

Norocholai out - no feasible alternatives to coal - what next?

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The Institution of Engineers Sri Lanka (IESL) held a seminar on July 8, 2000 on "The Alternatives to Coal". No doubt the IESL was prompted to do this because the media, and its contributors frequently make out that there are very many such alternatives all grossly neglected by the CEB.

As one might well have expected there were many professional engineers - civil, mechanical and electrical - some of them stalwarts from the CEB, and others who had an abiding interest in the power sector. Of no less importance were the scientists, environmentalists and members of the public advocating alternatives, in particular the renewables; and there was a priest representing the Bishop of Chilaw who had been especially invited by the organisers. Thus one might say that every shade of opinion was represented at the seminar.

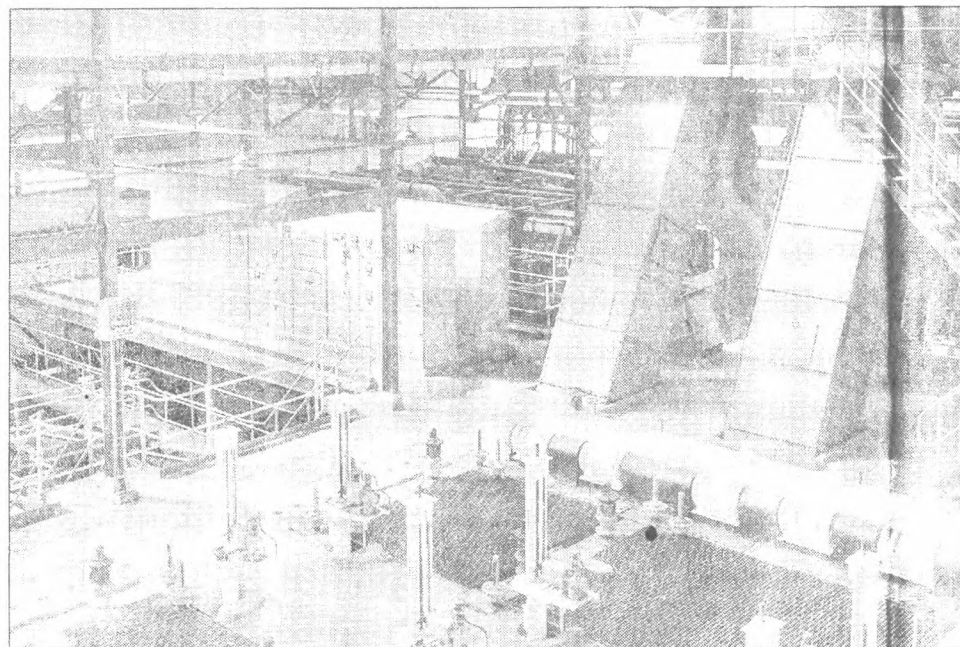
The proceedings were most interesting for they revealed that very many people recognised that there might well be a need to commission a coal plant at the earliest - what they wanted to be sure about was whether it could not be something other than coal.

Several alternatives to coal were mentioned but only two - Liquefied Natural Gas (LNG) which had to be imported and dendro generation using the wood of locally grown trees - found any real support.

Dr. Janaka Ratnasiri (JR) eloquently presented the merits of LNG for power generation. But he did admit that, until LNG was by government policy made the energy source for the transport sector, the demand for it would not be large enough to justify the setting up of the special harbour facilities and the infrastructure needed. This was in effect an admission that LNG was not presently an economic alternative to coal. Understandably the support for LNG became muted and no one raised questions about the fire and explosive hazards associated with LNG.

May one hope therefore that JR and all others who, with the very best of intentions, advocate the use of LNG whenever the urgency of local for power generation is raised, will desist from doing so.

Eng P. G. Joseph (PGJ) who with single-mindedness has pursued the subject of dendro (wood) generation, for the last two decades and more began by telling the audience that he was not against the coal plant. He wanted the audience to recognise the great many advantage of growing wood locally - utilising chena land more profitably, providing work thereby for rural communities, saving foreign exchange etc - with a view to achieving its wide use for power gen-



A coal-washery plant in Scotland

eration, and for achieving economic development. Whilst one hopes that PGJ's vision comes true, it needs to be pointed out that till then dendro is not a substitute for coal.

Those who, like the writer, have for years been advocating the early setting up of a coal plant must be grateful to the IESL therefore for hosting this seminar. It has helped prove beyond doubt that presently there is not a single alternative to coal for the purpose of generating electricity in this country.

Another item of good news for those advocating coal was the unequivocal statement by the Bishop of Chilaw - read out at the seminar - that his concern was only about the siting of the plant at Norocholai. The Bishop was quite clear as to his objections:

"First and foremost is the problem of security for the power plant."

"Secondly, siting the power plant so close to an area of current military activity will transform the beloved shrine of St. Anne of Talawila and its surroundings into a conflict zone and entail severe hardships on the shrine and pilgrims."

