power balance at home could circumscribe Rouhani's maneuverability. In any case, it should be expected that Iran would not be willing to surrender the right to enrichment. But, as long as the programme can be brought under IAEA safeguards, it would be a positive development. Even more, if Iran can agree to ratify the Additional Protocol (which allows for more intrusive inspections) which it had signed in 2005, it would be a major step forward.

In order to strengthen Rouhani's position at home, Obama will have to appear to concede some of Iran's demands, including a phased lifting of sanctions. It may be recalled that Rouhani was the Iranian nuclear negotiator from 2003-05 when the nuclear programme was first suspended. But the inability to make any breakthrough had led to a hardening of positions.

In order to strengthen Rouhani's position at home, Obama will have to appear to concede some of Iran's demands, including a phased lifting of sanctions. It may be recalled that Rouhani was the Iranian nuclear negotiator from 2003-05 when the nuclear programme was first suspended. But the inability to make any breakthrough had led to a hardening of positions. From then to now, under hardliner Iranian President Ahmedinejad, Iran substantially improved its enrichment capability through addition of basic and advanced centrifuges at Fordow. The agreement arrived at on the future of this capability could make or break the currently developing rapprochement.

Meanwhile, Rouhani too will have to understand the constraints on Obama from his own domestic opposition, as well as from its ally, Israel. Israeli PM Netanyahu has already expressed deep skepticism over the Iranian overtures and even described them as a show of duplicity. Given this attitude of Tel Aviv, the onus will be on Washington to soften positions in order to help develop the Iran and US negotiations into a wider dialogue on regional security.

In any case, a Conference on negotiations for a weapon of mass destruction (WMD) free zone in the Middle East, as recommended by the 2010 NPT RevCon is due. A coordinator for the same had already been appointed, but the conference could not be held in 2012 due to the intractable positions taken by Iran and Israel. As part of the evolving situation now, the convening of this Conference should be a goalpost since the next NPT RevCon is looming large in less than two years now. Progress on this front would enable foster a positive atmosphere at the meeting and reinvigorate the non-proliferation regime.

In fact, Obama could well use this opportunity of engaging with Iran to take some larger steps aimed at sustainable non-proliferation. While the immediate focus is on binding Iran to restrictions that may stop it from moving towards nuclear weapons, the long term objective should be to reduce the salience of nuclear weapons by delegitmising their use or threat of use through a UN convention or treaty to this effect. This would, in the long run, reduce the desire of nations to move in the direction of acquiring weapons that are unusable. The Syrian case, in a sense, has reinforced the strength of a taboo against the use of WMD, chemical weapons in the case of Syria. The norm against nuclear non-use could be strengthened in the backdrop of the Iranian - US nuclear rapprochement.

The short telephonic conversation between the two Presidents may yet prove to be a historic one. The onus lies equally on both to ensure progress. The repercussions of a failure, just as much as the benefits of a thaw, would go beyond the two capitals.

Source: CAPS In Focus, 30 September 2013.

OPINION- By Paul Richter

Iran Nuclear Talks: Congress is the Elephant at the Negotiating Table

Obama administration officials hoping to end the nuclear standoff with Iran not only face a nation legendary for hard-line negotiating, they also must deal with members of Congress who may be just as unyielding. In talks with Iran set to resume in Geneva in mid-October 2013, the White House must weigh two competing challenges: coaxing Tehran to stop uranium enrichment and other nuclear work, and winning support from a Congress that is skeptical of easing sanctions against Iran.

In an era when Congress is divided on almost everything, the desire to bash Iran is nearly universal on Capitol Hill, uniting tea party conservatives such as Sen. Ted Cruz (R-Texas) and liberals like House Minority Leader Rep. Nancy Pelosi (D-San Francisco). Since only Congress can permanently lift the bruising sanctions it has imposed on Iran, lawmakers can torpedo any deal if they believe the White House is giving too much to Iran's pragmatic New President, Hassan Rouhani, or his hard-line boss, supreme leader Ayatollah Ali Khamenei. "We have a tremendous amount of leverage," said Rep. Ed Royce (R-Fullerton), chairman of the House Foreign Affairs Committee and co-author of the toughest Iran sanctions legislation ever adopted by the House.

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If the Senate passes the bill, which the House approved in July 2013 by a vote of 400 to 20, the US would seek to cut Iran's oil exports which account for 80% of Iranian government revenue to near zero by punishing purchasers. The bill would also take a long step toward clamping a total trade embargo on Iran.

…Obama and Rouhani are both eager to avoid war, and have incentive to compromise. Diplomats say a possible deal might allow Iran to enrich uranium to low levels for peaceful purposes under strict oversight by the IAEA, or import nuclear fuel from Russia or other countries…US negotiators can tell the Iranians that if they don't give ground on their nuclear program, "those crazy people on the Hill might do anything," said Mark Dubowitz, a sanctions specialist at the Foundation for Defense of Democracies, a pro-sanctions advocacy group.

But Congress could go too far by imposing even harsher sanctions, enraging Iranian hard-liners and jeopardizing the new diplomatic opening. Some influential lawmakers, for example, are urging Congress to press ahead with more sanctions if Iran doesn't offer immediate concessions on several fronts, not just nuclear development. "So long as Iran continues to pursue a nuclear weapons capability, build longer-range ballistic missiles, sponsor terrorism around the world and abuse human rights, the Senate should impose maximum economic pressure on Iran to give diplomacy a chance to succeed," Sen. Mark Steven Kirk (R-Ill.) said in a statement.

