

Nuclear power: The debate within

Industry leaders think Japan's recovery from the disaster is firmly tied with the use of nuclear energy



A Bomb Dome, a shelled-out building preserved as a reminder of the first-ever nuclear weapon



At the Peace Park in Hiroshima, a young singer strums his guitar to an audience of a few dozen who care to listen. "I wonder when I will fall again, I wonder what will be left to take the place that I have destroyed".

Sitting in the shadow of the A Bomb Dome—a shelled-out building preserved as a poignant reminder of the first-ever nuclear weapon used in a war—the singer reels out the story of a nuclear bomb that was destined to be a hope for mankind but is now ashamed that it was ever born and wonders

when disaster would strike again.

It is here in Hiroshima that the billowing smoke out of the Daiichi in March brought back the harshest of memories, triggering anti-nuclear protests. While the smoke is long since gone even though the reactor in Fukushima has not been fully shut down, the debate in Japan on the future of nuclear energy has raged like never before.

With even Prime Minister Noda admitting that setting up of new nuclear plants in the current atmosphere would be difficult, Japan faces

an uncertain crossing. The country had already placed its bets on nuclear energy. The energy plan drawn up had envisaged that by 2030, nuclear power would be the source of half of the nation's energy requirement, up from the current 30 per cent.

With public mood firmly against any scaling up but rather for steady discontinuation of nuclear energy, policy makers are looking at two to three decades when energy demand could far outstrip supply. Since April, when nuclear power plants went offline for checks and inspections, the

industry has been facing a severe energy crunch. Automobile majors have enforced four working days per week while other manufacturing units shut production for months. Experts feel that the twin targets of emission cuts and reducing dependence on nuclear power could be too much to bear for the industry. While there is agreement that the future is green energy, business houses have argued that the gestation period is too long and a smooth transition has to be achieved.

"Japanese companies cannot continue to produce in Japan in the

absence of nuclear power. They will need to shift base to other countries that will bring huge problems such as unemployment and will reduce the nation's tax revenue," says Tadashi Saito, who heads the political affairs bureau of the Keidanren, Japan's largest business federation.

The federation joined thousands of business houses in urging the government to bring back a bulk of the nuclear plants on line. However, public sentiment is still hostile. In January, the restarting of a power plant in western Japan met with fierce

protests by activists and local residents. The issue of nuclear power has, in fact, even translated down to village elections, with pro- and anti-nuclear candidates facing off for votes.

Industry leaders, however, remain convinced that the nation's recovery from the disaster is firmly tied with the use of nuclear energy. "Japan's nuclear energy is one of the safest in the world. Because of this accident, we now have more experience in the field of nuclear safety. We should export this technology to other nations," says Saito.

'Potential for economic relations is much larger'

Noriyuki Shikata, the deputy cabinet secretary of the Japanese government, spoke to Manu Pubby on a variety of issues including the transition from recovery to reconstruction of Japan, ties with India, economic scenario and nuclear cooperation



What kind of impact do you see of the earthquake and subsequent economic problems on the trade with India?

I don't think there will be a major problem as we are seeing a rapid recovery in the Tohoku region. There are many SMEs in that particular area, and we have seen a remarkable recovery of that industry not only in Tohoku but also in other regions. There might have been some impact but the situation is now getting closer to how it was prior to March 11.

What kind of a role do you see India playing in the reconstruction efforts of Japan?

India has great human resources, especially in the area of information technology, and many of our municipalities in Tohoku will be investing in this field. New reconstruction projects to be implemented will entail lots of IT-related investments, and if there are Indian companies that will participate that will be a great contribution. It, of course, does not need to be only in Tohoku. We are broadly interested in deep-

ening ties in the economic arena.

Does the reconstruction present an even greater potential for improving bilateral ties?

Both countries feel that the potential for economic relations is much larger. It should not only be companies like Suzuki that are successful in the Indian market; we also wish to see more Indian high-tech companies in Japan. We are talking about an open reconstruction or a creative reconstruction – India has experience in coping with natural disasters. There can an opportunity for joint ventures between Indian and Japanese companies. India has experience in handling floods and earthquakes.

How worried are you that the disaster came at a time when the global economy is in recession? How much of a concern is this global slowdown for Japan?

This is a source of great concern for us. In Japan, we have been seeing an appreciation of Yen which has been excessive. We don't want to see a drastic fluctuation of currencies. There is the more fundamental issue of concerns surrounding the euro-zone and the unemployment situation in the US.

What kind of an effect can the Fukushima disaster have on India-Japan civil nuclear cooperation?

Prime Minister Noda has mentioned that Japan will thoroughly investigate the causes for the accident and will provide to the India side the real-time information regarding what has happened. From our view, we need to overcome the accident and also prove that our technology is safe. We think our nuclear technologies are very competitive, and we wish to promote collaboration between our countries in this field. We think India will need nuclear power in its energy mix, and there is scope for cooperation. —ENS



Yoshinori Moriyama, deputy director general for nuclear accident measures of Japan's nuclear safety agency

India can learn nuclear lessons from Fukushima

After the Fukushima nuclear accident, designers will need to think about emergency powers, additional back-up systems and protection gear for workers

WHILE the Fukushima nuclear accident cast doubts even in the minds of most pro-nuclear energy advocates, experts in Japan's nuclear safety agency that follows some of the most exacting standards in the world think that atomic energy is still safe and developing nations such as India can draw a lot of lessons from the accident that occurred in March.

Nuclear safety experts insist that the accident demonstrated that most safety features worked but has also drawn attention to the need for design changes that will make plants safer than before. "At the moment, we think nuclear power is safe. However, additional safety measures have to be created in the future while designing new power plants," says Yoshinori Moriyama, deputy director general for nuclear accident measures of Japan's nuclear safety agency.

The biggest lesson that the agency, which had seven people working at the plant when it was

struck by disaster, learnt was that it did not anticipate the scale of the twin disaster. While the plant withstood the effect of the earthquake, the ensuing tsunami swamped out the cooling plant and shut generators that were to pump sea water inside the reactor.

"The designers should have assumed that all power would be lost in the advent of a massive tsunami. It was never anticipated that power supply would go out for so long and even backup generators would not function," says Moriyama.

The second lesson was that planners at both the safety agency and the power plant did not expect an explosion to take place inside the reactor building. The safety features of the plant were not designed to enable workers to function inside a crippled building where radiation levels were high.

"We also learned that the main office was set too close to the plant. So when the plant was damaged, the main office also did not work. The

streets were hit, and it took a lot of time to bring in supplies. There was no mechanism to take care of this," says Moriyama, adding that the location of plants would have to be chosen with more care in the future.

The disaster has taught the agency many things, including the need to place pumps, dumpers and trucks within the premises of the reactor so that they can be employed in an emergency. Connectivity with disaster-control centers is also to be improved. "From now on, designers will need to think about things such as emergency powers, additional back-up systems and protection gear for workers in new reactors," the safety officer says.

India, with its plans to expand nuclear power plants has much that it can learn from the Japanese experience.

"The lessons that we have got from this incident will be provided to the entire world. We will share our experience with other nations, including India," says Moriyama.