

Going the green way

NAHID AKHTER

ENERGY is the ultimate essence of life itself. Unfortunately, due to increased demand, it is slowly becoming very limited in supply, which is probably one of the evils of modern technology. This, combined with the impact of global warming has necessitated the need for energy conservation and use of renewable energy sources.

So you would say "Ok, granted that energy conservation helps save the environment, but what's in it for me?" Well, even if you just ignore the fact that we, as citizens of the World and our next generation are eventually prone to the effects of climate change, you simply cannot ignore the amount of money you could be saving on your utility bills. Given the recent trend in fossil fuel prices, electric costs world wide are expected to increase further in years to come. Besides, who isn't already wary and miserable from our regular load-shedding? Don't you think it's about time we do something about it?

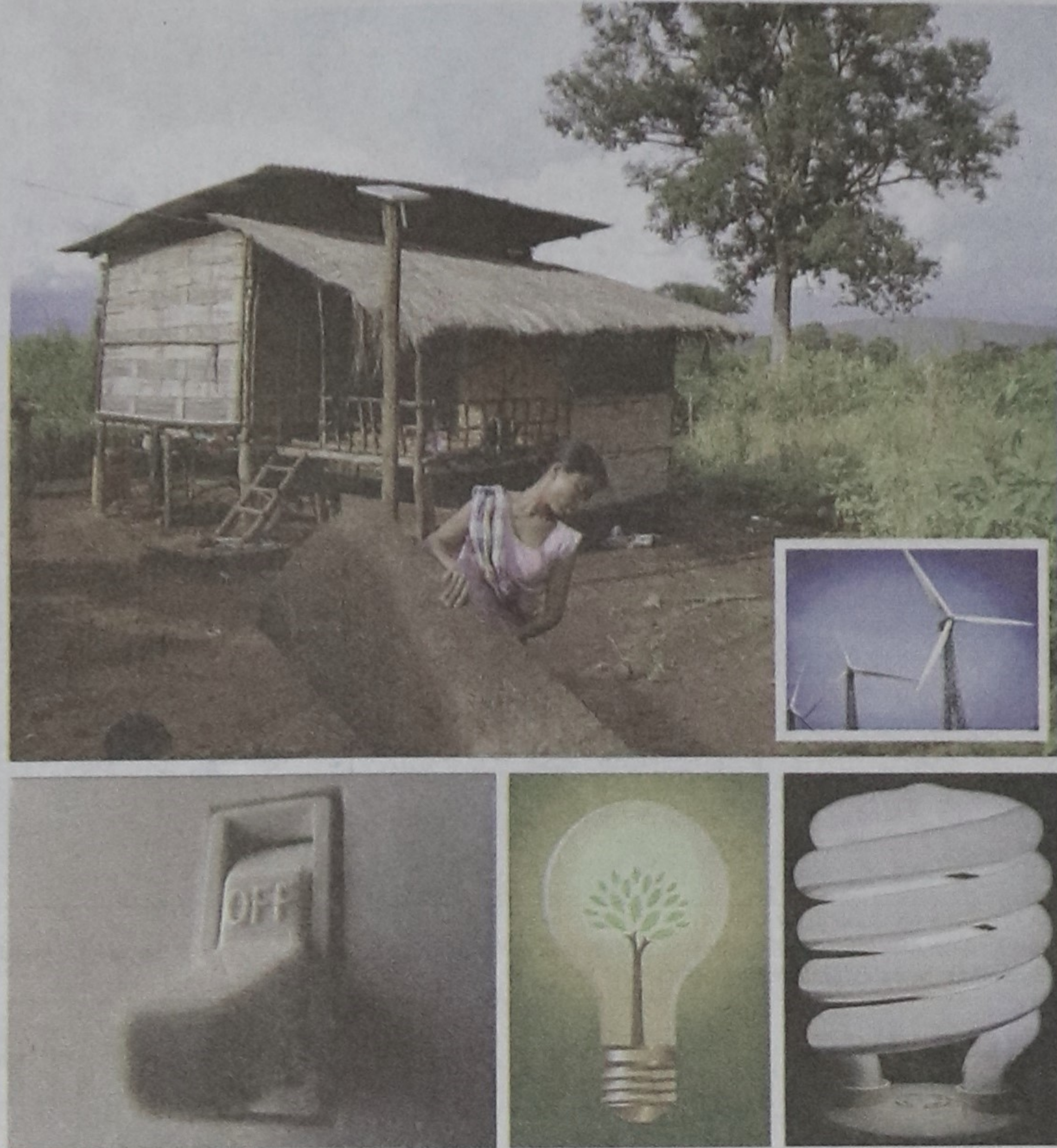
We, as citizens can do a lot to contribute to this move in a wide variety of ways. Some have been outlined below:

Energy saving lamps, like Compact Fluorescent Lamps (CFL) may be purchased, instead of the standard incandescent lamps, which would provide much higher energy efficiency. If a building that runs entirely on fluorescent light bulbs achieves the same level of illumination as a building that runs on incandescent light bulbs, it would consume only 30% of the electricity, 70% of the energy is saved. That also means utility bills will be only 30% of the original. Now we're talking money!

