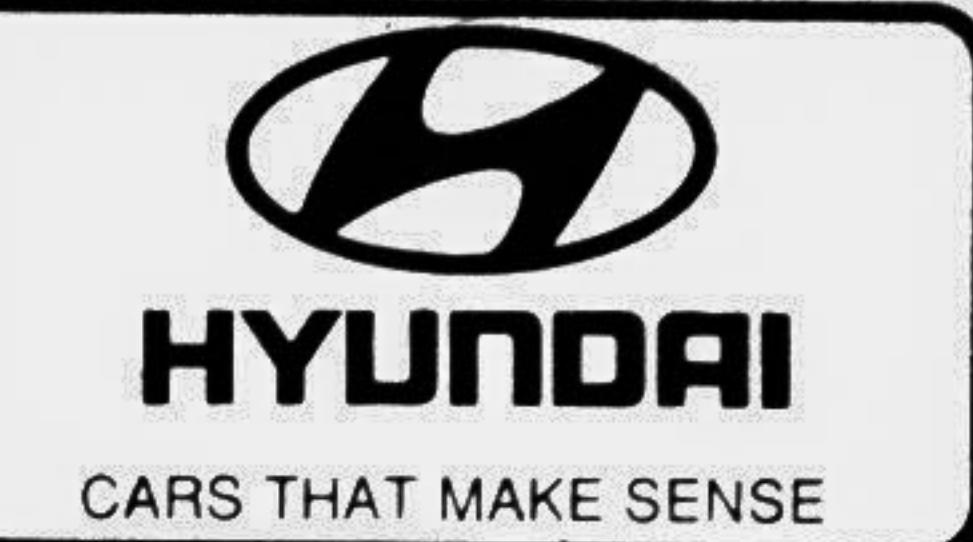




DHAKA FRIDAY, JANUARY 16, 1998



"May your minds unite in knowledge"

One of the areas of cooperation in this region is to increase the per capita commercial energy consumption which is very low compared to other Asian countries like South Korean and China.

So, there is ample scope of improving the per capita energy consumption by mutual cooperation.

The International Energy Agency projects that by the year 2010, countries of South Asia shall be consuming more than double the current levels of primary commercial energy. Although the share of coal in the entire energy spectrum shall decline to about 41%, its net consumption shall continue to increase. Forecast to meet about 19% of the primary energy needs in 2010, a major increase both in quantum and in relative percentage, is seen for gas. The share of hydro-power shall roughly remain the same at about 3.5%. Little increase shall take place in the quantum of nuclear and renewable energy sources.

Electricity demand is projected to grow at a rate of 7% per annum in South Asia during the period 1993-2010. Not only will the increase in income levels bring about higher consumption of electricity, but also electrification of areas yet not having access to electrical power shall cause a substantial increase in consumption.

As per the estimates by the Ministry of Power, India experienced a power shortage of 10.9% and a peak demand deficit of 16.9% during 1996-97. While power shortages are currently costing India 2% of its national income, it is estimated that India must have a generating capacity of 176647 MW in 2011-12 to meet the growth in peak demand for electricity, i.e. more than double its current capacity. A growth rate of 9-10% in electricity demand is seen in India.

The demand for power in Pakistan has been growing at the rate of nearly 10% p.a. over the last two decades. It must increase its installed capacity to 54,000 MW by the year 2018 to meet its projected demand. The economic losses from electricity shortfalls, estimated at up to 2,000 MW during peak hours, cost it to the order of US \$ 1 billion annually.

Due to power cuts in Bangladesh, the industry lost 22% of working hours. Transmission lines do not have the capacity to transmit power from the power surplus east to the power deficit west. Situation in Bangladesh shall only improve by 8 mid-1998 as bids for 3 large mounted power plant of 100 MW each in Chittagong, Khulna and Narayanganj are received and plants constructed. The 210 MW Rousan power plant is also expected to double its capacity till then with gas brought by Occidental Company from Sylhet. Similarly, Cairn Energy shall bring gas ashore from Sanghu gas field in Bay of Bengal. Bangladesh also has plants to install 900-1000 MW of capacity with foreign assistance and 570 MW with private investment in the near future. Bangladesh must have an installed capacity of 6100 MW, more than double its present capacity, to meet its peak power demand in 2010.

THE REGIONAL ENERGY SCENE An Indian View

The commercial energy consumption in these countries lies mostly on power. The current installed capacities in Bangladesh, Pakistan and India are 2,900, 12,700 and 84,000 MW respectively. Energy shortages of 10% and peak shortage of 20% exist in India. Similar shortages exist in Bangladesh and Pakistan also. Electricity demand growth rate is highest in India at 9% followed by Pakistan and Bangladesh at 8% and 7% respectively. With the current GDP and annual growth rates, the estimated installed capacity requirement by the year 2010 is put at 220,000 MW for India followed by Pakistan and Bangladesh at 35,000 and 7,000 MW respectively.