…Without congressional backing, Obama's diplomatic options are limited. He can halt sanctions imposed by executive order, and he can temporarily suspend sanctions imposed by law, citing the needs of US national security. But if he continues to suspend sanctions in ways that Congress doesn't support, he risks a blistering political attack. Obama would most likely need to convince Congress that Iran has complied fully with tough US legal requirements before lawmakers would permanently lift sanctions.

Congress also has leverage over European Union sanctions that have proved enormously effective. Tehran is eager to rejoin the Brussels-based international financial transaction system known as SWIFT so it can again move money around the globe.But even if Iran is permitted back into the system, financial companies might be wary of cooperating with Tehran until the US gives its blessing. That's because so-called secondary sanctions imposed by Congress bar foreign companies that do business with Iran from transacting commerce with any US firm, a huge penalty for many international companies.

The long reach of US sanctions law means the White House "really has to treat Congress as a full partner on this issue," said Dubowitz, who has been an advisor to lawmakers on the issue.Some analysts say the dynamics of American politics make it easy for Congress to add sanctions and tough to remove them. Lawmakers who vote to ease sanctions on a longtime adversary might come under fire as weak on national defense. They're less likely to be blamed if Congress undermines White House peace negotiations. A vote to continue or strengthen sanctions "is pretty cost-

free for Congress," said George Perkovich, a nuclear specialist at the nonpartisan Carnegie Endowment for International Peace.

US officials believe Iran is enriching uranium and developing components with an eye toward someday building a nuclear bomb. Iran insists it is only developing peaceful nuclear power… Administration officials say they will require real concessions from Iran before easing the sanctions that have forced Iran to negotiate. Many US lawmakers, in contrast, sound much like Israeli PM Netanyahu, who has warned the administration against Iran's mollifying talk….

Source: http://www.latimes.com/, 05 October 2013.

NUCLEAR STRATEGY

INDIA

Prithvi-II Test-Fired Again

For the second time in two days, the nuclear weapons capable surface-to-surface missile, Prithvi-II was successfully test-fired by SFC personnel from Chandipur, Odisha… While it was launched for a range of 300 km on 07 October 2013 as against its strike range of 350 km, the single-stage, liquid propelled indegenously-developed Prithvi-II was test-fired for a range of 325 km on 08 october 2013. The missile picked up randomly from the production lot was launched from a road mobile launcher at 12.15 p.m. by one of the missile regiments of SFC and the entire exercise was monitored by scientists from the DRDO.

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"It was an excellent mission", said a DRDO official. The missile reached an altitude of 38 km before it started descending and zooming towards the pre-designated target point in the Bay of Bengal. Carrying a 500 kg dummy payload and equipped with a GPS-INS hybrid navigation system, the missile closed in onto the target with a high degree of accuracy, said the official. All the radars, telemetry stations and electro-optical tracking systems along the East Coast tracked and confirmed the performance of the missile till the terminal event. Prithvi-II was the first missile to be developed under the Integrated Guided Missile Development Programme of DRDO. It has been inducted into the armed forces in 2004.

Source: The Hindu, 08 October 2013.

PAKISTAN

Pakistan to Focus on Short-Range Missiles

Pakistan is likely to remain focused on developing and improving short-range ballistic missiles and cruise missiles to deter India's conventional military superiority despite the second successful test of India's long-range, nuclear-capable Agni-5 missile, experts said in recent interviews. Although India and Pakistan are nuclear rivals, New Delhi's forays into longer-range missile systems do not seem to be spurring reciprocal developments in Islamabad.

In a 20 September 2013 e-mail to Arms Control Today, Naeem Salik, a retired Pakistani brigadier general, wrote that Pakistan is "not unduly concerned" with India's development of longer-range missiles, such as the Agni-5, because it would not be cost effective to fire them at reduced ranges to target Pakistan. Because Pakistan's nuclear weapons are "aimed only at India," Salik said, Pakistan does not require longer-range systems because Islamabad can reach "any target" in India with its current inventory of missiles. Salik added that Pakistan's "self[-]imposed restraint" on its missile ranges also is a "conscious decision" not to develop missiles that would allow Islamabad to target Israel. This prevents "unnecessary hostility" from Israel and "pro-Israel lobbies in the US," he said.

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India's 15 September 2013 test of the Agni-5, its longest-range missile, "met all the mission objectives," Ravi Kumar Gupta, spokesman for India's DRDO said in a statement released following the test. The Agni-5 is a three-stage, solid-fueled ballistic missile that can carry a 1,500-kilogram payload 5,000 kilometers, according to reports. It was first tested in April 2012.

In a Sept. 19 e-mail, Toby Dalton, a former senior policy

adviser to the Office of Nonproliferation and International Security at the US Energy Department, offered an analysis similar to Salik's on some key points. Pakistan is not responding "solely or even primarily" to India's nuclear developments but rather to New Delhi's "conventional military plans and growing [conventional] capabilities," he wrote. Dalton, now the deputy director of the nuclear policy program at the Carnegie Endowment for International Peace, said that India's nuclear developments are "primarily driven" by China's growing nuclear arsenal and Beijing's presumably growing conventional forces. The reported 5,000-kilometer range of the Agni-5 puts it just below the 5,500-kilometer threshold for classification as an ICBM, but it is capable of reaching most of China, including Beijing, and the Middle East.

Chinese Foreign Ministry spokesman Hong Lei said 15 September 2013 that China "noted relevant reports" of the Agni-5 test and that "both sides should make concerted efforts to enhance" political trust and stability in the region.

As India pursues longer-range systems, Salik said that Islamabad is focused mainly on development of two types of missiles: cruise missiles and short-range ballistic missiles. The emphasis Islamabad is placing on cruise missile development is important because of India's "ongoing efforts to indigenously develop or acquire ballistic missile defense systems." Ballistic missile defense systems are not designed to target cruise missiles.