Energy-efficient appliances may be purchased. A number of Brands are now providing this kind of an energy efficiency rating in their electrical appliances, for example, Energy Star, which is a label created by the U.S. Environmental Protection Agency and the US Department of Energy to help consumers save money and minimize air pollution. Its logo may be found on washing machines, computers, refrigerators, etc.

An appliance receives the Energy Star rating if it is significantly more energy efficient than minimum standards, as determined by standard testing procedures. Most computer monitors available in Bangladesh today have an Energy Star rating. However, there are very few companies that have this rating on their appliances. Policies should be framed to ensure that more of such products are imported and available here.

Our already existing appliances may be used more efficiently. You will be surprised to know that the refrigerator is the



single biggest power consumer in most households. To increase its efficiency, the coils in the back of the refrigerator should be cleaned twice a year to maximize efficiency. It should be ensured that the seal of the door gasket isn't broken by debris or food and that the door of the fridge isn't opened too frequently. Your refrigerator should not be located near any appliance that emits heat and should not be exposed to direct sunlight. It should also be ensured that airflow around the refrigerator is not obstructed. Foregoing features like auto defrost, ice makers, and heaters to control condensation can not only save up to 60% more energy and energy costs, but save you money on the purchase price as well.

We're not just talking here about saving electricity, but energy in general. In areas of Bangladesh, including Dhaka, where natural gas is available in abundance for cooking, people have a tendency of keeping stoves on for hours to dry their clothes. Since they have to pay a fixed amount for the gas every month, how much gas they use isn't an issue for them to consider at all. Such kind of wastage should be avoided.

Furthermore using lids on

pots and pans can save gas, since cooking can then be done at lower settings. Pilot light and burner flame on gas stoves should be blue. If the flame is yellow, ports need to be unclogged or adjusted. Ports can be cleared with pipe cleaners. If you can afford it, use a microwave oven. They use only one-third to half as much energy as conventional stoves.

Washing machines should be loaded with a full load of clothes, as far as possible. Moreover, make sure the water level matches the size of your load. There is no point filling up the whole tub for a few clothes. Of course, newer machines have automatic water level settings, which adjust to load size. Interestingly, using more detergent than required actually makes the machine work harder and use more energy.

Air Conditioner filters should be cleaned regularly, as this will reduce fan usage and save electricity. Since Air Conditioners use up a lot of energy, it would be wiser to use fans more often or a combination of your fan and Air Conditioner so that there is lesser load on the Air Conditioner to cool the room. When turning on your air conditioner, avoid using the coldest setting. Let the air

conditioner warm up for a while before lowering the temperature setting. The room will cool just as fast.

Computer monitors should be switched off when not in use. That screen-saver will just take up a lot of energy in exchange of only visual pleasure while no one is there to actually see it! In fact, not just the monitor, any computer component should be switched off when not in use. Even machines on standby use up to 30 watts of electricity. Laptops use 10 per cent or less of the electricity consumed by typical desktop computers. When buying a laptop, look for systems comprised completely of 3.3-volt components (processor, memory and LCD). These systems use 40 to 50% less energy than 5.0-volt systems.

Did you know that around 20% of the electrical power used by gadgets in our homes is consumed when they are not in use? Music systems, TVs and computer systems are kept on 'standby' mode all day long in many households, when one can easily just avoid that wastage by switching off the appliance altogether. Similarly, lights, fans, Air Conditioners and TVs are mercilessly left running for hours, even when not required. Why not just

take a small step to remind ourselves to switch them off, when coming out of a room?

Offices and Shopping Malls draw up a high amount of electricity in Bangladesh. The Government has already taken a step towards this by enforcing stringent laws to limit market and office timings. Even then, individuals should try to make their own little contribution to consciously save energy while working in the office. You take the first step and the others will follow. Laws have also been enforced to ban the use of decorative lights, but how many of us actually follow? Even today big buildings can be seen smothered with colorful lights blinking up and down to announce a wedding taking place. Wouldn't a huge beautiful banner or flowers do the same?