Hydroelectric Potential

Another peculiar feature common in these three countries is greater dependence on thermal power despite having tremendous hydro potential due to large river systems. India's total installed capacity comprised of 71.6% thermal, 25.7% hydro and 2.7% nuclear in 1994-95 (see table below). There has been no significant change in this ratio since then. Similar is the case in Pakistan and Bangladesh.

Seen in the light of hydropower potential in these countries, it can be inferred that the development of hydropower in these countries has not been given due importance. Although hydropower scores over thermal and nuclear energy on many counts, its development has suffered due to financial and environmental issues and related problems of rehabilitation etc.

Installed Power Generating Capacity and its Hydel Power Potentials.					
Country	Thermal	Nuclear	Hydel	Total	Hydro-Potential
Bangladesh	2678		230	2908	52000
Bhutan		355	355		21000
India	58100	2200	20800	81100	75400
Nepal	29		254	283	83000
Pakistan	7766	137	4825	12728	20777
Sri Lanka	272		1137	1409	2000

Source: Various publications, 1995.

Nepal alone has the potential for 83,000 MW of hydropower. The estimated hydropower potentials of the countries of the region are: Bangladesh (52000 Gwh), Bhutan (21000 MW), India (75400 MW), Pakistan (20777 MW) and Sri Lanka (2000 MW). However, a very small proportion of this great potential has been exploited so far.

Since wind, solar power or bio-gas cannot meet all the needs, clearly hydropower is the best choice amongst other options both in terms of cost effectiveness and environmental safety. Moving in this direction opens up all sorts of other benefits. Among the best sources of hydropower are multipurpose hydel projects. These yield irrigation, flood-control and navigation benefits in addition to producing electricity.

One of the corollaries of investing in hydroelectric development is that it can preserve and protect the watersheds of those river systems thereby compelling the upland environmental protection.

It is a pity that despite having such vast resources and capacity we are only utilising less than 25% of hydel power generating resources and the rest is either unutilised or going waste, it requires serious thinking to tap these resources to meet our requirements, export the surplus and earn foreign exchange. Although the installation cost of hydel projects is high yet the running cost is very low, so this is within our reach to pool our energy resources into a proposed SAARC Grid for Generation and Transmission. Thus we will be able to meet not only the future requirements but also earn foreign exchange by exporting the surplus to our neighbouring countries.

SAARC Grid

The advantages of interconnected operation of the power network is a widely accepted fact and practised across the globe. India's extensive transmission network coupled with its geographical situation provides it an opportunity to seek participation from neighbouring countries for formation of SAARC Electric Power Grid. It is opined that interchange of power facilitated by such an electric network would yield collective benefits for all the participating countries.

—Star photo by AKM Mohsin

Indian Government is committed to support the idea of SAARC Grid which would optimally utilise the hydro resources of Nepal, Bhutan and North-Eastern India, the large gas resources of Bangladesh and the surplus thermal power generation in Pakistan through exchange of electricity.

The Indo-Bangla Energy Exchange Programme proposes to set up a high capacity transmission line between Jeerat and Jessor in West Bengal with technical assistance from the Asian Development Bank. It is also being explored to link Tripura and Meghalaya with Bangladesh for exchange of power.

Feasibility has been examined to connect Bangladesh with Eastern and North Eastern regions of India. Initially, a 132 KV inter-connection is being considered between Eastern region of India and Western Bangladesh and another inter-connection is being considered between Eastern part of Bangladesh and North Eastern part of India.

Proposed interconnection with Bangladesh

The following interconnection alternatives may be suggested to facilitate increased reliable power exchange between India and Bangladesh.

Interconnection Alternatives:

- a) Between Eastern Region of India and West Zone of Bangladesh:
- i) 220 KV interconnection between Maita substation of POWERGRID and Ishwardi Substation of Bangladesh. The distance shall be approximately 150 km and there shall not be any river crossing.
- ii) 132 KV lines between Jeerat substation of India & 132 KV substation of Jessor in Bangladesh. The distance shall be about 80-90 km.
- iii) 132 KV lines between Siliguri of POWERGRID and Thakurgaon of Bangladesh. This shall involve a distance of about 80-90 km.
- iv) Connection between East Zone of Bangladesh and North Eastern Region of India.
- v) 132 KV interconnection between Ashuganj of Bangladesh and Kumarghat of India. The route length will be about 150 km.
- vi) 132 KV line between Comilla of Bangladesh & Agartala in Tripura State of India. The route length will be about 50 km.
- vii) 132 KV interconnection between Sylhet of Bangladesh & Khelemti of Meghalaya in India. The length of the line will be about 125 km.