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For the past several years, Pakistan has been testing several types of cruise missiles, including the Babur, which has a range of 700 kilometers with a 300-kilogram payload. The Babur can also be launched from naval surface platforms. Islamabad also is testing an air-launched cruise missile, the Raad, which has a range of 350 kilometers. Salik noted that the Raad will give Pakistan a "stand-off capability," which allows pilots to launch a weapon at a distance from the target, thus allowing them to avoid defensive fire.

Pakistan also has been focusing more attention on its short-range, nuclear-capable ballistic missiles, including the Nasr. Islamabad began testing the Nasr, which has a range of 60 kilometers, in April 2011. It is "ostensibly for use as a battlefield nuclear weapons delivery system" to deter India from launching its Cold Start strategy, Salik said. Cold Start is India's conventional military doctrine aimed specifically at responses to Pakistani incursions into India. It involves quick, limited strikes into Pakistani territory. India's conventional military capabilities exceed those of Pakistan. Dalton said that Pakistan is focusing on shorter-range systems to deter Indian conventional operations to address "substrategic" deterrence gaps. Pakistan's current focus on short-range systems does not preclude the development of longer-range systems in the future, but at this point, "the objective of such a development is not clear," Dalton said.

DRDO Director-General Avinash Chander said that the Agni-5 "canister-launch" should take place early next year. In Sept. 15 remarks, Chander said that, after thre or four more tests, the Agni-5 will be stored and deployed in canisters to "drastically" reduce the reacion time for launching the missile, a priority for India Recent statements indicate that New Delhi plans to focs on increasing the range of its ballistic missiles in the future. India is in the initial stages of developing an ICBM with a range of at least 6,000 kilometers, the Agni-6, DRDO officials have said on several occasions.

In his 15 September 2013 comments, Chander said that increasing the range of future ballistic missiles is the "least problematic" area for India. New Delhi could develop a missile with a 10,000-kilometer range in two and a half years, he said. India does not currently "see the need" for that range. The DRDO is working on technology for MIRVs, which will allow future Agni missiles to carry several warheads. Although the Agni-5 is being tested with a single warhead, the Agni-6 could be equipped to carry up to 10 nuclear warheads, a DRDO scientist told the New Indian Express on 18 September 2013. Dalton said that on "technical drivers" of Indian missile development, including areas such as MIRVs, the DRDO is "often out front of the rest of the government in claims about its technology developments that may not in fact be settled policy."

Source: http://www.armscontrol.org/, October 2013.

RUSSIA

Russia to Up Nuclear Weapons Spending 50% by 2016

Russia is to increase annual spending on nuclear weapons by more than 50 % in the next three years, a parliamentary defense committee said… In 2016, 46.26 billion rubles ($1.4 billion) is to be spent on Russia's nuclear weapons systems, up from 29.29 billion rubles this year, according to the State Duma Defense Committee's report on the draft federal budget for 2014-2016. The draft federal budget provides for a 60 percent increase in overall national defense spending by 2016, according to the report, rising from 2.1 trillion rubles this year to 3.38 trillion rubles in 2016.

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Defense spending in 2014 and 2015 will be 2.49 trillion rubles and 3.03 trillion rubles, respectively. The government's 2014 budget, which PM Medvedev has described as "very harsh," was submitted to the Duma... According to the budget, which also includes projections for 2015 and 2016, Russia is set to record a budget deficit of 391 billion rubles ($12 billion) in 2014, rising to 817 billion rubles ($25 billion) the following year. Medvedev warned that budget cuts between 2014 and 2016 could amount to 5 percent in some areas… Russia is currently in the midst of its biggest rearmament drive for a generation, part of a massive overhaul of the forces including a move toward all-professional services. New nuclear weapons systems entering service include the navy's Bulava submarine-launched ballistic missile, the Kh-102 long-range cruise missile for the air force and new land-based intercontinental ballistic missiles for the Strategic Missile

Source: http://en.ria.ru/, 08 October 2013.

NUCLEAR ENERGY

BANGLADESH

Bangladesh Nuclear Power Plant Work Begins

Bangladesh has begun building the first of two new nuclear power plants north of the capital, Dhaka. The plants each with a capacity of 1,000 megawatts - are being constructed with Russian help as Bangladesh looks to close a yawning power deficit. Inaugurating the project, PM Sheikh Hasina said that "utmost priority" would be given to nuclear safety". The $2bn project is funded by $500m of Russian credit and is expected to be fully completed by 2022. PM Hasina said the plant would be constructed so that natural disasters could not damage or destroy it. "Regarding the design of the plant, we are following the guidelines of the IAEA" she said.

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The plants will implement new safety features following the nuclear accident in Fukushima in Japan, officials say. Under the terms of the construction deal, Russia's state-run Rosatom nuclear energy corporation will build, operate and provide fuel for the plant in addition to processing its spent fuel in Russia. The project is part of an export drive backed by Russian President that includes Rosatom building plants in Iran and Turkey. The reactors at Rooppur in Pabna district, 120km (75 miles) north of Dhaka, are expected to operate for 60 years with options to extend by another 20 years. Bangladesh currently relies on dilapidated gas-fired plants for its power supplies and experiences daily electricity shortfalls. Erratic electricity supplies have been blamed for hampering industrial production and economic growth.

Source: http://www.bbc.co.uk/, 02 October 2013.

