

# New Power Generation

With widespread concern over Sri Lanka's energy struggle, the Ceylon Electricity Board's (CEB) decision not to impose power cuts, this year stands firm. Not only is the CEB taking adequate emergency measures, but also gradually forming new ground to maintain a sufficient, stable inflow of thermal power into the country's National Grid. Soon, the country will be able to get back on its feet without having to depend on rainfall patterns and hydro generation, focusing mainly on thermal power generation, which is gradually taking over as the main form of energy generation in the country.

'I am confident that we are reasonably well positioned for 1998 with the thermal plants and can get through 1997 safely', CEB, chairman, Arjun Deraniyagala told Business Today.

According to him, taking into account the appeal made to industries, to cut down on electricity consumption, the country at present consumes on average 12 mn units per day. Of this total, the thermal power contribution constitutes about 6 1/2 mn units per day. However, by mid-May this generation would increase to 7 1/2 mn units per day, with the refurbishments of the CEB Gas turbines and the setting up of other thermal power generation plants etc. In addition, by the end of May with the setting up of the 115 MW Fiat Gas Turbine, a further 2 1/2 mn units per day could be generated, bringing the thermal power contribution to almost 10 mn units per day. Thus, showing that thermal power would generate on average more than 80% of the daily consumption, by June this year.

The inflow of hydro generation would contribute a minimum of 5 mn units per day, Deraniyagala said, adding that this, being the minimum could go upto 300 mn units per day in certain months. Hence, if this 5 mn units per day is achieved through the inflow of hydro generation, the CEB is able to cut down on some of the expensive thermal power that is being consumed.

"The thermal power generation capacity which we brought into operation over the last few months in anticipation of problems has paid dividends, and the contribution we got from the emergency thermal power and also by generating maximum possibility, using CEB thermal power has helped us enormously', Deraniyagala said, adding that the water received from the hydro reservoirs, this

year amounted to 50% of what we received last year. Hence, it was through emergency thermal power and maximum use of CEB thermal power that the country was able to get through the difficulty, this year.

'With regard to the reliability of power supply, we can ensure that there will always be sufficient stand-by power available', Deraniyagala said. However, he said that the public must be made aware to consume electricity with utmost care and not take both electricity and water for granted. "The public in this country has to be educated to realise the cost of these things', commented Deraniyagala. He also said that large funds invested on imported oil can be used for various other development activities in the country and the people should be aware of the high cost borne by the government, in generating thermal power.

With thermal power being introduced another question that would arise in the mind of the consumer would be the extra cost that would be incurred, as a result. According to Deraniyagala, at present, part of this cost is being planned into their budget. However, the additional cost of emergency generation which took place

during the first 4 months of this year, was borne by finances collected through tariff for development purposes. At present, this is what is being used for emergency power generation, he said. However, towards the beginning of June, the CEB hopes to do away with some of the costly emergency thermal power generation units, after which based on deliberations, Deraniyagala will be making his recommendations to the minister and in turn, to the Cabinet of Ministers, who will then take a final decision. However, at present this decision is not taken', he said.

According to Deraniyagala, the CEB has identified the need to have several coal power stations around the country, in time to come, because of the limit on hydro potential. He said 'at the moment, projections are that coal is freely available in the world, unlike oil which may have certain restrictions, coming in'. However, he is of the opinion that there should be a reasonable mix when it comes to both coal and oil in the country. He added that coal has been identified as the cheaper possibility for the larger power plants that will be put up in the next few years, when the demand will probably double. 'We have identified certain power plants that will run on oil and the larger plants that will run on coal', he said. The CEB feels that the location of these plants, should be in the east, south and west coasts. However, these are yet to be studied and feasibility studies have to be carried out, not only on technology, but also on geology, transmission and water, in addition to the

monsoons and the predictability of bringing the fuel to that point. With all these factors to be considered, there is also the social and environmental aspects which have to be dealt with and the CEB has to study all this, in order to decide on a site. 'Although we have identified the need to locate a plant in the southern district, at present we are not conducting any studies', Deraniyagala said.