Recently, High Commission of Pakistan had shown inclination for export of power to an extent of 2000 MW by June 1998. To receive this power, interconnection can be established between Pakistan and India at different locations viz. Rajasthan, Punjab and Gujarat which are in the close proximity of the boundaries of the two countries. In this direction, studies are in

progress.

Technical Cooperation in Thermal Power Generation

Apart from hydropower, there exist other opportunities for cooperation in thermal and nuclear power generation also. India can extend its technical capability for installing thermal power plants in Bangladesh and Pakistan. Pakistan's existing power generation programme emphasises on thermal generation, but it does not have enough indigenous coal. Whereas India and Bangladesh have some surplus coal which can be exported to Pakistan.

Petroleum

Oil & Gas: Resources & Production

Country	Estimated Proven Reserves		Actual production	
	As on January 1, 1995	As on January 1, 1994	1993	1992
Bangladesh				
Bangladesh	4,000	25,200	4,000	25,200
India	5,776,000	24,967	5,920,856	25,354
Pakistan	2,03,284	27,500	2,03,284	22,940
	('000bbl)	(bcf)	('000 bbl)	('000 bcf)

Source: Petroleum Encyclopedia, 1995

On oil and gas front, our countries are fulfilling their needs through imports. The indigenous production in these countries is well below their consumption, thereby resulting in huge oil import bills. A significant area of cooperation here would be Bangladesh's surplus production of natural gas. India's private power development programme which envisages the use of liquid fuels can be greatly benefited through natural gas import from Bangladesh. Significant in this regard is the announcement by a global major power company's announcement to set up LNG terminals on the east coast of India through imports by a pipeline network from Bangladesh. Also significant in this regard is the fructification of such schemes. The importance and viability of such projects for an economy should be given due consideration.

Of the major sources of commercial energy in the world today, natural gas is considered to be one of the most environment-friendly fewer emission into the air and water, and minimal generation of solid wastes, when compared to coal or oil. Natural gas pipelines and gas-powered thermal power stations face little or no public opposition, unlike the situation for large hydro, nuclear power plants or coal-fired power stations. Given the constraints faced by India and Pakistan to develop their hydro-power potential or in nuclear power generation, natural gas could bridge the gap between the present coal and oil dependent supply systems, and the renewable energy sources that are expected to become commercially viable and provide much of the energy supply a few decades from now.

The use of natural gas as fuel has seen a meteoric rise in Bangladesh, India and Pakistan during the last 25 years and estimates show that demand in both India and Pakistan could be 8 billion cubic feet per day in each country by 2010, of which only about 25% could be supplied from domestically proven reserves. Natural gas is an essential input for thermal-based power stations, as feedstock in the fertilizers and chemicals industry, and as an environment friendly and convenient cooking medium. Gas shortages are already being felt in India, Pakistan, western Bangladesh and Nepal.

India and Pakistan enjoy the proximity to two of the largest natural gas rich regions, viz., the Persian Gulf and Central Asia. Pakistan's immediate western neighbor, Iran, possesses the second largest gas reserves (only after the Russian Federation) which stood at 741.6 tcf at the end of 1996. The Central Asian republic of Turkmenistan possesses natural gas reserves to the tune of 102 tcf. Natural gas supplied via pipeline from these countries is expected to cost about 35% less than LNG in Pakistan and Western or Northern India. Given the quantum of natural gas required, this could result in substantial savings in the long term. With five of the seven SAARC nations i.e. all except Sri Lanka and Maldives, in close proximity of each other and these reserves, possibilities of mutual cooperation become manifold. If both the gas pipeline options are exercised, they would ensure sufficient gas supply to the South Asian region to meet its entire demand for the next 12-15 years. An added advantage is the extension of the supply of gas via pipeline to Nepal.

Hasina speaks of Asian energy grid

"INDIA, Pakistan and Bangladesh are located at the cross-roads between West and Central Asia on the one hand and East and South East Asia on the other. Our meeting today reflects our shared commitment to join hands in working for a better future for the 1.2 billion people in our three countries.

Our three countries share a common history and a common heritage. India and Pakistan are celebrating 50 years of independence. We share our sense of joy and optimism about the future. We too recently celebrated the Silver Jubilee of our independence. Each of our countries values and cherishes our independence and sovereignty. Indians, Pakistanis and Bangladeshis are nationalists to the core. We take great pride in the many achievements of our respective countries. But we are also hard-headed realists.