EGYPT

Egypt to Launch First Nuclear Power Plant In Dabaa: President

Egypt is taking steps towards launching its first power-generating nuclear plant in Dabaa, located on the Mediterranean Coast, announced interim-President Mansour. In his speech to commemorate the 40th anniversary of 1973 war against Israel, President Mansour said that Egypt plans to use the nuclear power project for peaceful

purposes to help fill an energy gap. The first brick of Egypt's Dabaa nuclear power plant was laid under ousted-president Hosni Mubarak, but was halted due to disputes with local residents, who accused the state of confiscating their land by force and without proper compensation. In January 2012, Dabaa locals stormed the construction site, destroying existing infrastructure and refusing to surrender to military police. Low radioactive sources were also looted from the location, according to the IAEA. Last week, local tribes from Dabaa, Marsa Matrouh - a sea port 240 km west of Alexandria - relinquished the nuclear construction site to the Egyptian armed forces after months of occupying the controversial zone.

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Source:http://english.ahram.org.eg/, 05 October 2013.

GENERAL

Small Reactors May Be Nuclear Power's Future

While countries such as Japan and Germany are moving away from nuclear energy in the wake of the Fukushima reactor meltdown in 2011, the US is taking a different tack. "The promise of nuclear power is clear," Energy Secretary Ernest Moniz said in July 2013 at a Senate Energy and Natural Resources Committee hearing, adding, "Nuclear power has an important role in President Obama's all-of-the-above approach to energy."

For the White House, part of nuclear energy's promise comes in the form of scaled-down facilities called small modular reactors, or SMRs. The average US nuclear reactor has an operating capacity of 1,000 megawatts or more; SMRs, by contrast, have a generating capacity of less than 300 megawatts. They have yet to be deployed on a commercial scale, but the administration is betting on this option as a way to diversify the nation's energy portfolio and rein in carbon emissions.

SMRs would be cheaper than conventional reactors simply because they're smaller. This means less overhead for utility companies. The component parts of SMRs would be manufactured in factories as modules that could be shipped for on-site assembly. Supporters of the technology say this would also bring down costs, although not everyone agrees.

Obama has put the Energy Department at the helm of a $452 million public-private partnership to finance SMR construction. In November, DOE awarded a grant to U.S-based Babcock & Wilcox to create a 180-megawatt SMR in cooperation with the Tennessee Valley Authority and Bechtel. The reactor is slated to be up and running by 2022.

First, there's the economic argument. SMRs would be cheaper than conventional reactors simply because they're smaller. This means less overhead for utility companies. The component parts of SMRs would be manufactured in factories as modules that could be shipped for on-site assembly. Supporters of the technology say this would also bring down costs, although not everyone agrees…

Proponents of the technology follow a different line of reasoning. "Smaller reactors could be cost-competitive because, since they're built in a factory, you can construct them more quickly and on a mass scaleated mechanisms within the reactor and would continue to function in the event of an emergency or a loss of electricity.

… While SMRs remain an unproven technology, DOE is continuing to look for companies to develop the technology and is expected to award additional matching grants in the coming months… If SMRs take off, they could spur US manufacturing and be shipped abroad, boosting exports. Keeping a hand in nuclear power could also benefit national security. "I think from a global perspective it's best for the US to stay a prominent player in the nuclear industry," said Darren Gale, vice president and project director of Generation mPower, LLC, a company formed between Babcock & Wilcox and Bechtel responsible for developing the company's SMR prototype with funding from DOE. "If we don't, the US won't have a voice in conversations about nuclear technology in the international arena."

Source:http://www.nationaljournal.com/, 01 October 2013.

Small Nuclear-Fossil Fuel Reactors Are Attracting Attention But Not Capital

If creative thinking is central to the success of electric generation, then American entrepreneurs have a decided advantage. But if raising the necessary capital is factored into the equation, the challenge becomes increasingly daunting — unless the federal government makes a contribution. One such idea is to combine the use of nuclear energy and natural gas into one electrical generator. Advocates of the technology say that it would extend the life of natural gas deposits while also limiting the level of greenhouse gas emissions. Meantime, the odds of a nuclear accident are almost wiped away while the amount of nuclear waste requiring disposal would be minimized.

The advantage of going small is that the technology is within the financial grasp of most power companies that would be its customers. The mega-nuclear units are out-of-reach for any utility other than the behemoths such as Southern Company, which along with its partners, is getting an 8.3 billion loan guarantee to construct two units in Georgia.

"The hybrid is able to generate at least 15 percent more power than a conventional combined-cycle power natural gas power plant," says Mike Keller, chief executive of Hybrid Power Technologies, who spoke by phone with this reporter. "While the hybrid has numerous environmental benefits, the reason for using the technology is superior economics."

Why not build two separate plants? It's kind-of like a hybrid vehicle that runs on both gasoline and electricity, Keller adds, saying that alternating between nuclear and natural gas would reduce the level of harmful emissions between 30-70 percent, largely because the reactor is more efficient…The efficiency of the unit, meanwhile, means that nuclear waste is cut by 75 percent. What is left is stored in highly stable graphite containers.

At the same time, the cost of construction is marginally less than building two separate generating facilities because fewer production components are required. That is, it does not need as many transformers and generators, or as much steel, which could shave as much as 25 percent off the building costs. Can they actually get permits? "It is essentially a gas reactor and there is ample precedence for it," says Keller. "Obviously licensing a nuclear technology is a formidable hurdle but it has been done before." The technology promises to be highly competitive as well as clean, he says, adding that it could transform the American energy landscape. But can it live up to its promises and can it attract investors? "This would still have long potential reviews by the NRC because of the nuclear component," says Tom Drolet, an engineer in both the nuclear and fossil FOSL -0.45% fuels sector. "But it is worthy of a detailed look." It falls in the family of small modular reactors, the best known of which are the 100-megawatt nuclear modules that are pieced together to meet a specific power need. At present, the Obama administration is partnering with Babcock and Wilcox and Bechtel Corp. to develop a 180-megawatt reactor for the Tennessee Valley Authority. The $452 million project is expected to be operational by 2022.