The Power Division is presently preparing a draft Energy Conservation Act which will include provisions for ensuring efficient use and conservation of energy in building complexes, like insulating a building from sunlight so that less amount of energy is needed to cool or heat the rooms, usage of efficient insulation materials, use of energy-efficient lights and installation of energy-efficient appliances.

The Government has also undertaken several programs for off-grid electrification through solar home systems, on a small-scale. A number of NGOs, like the Grameen Surja Shakti Sangstha are working for the promotion of Solar Home Systems in remote rural areas of Bangladesh, which are in complete darkness after sunset, by providing an LED-based lighting system that is non-polluting. So far, more than 250 thousand Solar Home Systems have been installed. Financial and technical assistance is also being extended by the Government to encourage such projects.

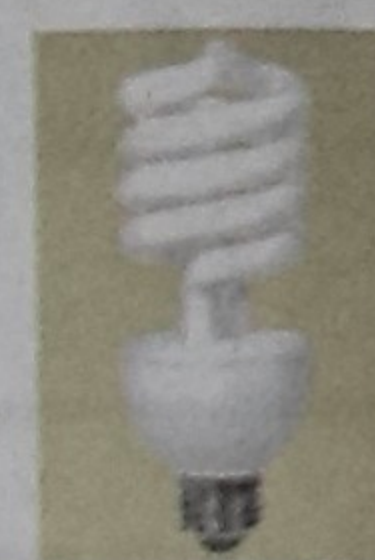
Other options for renewable energy sources include wind and natural gas. The Power Development Board has already installed a wind turbine near Feni and Kutubdia. More such projects should be undertaken. IDCOL is implementing a National Domestic Biogas and Manure program, under which, it is estimated that a total of 60 thousand domestic biogas plants will be installed.

So, let us all get together, both citizens and the Government and work in unison to fight the energy crisis, thereby providing a safe and secure future for our next generation.

References: eartheasy.com, inaugural speech by Chief Advisor Fakhruddin Ahmed at the National Workshop and Exhibition on Energy Conservation and Renewable Energy Programmes.

Compact fluorescent lamp

A compact fluorescent lamp (CFL), also known as a compact fluorescent light bulb, is a type of fluorescent lamp. Compared to general service incandescent lamps giving the same amount of visible light, CFLs use less power and have a longer rated life, but generally have a higher purchase price. The parent to the modern compact fluorescent lamp (CFL) was invented in the late 1890s by Peter Cooper Hewitt. The Cooper Hewitt lamps were used for photographic studios and industries.



startech@thedailystar.net

TECH VIEWS

Tech marvels@Beijing 2008

MAHDIN MAHBOOB

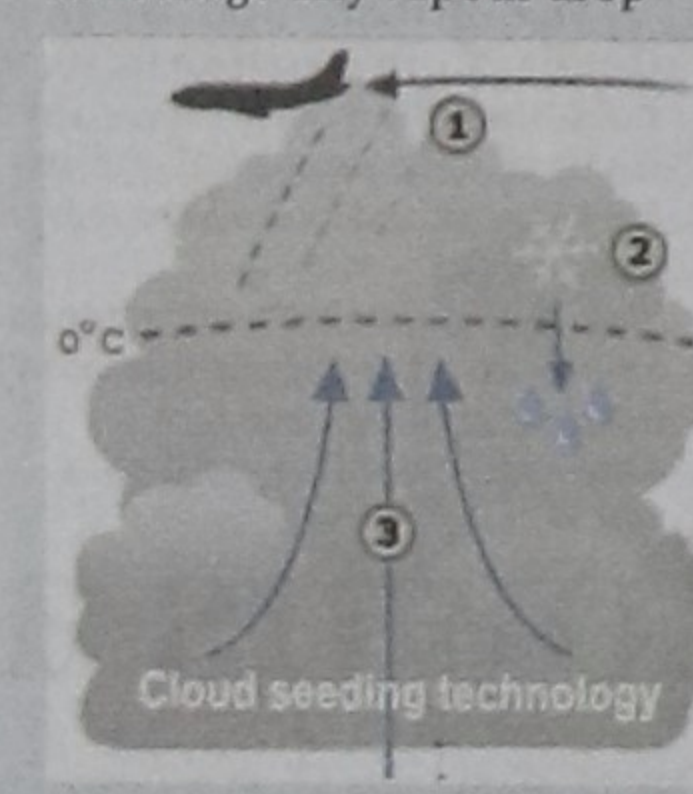
THE 2008 Summer Olympics is on full throttle in Beijing and the Chinese government has vowed to make it the most perfect and secure game ever. From making exceptional moves like taking technological help from different non-Chinese companies to the attempt of ensuring a no-rain weather in Beijing, this Olympics is much more than sports alone.