The world has indeed undergone a dramatic transformation during the past decades. Globalisation and liberalisation today dominate the world economic agenda.

We are aware that our three countries today constitute the largest single concentration of poverty in the world. We can overcome our poverty and bring prosperity to our region if we can forge strong economic links among ourselves. We must work together to realise our full potential. Our enormous market, our un-tapped natural resources and above all, our vast human resources can convert our region into one of the most prosperous in the world. Indeed the forecast for 1998 is that South Asia's growth will be at least six per cent, the highest for any region in the world.

We had an excellent SAARC summit in Male this year. Regional cooperation in South Asia has taken firm root. Our achievements in the field of poverty alleviation and reduction of tariffs are quite commendable. But we need to do much more to catch up with the rest of the world, particularly to match the high rates of growth achieved by some of our fellow Asian countries in the recent past.

The summit should set directions for close interaction between the private sectors and government representatives of the three countries.

In order to enhance trade among the three countries, there is the imperative need for harmonisation of customs procedures, improvement of shipping and port facilities and simplification of visa procedures for businessmen and investors.

The identification of "regional best practices" as followed by the European Union (EU) and North American Free Trade Agreement (NAFTA) regional blocs, where the best practices for a particular economic reform by one country is adopted by all others on a reciprocal basis.

We may set up a task force made up of senior officials from the three governments as well as representatives of the private sector, to look into improved road, rail and air links between our countries.

An Asian energy grid could be of enormous benefit to all of our countries. Such a grid system could extend eventually all the way from Turkmenistan to Singapore.

I would urge His Excellency Mr. Gujral to urgently consider Bangladesh's proposal for giving zero tariff access to exports from the four South Asian LDCs into India. At the same time I would request His Excellency Mr. Nawaz Sharif to examine the possibility of extending this facility. In the meantime, I would urge you to at least remove the duty on Bangladesh tea, so that we can re-establish our market in Pakistan.

In order to follow up on our deliberations in this summit, I would like to propose that the Finance and Commerce Ministers of our three countries should meet by the middle of this year. Prior to their meeting, a task force made up of senior officials and representatives of the private sector would put forward some specific recommendations for their consideration, including the possible setting up of some trilateral joint venture industries.

Within SAARC itself, we need to increasingly cooperate on specific projects. We need to improve the environment for business and investment. Our infrastructure must match that of the more advanced countries — our ports, railways, telecommunications, civil aviation, roads and highways must be of the highest standard. We must ensure an abundance of electricity at competitive rates. Our bureaucracies must show a high level of efficiency. In this effort to accelerate the rate of growth and create a healthy environment for business and investment our three countries must take the lead.

In Mr. Gujral and Mr. Nawaz Sharif, we are fortunate to have two men with a clear vision for their own people and also for South Asia. Mr. Gujral's firm commitment to improving relations with India's neighbours has already shown some very positive results. He, above all, realises that any meaningful regional cooperation must take into account the size of India as well as the political sensitivities of its neighbours. Mr. Nawaz Sharif's resounding electoral victory has given him a golden opportunity to take some bold policy initiatives. His own valuable experience as a successful entrepreneur has been a major asset for Pakistan.

These two visionary men have shown a sense of determination to put India-Pakistan relations on a better footing. We, in Bangladesh, pray that their noble efforts are crowned with success. Peaceful co-existence between India and Pakistan is of great importance in ensuring peace, stability and economic development in South Asia.

When I became Prime Minister in June 1996, I realised that to achieve this goal I would have to follow an innovative approach towards accelerating economic development in the country. It was essential to reach development to the villages, focus on human development and improve infrastructure within the country. Moreover, our foreign policy would have to be energised.

In particular, it was necessary to strengthen relations with our neighbours in South Asia and intensify our work to make regional cooperation a reality.

We have to create conditions to attract foreign direct investment and intensify the economic interaction among ourselves. This would require forging an effective partnership between government and the private sector. Each of us may be doing this already in our respective countries but it is essential that we, the three largest economies come together to chalk out a plan of action.

I am grateful to both Mr. Nawaz Sharif and Mr. Gujral that when I put forward the proposal for a business summit to them last year, they readily accepted my proposal with great enthusiasm.

The existing trade within the SAARC region presents a very dismal picture. Today, the SAARC countries share in total world is less than 1 per cent while inter-SAARC trade remains below 3 per cent of their total world trade. Given the great wealth of natural resources, water potential, arable land, agriculture produce, industrial raw materials and measured against the great multitude of human resources of 1.2 billion people in the region, this intra-regional trade is highly insignificant compared to its potential. Although SAFTA Agreement was signed by the SAARC Countries