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Hybrid Power's Keller insists that the smaller reactors, which include both the hybrid and the purely nuclear, are real. The main issues going forward, he adds, are winning over regulators and investors.

Here, he maintains that the public sector could provide a powerful lead, although such thinking is disputed by critics who question why anyone would build essentially two power plants to drive the same generator. Moreover, utilities have shown little interest in buying into any form of power production that cannot be widely disseminated. Clearly, it's a complex device, which must be better understood by investors, whether they be private or public. That said, the federal government is heavily rooted in the energy sector, participating in everything from early-to-late state research. The smaller nuclear reactors are getting some public funds. Developers of the hybrid technology say that they should too, noting that the efficient generators could find their place in a niche market.

Source: http://www.forbes.com, 09 October 2013.

NUCLEAR COOPERATION

FRANCE -- PAKISTAN

French Ambassador Philippe Thiebaud has said his country is ready to consider Pakistan's request for civil nuclear cooperation keeping in view international safeguards.

However, "we have not received any formal request from Islamabad to enhance cooperation in producing nuclear electricity." Pakistan is working with China in the area of civil nuclear power, the ambassador said while talking to the media at the first roadshow tilted "World of energy efficiency for a better Pakistan," organised by Schneider Electric. "It depends on Pakistan whether it takes any such decision and my country is ready to consider the request for enhancing civil nuclear cooperation in line with international obligations," he reiterated… Responding to a question about French help to Pakistan in constructing Diamer Bhasha Dam, he said Paris was already providing assistance in setting up hydropower projects, mainly smaller ones such as Jabban hydropower project in Khyber-Pakhtunkhwa, Jagran project of over 100-megawatt capacity and Munda Dam, a comparatively bigger project…

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Source: http://tribune.com.pk/, 03 October 2013.

INDIA - UZBEKISTAN

India Looking to Import Uranium from Uzbekistan

India is in talks with Uzbekistan for procuring uranium for growing requirement of fuel for its nuclear plants, expected to increase in number in coming years. A delegation of department of atomic energy (DAE) officials travelled to Uzbekistan last week to discuss the modalities of a possible contract… a contract for procurement of uranium could materialise in the near future. India is looking at importing about 2,000 tonnes of uranium by 2014 from Uzbekistan, which has 1,85,800 tonnes of proven uranium deposits. India already has a contract for uranium import from another Central Asian nation Kazakhstan and Mongolia. Apart from these countries, Kyrgyzstan also has rich uranium deposits. DAE officials, however, said that they were looking for uranium across the world to meet the growing demand for the country's nuclear power plants. "It is not that we are focusing on Central Asia only, but the region happens to have proven reserves of uranium. We will try to procure uranium from wherever possible," said a senior DAE official. "We are also looking at Niger and Namibia to get our supply of uranium," the official added. Both these countries have rich deposits of uranium. In 2009, India also signed a civil nuclear cooperation with Namibia. India currently has 19 active nuclear reactors that produce 4,780 MW of electricity.

India is looking at importing about 2,000 tonnes of uranium by 2014 from Uzbekistan, which has 1,85,800 tonnes of proven uranium deposits. India already has a contract for uranium import from another Central Asian nation Kazakhstan and Mongolia. Apart from these countries, Kyrgyzstan also has rich uranium deposits.

In the 12th Five Year Plan (2012-2017), NPCIL plans to add 16 more reactors and increase power generation to 16,000 MW and further take it up to 20,000 MW by 2022. In his speech at the 57th General Conference of the IAEA in Vienna in September 2013, DAE secretary RK Sinha said India had "limited resources" from which it is trying to "extract maximum energy". Sinha had said with the finding of new reserves of uranium, the total reserves capacity had shot up by five per cent. He was referring to the Tummalapalle mines in YSR district in Andhra Pradesh. Apart from Andhra Pradesh, other active uranium mines are in Jaduguda in Jharkhand. These reserves, however, are not enough to meet the increasing fuel demand…

Source: http://articles.timesofindia.indiatimes.com/, 06 October 2013.

INDIA – USA

US-India Nuclear Deal Stirs Political Debate

The US-India nuclear cooperation agreement has once again become the talk of the town. It started after PM Singh — during his recent trip to the US — gave assurances to President Obama that his government would facilitate US companies to invest in India's burgeoning civil nuclear energy market. Since then, the nation continues to be entertained by political antics. While each of the

mainstream political outfits in India are engaged in tug of war presenting themselves as the sole protector of the supreme national interests, virtually all are resigned to the fact that it is impossible for any Indian government to ignore US interests. All the more so, because Washington has taken the initiative to extricate a nuclear armed non-NPT signatory by offering an exit route in the form of bilateral civil nuclear cooperation.

The frustration of US lawmakers, who played a decisive role in not only lifting the US moratorium on pursuing nuclear commerce with India but also expediting the waiver granted by the NSG, is reflected in the statements of Mark Warner and John Cornyn, both co-chairs of the US Senate's India Caucus. In a letter written to Secretary of State John Kerry, the senators lamented the lack of progress in finalizing a workable nuclear liability agreement to ensure easy access of American nuclear companies to Indian market. Perhaps the secret behind Singh's hastiness to push through the contract, by way of which Toshiba's US subsidiary Westinghouse will be providing reactors for building nuclear power plants in Gujarat and Andhra Pradesh, lay in Washington's low-key persuasion.