In addition to sportsmanship, it is a celebration of state of the art technology and human skill and endeavour. This week, in Star-Tech, we will have a look into the technological marvels of the Beijing Olympics.

Say No to Rain!

The Chinese Government has decided to say no to any form of disruptions in the game, including rain! The administration is using a technique called 'cloud seeding', which works in the following way:

- Aircraft or artillery spray chemicals (often silver iodide or dry ice) into clouds to encourage tiny vapour drop-



lets to coalesce.

- Droplets of supercooled water (liquid below freezing) coalesce into snow and melt as they fall.

- Heat released as the droplets freeze boosts updrafts,

which pull more moist air into the cloud.

Security above all else

Security at the Olympics is not a joke and the Chinese are spending a staggering \$6.5 billion for the purpose, more than four times of what was spent in Athens in 2004! This includes the usage of modern gadgets like segways (see picture) and advanced surveillance technologies.

General Electric (GE), IBM, Honeywell, Siemens, Panasonic, and LG have all won major contracts providing security technology for the Olympics of the biggest security-business opportuni-

ties ever.

GE@Olympics!

China has decided to let go of its ego about their technological superiority and have deployed a range of American, European and other foreign



also generated a record of more than \$1 billion in advertising revenues, making the Beijing Games the most successful Games in GE's history. GE is managing projects in all 37 official Beijing Games competition venues and 168 commercial buildings in and around Beijing. Several projects feature technological firsts for China, including filtration technology for safe drinking water and rainwater recycling at the National Stadium (Bird's Nest), 73 electrical substations to provide power at more than 50 Olympic Games venues, and advanced baggage screening at the Beijing Capital International Airport.

Samsung presents it with style

STARTECH DESK

SAMSUNG Electronics in a glamorous event on August 9 at the Celebrity Hall of Bangladesh China Friendship Conference Center launched three new advanced LCD monitors T Monitor, Myst Plus and Lime and two new products Projectors and Thin Client.

The three new advanced LCD monitors offer consumers total display solutions for home and office requirements.

Mr YYY Kim, director marketing of Samsung Electronics on the occasion said "In keeping with the global market trends, Bangladesh Display market too is witnessing a dramatic shift in favor of LCD Monitors, Samsung as a global leader in

LCD Monitors, is fueling this transition in Bangladesh by continuously launching LCD Monitors that lead in terms of their designed performance and innovative features."

Samsung is intending to become a total display solution provider in Bangladesh with the launch of new series of monitors and projectors.

