

Forum calls on India, Japan to work together to cope with environmental issues

On Sept. 5, Nikkei Inc. and The Energy and Resources Institute (TERI) of India held the second of four symposiums on the subject: "Global Eco-Business Forum — Bringing Japan's Advanced Eco-friendly Technologies to the World and Building International Partnerships with Nations."

The forum is designed to inform the world of Japanese companies' overseas environmental activities as well as how their environment-related businesses are advancing. With its cross-media use of newspapers, symposiums and

the Internet, the forum is intended to provide an opportunity to consider Japan's role in the international community.

The second forum was held in New Delhi. It was sponsored by Japanese Business Alliance for Smart Energy World wide, Toshiba Corp., Heat Pump & Thermal Storage Technology Center of Japan, and Mitsubishi Corp. It was supported by the Ministry of Economy, Trade and Industry, Japan Finance Corp., the Japan Bank for International Cooperation and Japan External Trade Organization (JETRO) as well as the Japan Center for Economic Research.

Nikkei Environmental Project 2009



Think Eco.

Huge opportunities in bilateral cooperation

RAJENDRA PACHAURI

Chairman, Intergovernmental Panel on Climate Change; director general, TERI

I am very grateful to all those who have been involved in bringing together this event, because it clearly goes beyond symbolism and establishes the importance of Japan and India working together to usher in a new revolution.

We have seen several technological revolutions over the past 150-odd years. The beginning can be attributed to a major change in the way human affairs were conducted by the invention of the steam engine, which brought about a major shift in production activities and even in locomotion. It ushered in the age of fossil fuels, and that age was reinforced further when the automobile became a common sight all over the world.

But today what we need is a set of technologies that would reverse the damage that we have done to the environment, essentially associated with the two major technological changes that I have just mentioned.

I can't think of a closer and more relevant partnership than what I hope this event symbolizes and which I hope will also provide the substance for pursuing in the future.

I have long had close involve-



ment with Japanese organizations and institutions, and I have traveled to your country at least 130 times. I am a great admirer of Japanese society for a variety of reasons, one of which is the fact that Japan has been able to blend traditional culture with modernity.

I also believe that Japan has been uniquely successful in developing technologies that are resource-efficient. Having been a student of energy development, I have a great deal of admiration and much to learn from what Japan was able to do in the wake of the two oil price shocks in the 1970s and early 1980s. They brought about a major and remarkable shift in the use of energy, as a result of which the Japanese economy did extremely well during the

1980s and 1990s. That example gives us a great deal of confidence that if a nation clearly articulates a goal and establishes the political will to bring about a major shift, it certainly can be done. So we have a lot to learn from Japanese society.

What I want to emphasize is the fact that there is a business rationale for Japan and India working together. That rationale has strengthened much further, now that we have a national action plan on climate change. The advisory council to the prime minister, of which I am privileged to be a member, has approved in principle two major missions: the solar mission and the energy-efficiency mission. These could open up enormous business opportunities for Japanese and Indian organizations to work together.

These really would be revolutionary steps, because if you look at the staggering scale on which the country intends to bring about a major transformation of the way energy is used in this country, then I think there are unique business and technological challenges available.

There are several reasons Japanese and Indian organizations can work together. Firstly, there is a complementarity in terms of our being able to do

things at much lower cost since our cost of technical and scientific manpower is understandably much lower. The skills in the Indian market are second to none, and therefore there is a complementarity in our being able to work together. India is a huge market; if we can evolve technologies jointly that suit our conditions, you will have this largest market in the world.

Very soon, India will have a larger population than China. With respect to increasing incomes and buying power, if growth continues as we all hope it will, then clearly the Indian market will be an extremely attractive destination for Japanese goods and services. There will be an important partnership between Japan and India.

All of this is extremely important, because the problem of climate change threatens every part of the globe. The IPCC has provided overwhelming evidence on the scientific realities of climate change, and while every leader in the world has accepted the need for taking action, we just don't see evidence of the level of action that is required.

What we should really be working on is a range of technologies, and all of these are going to be absolutely essential.

Differences could be real assets



KIYOSHI KUROKAWA

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In any international meeting it is very difficult to get the Japanese people to speak up; on the other hand, it is very difficult to get the Indians to not speak up. Speaking and expressing themselves is the foundation of their democracy, which made India one of the largest decentralized democratic countries in the world.

India has 26 official languages. In contrast to India, both a strength and a weakness of Japan is its centrally driven homogeneity. This difference itself could be both a strength and a weakness. Played right, in this globalizing world it could be a real asset in developing collaboration.

Although we are separated by a great physical distance, we still have a certain historical background. India has huge potential for growth, with a potential market of 1.1 billion people, and why not work together with India? But even in New Delhi, the number of experts from Japan is very small compared to China. Perhaps one reason is that we are not familiar enough with the way of thinking and the differences and similarities of Indian citizens and our potential business partners.

There are many Indian students at the moment around the world but the number of Indian students studying in Japanese colleges and universities is disproportionately small.

If you start negotiating with India's businesspeople you may find it very difficult because their strength is in negotiation skills and finance. But I think once you make a friend, that will be a great opportunity. I would like to welcome many Indians to come to Japan, but I also must urge Japanese students of business or bankers and others to go to India.

Industrial park experiments with alternative energy

ASHOK ASHTA

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As one enters the state of Rajasthan from Delhi, one comes upon Nimrana, home of the 15th century fort palace for which it is named. On the other side of the highway is an emerging industrial area. Factories in these areas are coming together to create a shared energy center that will encourage development and foreign investment by offering more efficient sources of power.

The plan for the Nimrana shared energy center has been adopted under the early bird scheme for the Delhi-Mumbai Industrial Corridor. This region was launched in this exciting direction in 2007, when the Indian government announced plans to establish a dedicated freight corridor covering approximately 1,500km between Delhi and Mumbai.

In anticipation of the DMIC projects in July 2006, Rajasthan State Industrial Development & Investment Corp. partnered with JETRO to develop an exclusive Japan investment park in Nimrana.

However, there have proven to be infrastructure hurdles. So 10 Japanese companies participating in the Nimrana investment park planned to use the privately generated power for regular use and only one company planned to use the public grid in the future. Indeed, existing industrial users in other parts of Nimrana reported huge unpredictable outages for about six hours a day.

Power generation costs were also high using diesel generators. So a solution was needed to overcome the problems of unstable power from the grid and the high cost of the environment-unfriendly diesel generators. The shared energy center presented solutions in October, envisioning the use of



gas turbine generators fueled by natural gas.

Existing generators will be used concurrently while an advanced operating control system will coordinate optimum power supply from the different channels. The plant will also be linked to the transformer substation of the public grid so that different companies will be able to draw power as needed.

However, the global economic crisis has created future

uncertainty in terms of attracting new investment and also in terms of determining the exact power needs of existing tenants. Diesel generators purchased by companies that have already started operations in Nimrana are now in surplus.

The solution that we are considering is to link the existing diesel generators through a common 33kw bus. However, the diesel generators bought by the different companies have different capacities. So we needed solutions for connecting dissimilar-capacity diesel generators.

The first phase is an optimal power supply system using the diesel generators, and the final phase will be a system when connected to the gas turbine and commercial grid. The expected benefits of high-quality, economical and eco-friendly power in areas of unstable commercial power supply will contribute to the development of industry appropriate to Nimrana Industrial park.