This in itself is an interesting development given the fact that the Gujarat chief minister and opposition BJP PM candidate, Narendra Modi, has been projected as an anti-nuclear dove. Modi has already been pitched into this delicate debate because his government is ready to deal with the local farming communities' steadfast opposition to the acquisition of their land for the upcoming nuclear project with an iron fist. With Modi clearly supporting nuclear commerce with the US, albeit surreptitiously, it remains to be seen how best his loyalists or the leftist intellectuals banking upon Modi's apparent anti-nuclear stance to scuttle the deal, can defend this prime ministerial aspirant's frequent somersaults.

The BJP's doublespeak on the issue has already been exposed by the revelation of US Charge d' Affaires Peter Burleigh's note back home, which clearly quotes the senior BJP leadership of accepting to have played a neat little game with the masses. "Criticism of the US in public was to score easy political points against the ruling UPA government and when in power (the) BJP would not harm the Indo-US nuclear deal" was the clear commitment given by the BJP leadership to the US envoys during private deliberations.

So, scoring brownie points over the ruling party through such concocted opposition to nuclear commerce and accusing the prime minister of having extra-territorial allegiance can at best be described as crocodile tears shed over a critical strategic issue that needs to be debated sincerely.

…It is unlikely that India has developed that sensitivity by now to make sure that those living adjacent to high-risk facilities are not harmed by any leakages caused by safety failures. But then it is a Catch-22 situation for New Delhi, attempting to diversify the country's energy basket with addition of 63,000 megawatts of nuclear power in the next 20 years. Moreover, nuclear energy has the potential to become the mainstay of any future attempt to arrest global warming and greenhouse gas emission. Unfortunately, the crucial safety issue is not settled as yet with US nuclear firms still bogged down by civil liability clauses incorporated in India's nuclear damage law enacted in 2010.

Confused citizens are justified in asking that if Westinghouse's reactors are the safest in the world, why are the Americans not confident that there will be no occasion for nuclear damage claim resulting due to equipment malfunctioning. With the Russians and French also imposing prohibitive cost, Indian taxpayers will end up paying heftily for any prospective nuclear accident if indeed Manmohan Singh is trapped into diluting the liability clauses to provide immunity to suppliers for any nuclear incident. Above all, the significance of Thorium has so far been ignored in India's largely lopsided nuclear debate. Construction of a series of Thorium-based Fast Breeder Reactor (FBR) would be strategically gainful for a nation, rich in Thorium deposits and which goes around the world begging for fuels to run its existing nuclear reactors. Fuels generated in FBRs can be easily reused in other such reactors leading to less consumption and significant reduction in the cost of power generated. But then, India is squandering her Thorium reserves by exporting indiscriminately — thanks to an amended Mines and Mineral Regulation Development Act — when this naturally occurring radioactive element could have been a game-changer for the nation's energy sector.

Source: http://www.arabnews.com, 07 October 2013.

USA - VIETNAM

US Agrees to Nuclear Deal with Vietnam

The Obama administration has agreed to sell Vietnam nuclear fuel and technology in an agreement that is aimed at deepening U.S. ties to Asia's growing economies as China increasingly asserts itself in the region. But the details of the agreement with Hanoi run the risk of complicating President Obama's wider

efforts to keep close tabs on technologies that can be used to develop nuclear weapons. Secretary of State John Kerry initialed the agreement early Thursday with his Vietnamese counterpart at an Asian summit in Brunei. U.S. officials said Hanoi has agreed to initially purchase nuclear fuel for its reactors.

Source: Wall Street Journal,09 October 2013

NUCLEAR PROLIFERATION

IRAN

Iran's Nuclear Warheads Could Hit NY in 3 to 4 Years – Netanyahu to UN

Iran is building missiles that could reach New York in three to four years, Israeli PM Netanyahu told the UN comparing a nuclear Iran to "50 North Koreas." It comes after Hassan Rouhani launched his "charm offensive." "Iran is now building ICBMs that the US says could reach this city in three or four years," Netanyahu said, speaking to the UNGA in New York. Netanyahu said he wished he could believe new Iranian President Rouhani - who has sought to make progress in nuclear talks since taking office at the beginning of August 2013 - but said he simply couldn't do so…He added that "if Israel is forced to stand alone, Israel will stand alone" in the matter of defending itself. "The only diplomatic solution that would work," claimed Netanyahu, "is one that fully dismantles Iran's nuclear weapons program and prevents it from having one in the future." Existing sanctions on Iran have seen unemployment rise to 20 percent, with inflation hovering at over 30 percent, according to former US Labor Secretary Robert Reich. The US and EU have placed the country under a total economic embargo, meaning that Iranian-origin imports are banned and there is almost a complete US ban on selling aircraft parts to the country.

Netanyahu created a four-point plan for imposing a further "diplomatic solution" on Iran. Firstly, the country would have to cease all uranium enrichment. Secondly, Iran would be required to have all stockpiles of enriched uranium removed from its territory. Thirdly, infrastructure for a nuclear breakout capability would have to be dismantled. And lastly, all work at the heavy water reactor in Iraq aimed at the production of plutonium would have to be stopped.

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…Iran says its nuclear program addresses its energy and medical needs, and insists on its right to develop it – a topic which will be brought up at the next round of high level talks. The talks will be held in Geneva, Switzerland on 15-16 October 2013. Iran and the six world major powers will participate in what will be the first nuclear negotiations to take place since the election of Rouhani, who has urged the world to seize the opportunity of his election to resolve the nuclear dispute...

Source: http://rt.com/news/iran-nuclear-netanyahu-un-598/, 01 October 2013.

NORTH KOREA

N. Korea May Learn to Miniaturize Nuclear Warhead for ICBMs in Few Tests: Researcher

North Korea may be one test shy of developing a technology to miniaturize a nuclear warhead small enough to fit on its long-range ballistic missile, a nuclear policy researcher said on 25 September 2013. "In the last (third) nuclear test, they could not finish the task of miniaturization ... but if they have a chance for more nuclear tests, maybe one more, they would be able to have small and more reliable device for their missile," Li Bin, a nuclear policy expert at the Carnegie Endowment for International Peace and a professor at Tsinghua University, said during an international forum on North Korea, hosted by the Asan Institute for Policy Studies.