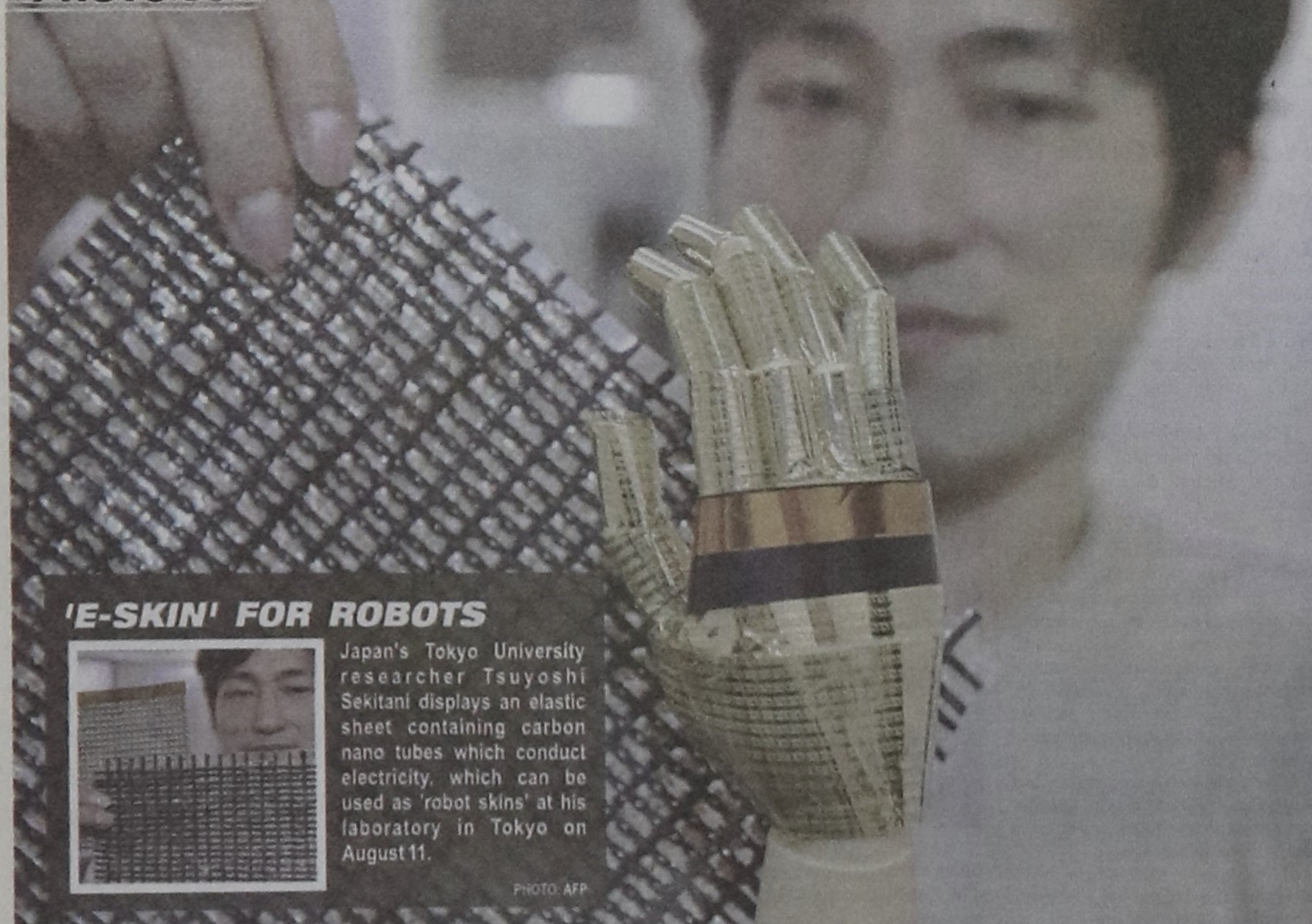
Lokesh Nagpal, manager, Export Business Group and Anurag Kumar, assistant manager, Export Business Group of Samsung Electronics were also present at the event.

Index IT Limited, the authorised distributor of Samsung products in Bangladesh was the co-host of the event. The event was also



marked the 15th anniversary of Index IT Limited and 11 years of partnership of Index IT limited and Samsung Electronics.

PHOTO TECH



'E-SKIN' FOR ROBOTS



Japan's Tokyo University researcher Tsuyoshi Sekitani displays an elastic sheet containing carbon nano tubes which conduct electricity, which can be used as 'robot skins' at his laboratory in Tokyo on August 11.

PHOTO: AFP

TECH NEWS



New version of Bangladeshdir.com

STARTECH DESK

THE new version of Bangladeshdir.com, a website founded by a group of Bangladeshi students in 2005, has been launched with more improved structure and new features.

Following months of redevelopment and testing, BangladeshDir Networks proudly announced the launch of its new enhanced website, says a press release.

New features such as News, Reviews, and improved Search features have been added to the

site.

Bangladeshdir.com News is a content aggregation tool, which collects Bangladesh related News content from over 100 news sources, including The Daily Star, The New Nation, Financial Express, Google News, Yahoo News etc. This content, which is updated every 30 minutes, is categorised under Latest News, Business, Entertainment, Sports, and World News.

The web directory contains information about over 2,000 Bangladeshi companies. To ensure overall quality all updates are manually reviewed.

Intel PCs to wake up for phone calls

AP, New York

INTEL Corp. is unveiling new technology that will let computers wake up from their power-saving sleep state when they receive a phone call over the Internet.

Current computers have to be fully on to receive a call, making them impractical and energy-wasters as replacements for the telephone.

The new component Intel is announcing Thursday will let computers automatically return to a normal, full-powered state when a call

comes in. The computer can activate its microphone and loudspeaker to alert the user, then connect the call.

"This certainly helps the PC become a much better center of communications in the home," said Trevor Healy, chief executive of Jajah, which will be the first Internet telephone company to utilize the feature.

The first Intel motherboards with the Remote Wake capability will be shipping in the next month, said Joe Van De Water, director of consumer product marketing for Intel.