The Kalpitiya coal power project which is still under a feasibility study, is expected to generate 300 MW and gradually increase generation upto 600 MW. The feasibility study is currently being funded by a Japanese funding authority, which will also fund the plant if found feasible. However, the dwellers of the area are under the notion that this project would cause serious environmental problems. The people in this area seem to fear that this whole power station will be another Puttalam Cement plant' Deraniyagala said. Due to representations made by these people, the study has at the moment come to a halt. However, they hope to re-commence once the problems are cleared.

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The Sapugaskanda project includes the 80 MW Diesel plant which was installed in the 1980's and the 40 MW Diesel plant capable of generating about 30 mn units a month, which will be connected to the system in June this year. Further, a 20 MW plant on a BOO/BOT basis with a generation capacity of 38 mn units will come into operation, later this year at Sapugaskanda.

The CEB has negotiated with the Japanese government the funding of a 150 MW combined cycle plant, to be installed at Kelanitissa. Further, the government is also

calling for proposals for a BOO/BOT combined cycle plant at Kelanitissa.

With the closure of the tender for the 3 MW pilot Wind Power generating project in Hambantota, the CEB is currently doing an evaluation on the site for the project. 'Once the site is identified and approved by the Wild Life Department, we will go ahead to procure and install the Wind Turbine', Deraniyagala said. This pilot project is mainly to assess the economic viability of windpower.

With regard to Wind Energy, the CEB has been committed to the development of renewable energy resources in the country and has been active in this field since 1975. Its future strategy is to involve the private sector for the development dispersed renewable energy resources and has adopted a policy of paying the private producers who utilised renewable energy sources, the full system avoided energy cost. This means that the producers will be paid not less than that, at which the CEB could generate through its own sources.

The Staff Generation Scheme, launched by the CEB some time back, has not brought about the anticipated results, and Deraniyagala feels, that this scheme with its primary objective of encouraging industrialists to generate their own power, by using generators etc., has not been very effective, and most industrialists have made use of the scheme to buy generators at a reduced price and keep them as stand-by power, instead of using them during difficult times. The intention of this scheme was to use these generators during difficult periods, such as that which was experienced during the beginning of this year, and not just when the country was deep into a crisis.

According to Deraniyagala, there has been a fairly good response from the Industrial Chamber, where they have requested all their members to use their own generators. In addition, the CEB has requested the commercial sector to cut down on air conditioning, and as far as possible to use their own generators, if they want to use air conditioning. The economising on the use of electricity by industry and commerce has been through a dialogue with these organizations, with minimum hardship on these organizations, unlike last year', he said. The rainfall figures for this year have been much worse than last year and the country was able to avoid power cuts due to emergency measures taken by the CEB. "This year with much less rain we have kept above last year', Deraniyagala said. According to him, from June this year, we will not be dependent on hydro, with the thermal installations that are coming up. In time, the CEB hopes to taper off the expensive thermal power, in the form of gas turbines etc., and introduce more economical thermal

power which they hope to achieve through combined cycle plants, coal or diesel.

By the end of 1997, there will be on average, 175 MW of very reliable thermal capacity through the Fiat Gas Turbine, Mann Diesel etc. In addition, there will be the 250 MW of CEB thermal plants, which will be operating even more efficiently by the end of the year. Of the remaining emergency thermal power generation units 20 MW of Gas Turbines and another 20 MW contracted through Coolair will be available, hence, placing the country in a somewhat stable position for 1998.

to "The situation is reaching a stable level, so that for the rest of 1997 and 1998, the thermal generation capacity, which we have now installed, would adequately safeguard against a situation, such as that which arose last year, and a situation which we were just able overcome, this year" Deraniyagala said, adding that the CEB was fortunate to be able to procure power at such short notice, through emergency power generation units. However, he feels that with adequate rains coming in and CEB's own thermal capacity, some of the emergency power generation units could be tapered off soon, to bring the situation to a stable level.