In its first nuclear test in 2006, "(the North) began with a small device with a small amount of explosives, and it was not so successful," the Chinese expert said. "Then they had to add more chemical explosives because the yield was not good enough. Eventually they got full yield (in the third test), but the device is not small enough," according to Li, who also joined the Chinese delegation on the CTBT negotiations.

…Pyongyang is believed to be developing ICBMs, and

the country has repeatedly threatened nuclear attacks on the continental US and South Korea. The Chinese expert also noted that the North may have tested a plutonium-based nuclear weapon, instead of uranium-based one, because it is more difficult to miniaturize bombs using uranium.

Joshua Pollack, a nuclear expert at Science Applications International Corp., said the North is presumed to be internally producing crucial components for gas centrifuge, used for uranium enrichment, given the progress the North has made in its nuclear facilities in Yongbyon despite little indication that the country imported the crucial parts since 2003.

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…"If that's the case we cannot easily stop the expansion of the enrichment program," he said, adding that raises a serious question about whether there can be viable strategies to denuclearize the North.

Source: http://english.yonhapnews.co.kr/, 25 September 2013.

NUCLEAR NON-PROLIFERATION

IRAQ

Iraq Ratifies Nuclear Test Ban Treaty

Iraq has ratified on 28 September the CTBT, an accord that however cannot enter into force until the US, China and six other states follow suit. "Iraq's commitment to relinquish the most devastating kind of weapons by banning nuclear explosions ... inches us closer towards the realisation of a zone free of nuclear weapons in the Middle East," said Lassina Zerbo, executive secretary of the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO). Iraq's move, formalised at UN headquarters in New York, raises the number of countries that have adhered fully to the treaty to 161. In the Middle East, Egypt, Israel, Iran, and Yemen have not yet ratified the CTBT, while Saudi Arabia and Syria remain outside as non-signatories. Efforts to create a zone in the Middle East free of nuclear weapons have failed to make progress, with a hoped-for meeting in late 2012 failing to take place.

To enter into force, the CTBT must be signed and ratified by 44 specific states, only 36 of which have done so including France, Russia and Britain. The remaining eight are China, the United States, India, Pakistan and North Korea; Israel, widely believed to have atomic weapons; Iran, suspected of wanting them; and Egypt.

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Source: The News International, 28 September 2013

NUCLEAR DISARMAMENT

CHINA

China Calls For Joint Efforts To Advance Nuclear Disarmament In Step-By-Step Manner

Chinese Ambassador for Disarmament Affairs Wu Haitao here on 08 October 2013 called on the international community to advance nuclear disarmament in a step- by-step manner… The UNGA's First Committee deals with disarmament, global challenges and threats to peace that affect the international community and seeks out solutions to the challenges in the international security regime. "Nuclear proliferation issues are still prominent," Wu said, adding that the international community should make joint efforts to further promote the process of disarmament.

In doing so, countries should first advance nuclear disarmament in a step-by-step manner and reduce proliferation risks comprehensively, he noted. "

NWS should abandon the nuclear deterrence doctrine based on the first use of nuclear weapons and make an unequivocal commitment of no-first-use of and not using or threatening to use nuclear weapons against non-nuclear-weapon states or nuclear-weapon-free zones, negotiate and conclude a legally-binding international instrument in this regard at an early date," said the Chinese ambassador.

According to him, countries with the largest nuclear arsenals should continue to take the lead in making drastic and substantive reductions in their nuclear weapons. Meanwhile, Wu noted, other nuclear-weapon states should also join the multilateral negotiations on nuclear disarmament when conditions are ripe.

"Nuclear disarmament should stick to the principles of maintaining global strategic balance and stability and undiminished security for all," he said. In this regard, the development of missile defense systems that undermine global strategic balance and stability should be abandoned, he added. Wu went on to say that China has always stood for the complete prohibition and thorough destruction of nuclear weapons."China is firmly committed to its nuclear strategy of self- defense and has adhered to the policy of no-first-use of nuclear weapons at any time and under any circumstances," he said. In his speech, Wu also stressed that dialogue and negotiation are the only right way to resolve regional nuclear issues.

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"For the Iranian nuclear issue, parties concerned should step up diplomatic efforts, promote the dialogue process between P5+1 and Iran to make early progress, so as to create conditions for a comprehensive, long-term and appropriate solution," said the ambassador. Regarding the Korean Peninsula nuclear issue, according to Wu, China believes that the six-party talks remain a pragmatic and effective mechanism to push forward denuclearization of the Peninsula and maintain peace and stability there. "China is ready to work together with parties concerned and make unremitting efforts to relaunch the six-party talks without delay and realize the denuclearization of the Peninsula and lasting peace and stability on the Peninsula and in Northeast Asia at large," he said.

Source : http://www.globaltimes.cn/, 09 October 2013,

RUSSIA

Lavrov Calls for CTBT to Come into Force as Soon as Possible

Foreign Minister Sergei Lavrov insists the CTBT comes into effect as soon as possible, Russia's Foreign Ministry reported. The ministry reported on 02 October 2013 meeting between Lavrov and Executive Secretary of the CTBTO Lassina Zerbo. Lavrov said, "Russia considers the CTBT one of the key elements of the global security system in the field of the limitation of nuclear arms and the non-proliferation of nuclear weapons." During the meeting, Russia "confirmed commitment to contributing to the Treaty's soonest coming into effect", the ministry said. The high-ranking officials noted the high level of cooperation between Russia and the CTBTO Provisional Technical Secretariat, the ministry said. Zerbo expressed gratitude to Russia "for its unchanged position on the Treaty and the active efforts aimed at making the Treaty universal".

Source : http://www.itar-tass.com/, 02 October 2013.

NUCLEAR SAFETY

UK

A major nuclear incident was narrowly averted at the heart of Britain's Royal Navy submarine fleet, The Independent on Sunday can reveal… The failure of the electric-power source for coolant to nuclear reactors and then the diesel back-up generators was revealed in a heavily redacted report from the Ministry of Defence's Site Event Report Committee (Serc). Once

a submarine arrives at the Devon base's specially designed Tidal X-Berths, it must be connected to coolant supplies to prevent its nuclear reactor overheating. But in July 2012 a series of what were described as "unidentified defects" triggered the failures which meant that for more than 90 minutes, submarines were left without their main sources of coolant. The IoS has learnt that there had been two previous electrical failures at Devonport, both formally investigated.

They were the loss of primary and alternative shore supply to the nuclear hunter/killer attack sub HMS Talent in 2009 and the loss of "AC shore supply" to the now decommissioned nuclear sub HMS Trafalgar in 2011, the Serc report said. John Large, an independent nuclear adviser who led the team that conducted radiation analysis on the Russian Kursk submarine which sank in the Barents Sea in 2000, said: "It is unbelievable that this happened. It could have been very serious. Things like this shouldn't happen. It is a fundamental that these fail-safe requirements work. It had all the seriousness of a major meltdown – a major radioactive release."

Operated under extremely tight security and secrecy, the Devonport nuclear repair and refuelling facility was built to maintain the new Vanguard ballistic missile submarines and is also home to the Trafalgar- and Astute-class attack submarines – both powered by nuclear reactors.

Large warned that if a submarine had recently entered the base when the failure occurred the situation could have been "dire" because of high heat levels in its reactor. Babcock launched an internal investigation after the incident; this blamed the complete loss of power on a defect in the central nuclear switchboard. It said the defect had resulted in an "event with potential nuclear implications". Among a number of "areas of concern" uncovered by the Babcock investigation was what was described as an "inability to learn from previous incidents and to implement the recommendations from previous event reports". A subsequent review from the Base Nuclear Safety Organisation revealed the "unsuccessful connection of diesel generators" and questioned the "effectiveness of the maintenance methodology and its management", while advising Babcock to "address the shortfalls in their current maintenance regime".

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Babcock, which is Britain's leading naval-support business and works with the MoD on a number of projects, admits that working with nuclear fuels will always carry a "small risk of a radiation emergency". Its own "stress test" on Devonport safety, launched after the Fukushima disaster, said that in the event of the failure of both power supplies, heat levels in reactors could be controlled by emergency portable water pumps, and added that such a failure had occurred a "number of times" previously. Caroline Lucas, the Green MP, said: "It's deeply worrying that a technical fault resulted in an event with potential nuclear implications. As long as we continue our obsession with nuclear – both in our defence system and in energy generation – there are going to be safety issues like this."

Ten days ago, the Office for Nuclear Regulation watchdog published details of an improvement notice it had served on Devonport on 16 July for three alleged breaches of health and safety legislation, and of Section 24 of the Nuclear Installations Act – regarding "operating instructions"…

Source: http://www.independent.co.uk/, 06 October 2013

NUCLEAR WASTE MANAGEMENT

USA

Poll: Americans Want New Agency to Store, Manage Nuclear Waste

A majority of Americans now believes that an independent federal authority accountable to a board of directors would do a better job than a federal agency in managing a nuclear waste storage facility, according to an opinion survey commissioned by the Nuclear Energy Institute (NEI).

In a shift from earlier surveys in which the public was split on the issue, 57 percent of Americans said they believe that an independent federal authority with a corporate-style board would better manage a waste storage facility. Of those surveyed, 37 percent voiced a preference for a "federal government agency," according to the national survey conducted by Bisconti Research Inc. with Quest Global Research. In February 2013, a plurality of 49 percent thought that a federal government agency would do a better job, compared with 43 percent for the independent federal authority.

The survey also found strong public support for consolidated storage of used nuclear fuel rods. These fuel rods are securely stored at nuclear power plants that generate one-fifth of US electricity supplies. About 84 percent of Americans believe "the US should retool its program for managing spent nuclear fuel rods from nuclear power plants to focus on consolidating the fuel rods at storage centers while the nation develops a permanent disposal facility." Nearly one-half—47 percent—of Americans strongly agree, with only five percent strongly disagreeing.

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Consolidated storage of used nuclear fuel is among the recommendations made to the Department of Energy in 2012 by the Blue Ribbon Commission on America's Nuclear Future. The commission also recommended creation of a new, congressionally-chartered federal corporation dedicated solely to implementing the nuclear waste management program…

NEI released other survey findings last week. The survey found that 60 percent of Americans agree that used nuclear fuel assemblies are stored safely at nuclear power plant sites. Thirty-one percent of respondents disagree, and nine percent don't know. Eighty-seven percent of Americans believe the federal government should develop a final repository for used nuclear fuel "as long as the facility meets US NRC regulations." Ten percent disagrees.

Source: http://www.elp.com/, 03 October 2013.

Centre for Air Power Studies

The Centre for Air Power Studies (CAPS) is an independent, non-profit think tank that undertakes and promotes policy-related research, study and discussion on defence and military issues, trends and developments in air power and space for civil and military purposes, as also related issues of national security. The Centre is headed by Air Marshal Vinod Patney, SYSM PVSM AVSM VrC (Retd).

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