"Thirdly, we are appalled at the way the CEB is undermining the democratic process and defying the stand taken by the Head of State who, having taken into consideration the aspirations of a large section of the population has taken a definite stand against the project."

The Bishop then draws attention to the failure of the Government to monitor pollution, to respond to public complaints about pollution or to take corrective measures in regard to continuing pollution caused by such facilities as the Puttalam Cement Plant established years ago. He concluded his letter with: "Taking into consideration all these factors, it would be suicidal to pursue the idea of a coal plant at Norocholai. It is pointless

to speak of an impending power shortage and look for scapegoats. If a shortage does occur, it is the CEB with its incomprehensible refusal to look for alternatives, and consequent procrastinations, that would be held responsible."

Thus the question now is not whether there are any alternatives that this country could deploy in place of coal at the present time, but whether at the present time there is any site other than Norocholai for building a coal plant?

Eng E. Carlo Fernando (ECF) - the former Power Development Consultant of the CEB - who spoke on the "Mawella Coal Power Project" was quite clear that Mawella was a far better site for a Coal Power Plant. He pointed out that whilst Mawella had deep water close to the beach and fresh water nearby, Norocholai had neither. He drew attention to work done by Black and Veatch identifying suitable sites for the coal power plant and the site investigation work at Mawella done by Sir Alexander Gibb & Partners (AG&P) for the Anglo-Japanese-Australian Consortium. These clearly indicated that Mawella was the second best site, after Trinco, for a coal plant. Why then must the CEB go about as if all is lost if it is not allowed to build the coal plant at Norocholai?

It has been the stated policy of governments since 1990 to let the private sector develop thermal generation on a BOO or BOT basis. How come that the CEB is developing the Norocholai site and adding more thermal plant? The CEB's claim is that Norocholai is the best site presently available to it. Further, the CEB has loudly proclaimed in two engineering fora that the Japan Consulting Institute supports this view.

The Japan Consulting Institute's report on "Coal Fired Thermal Development" gives the capital cost per KW of plant for the four sites investigated on the West Coast. The lowest is Negombo at US\$ 1880 and the highest Puttalam (Norocholai) US\$2279 - a difference of 400 US\$. This works out to an added cost of 120 million US\$ for a 300 MW plant. Why the country should invest so much on the Norocholai is a matter for the government, so this issue must rest here. The AG&P "Mawella Power Station Site Con-

firmation Study Report" states quite categorically: "The study has examined the feasibility of constructing the planned 1 x 150 MW coal fired power station and anticipated future extensions at Mawella. The findings have confirmed that there is at least one location within the designated site which is both suitable and practical for construction of the station, and that a marine jetty can be built to berth and satisfactorily unload coal bulk carriers of at least 65,000 tonnes DWT."

(Summary - page 3)

Sir Alexander Gibb and Partners are among the most highly respected civil engineering consultants in the world. Their study has been conducted for an Anglo-Japanese-Australian Consortium that undoubtedly was interested in the Mawella project. But the CEB, whilst admitting that Mawella is a site to be developed, claims it must do its own study before that.

The AG&P report also states:

"At this feasibility stage of the project it is not necessary to undertake collection of data required for the detailed design of the project. A further geotechnical investigation will be required on land and off shore, together with a more detailed topographical survey over the chosen location for the station."

(Scope of Study - page 9)

If we take the CEB statement that they need to do a study on Mawella in the context of the AG&P report comment that such a study would be "required for the detailed design of the project" it would mean that the CEB intends to do the detailed design. That raises two questions, "Is the CEB competent to do such a study even when guided by its consultants?" and "Need the CEB do the design?"

The answer regrettably in the writers view to the first question is "Oh no". As to the second question, there is no need for the CEB to be involved with the design if Mawella is to be developed on a BOO or BOT basis. Those who invest large sums of money will want to make sure of the data they collect for the design, for the plant they set up with their money must function without trouble, and profitably, for two or more decades. Only if the CEB is seeking to develop Mawella on its own, in violation of the stipulated policy of the government will the CEB need to get involved with the design, which one hopes the government will not permit the CEB to do.

When the government called for offers on a BOO basis in 1993 for a coal plant at Trinco there were two offers. The bidder who got the award was unable to raise the funds in spite of being given a lot of time both by the previous government and the present. Finally, the government decided to cancel the Trinco project because of the security situation there.

There is no doubt that there will be bidders, and that those who bid will take good care to conform to our environmental standards and to provide as generously as need be to ensure that those disaffected by the project will not hinder it but support it. So the concerns that arise when the CEB seeks to set up a coal plant will not arise. There is no doubt that the public do not want their life and their work disrupted by power cuts. This expectation of the people can only be fulfilled by the President - now that she has cancelled the Norocholai project - taking prompt action and getting the private sector to develop the Mawella site on a BOO basis. Electricity is the 'industry of industries' and without it economic development was not practicable in the twentieth century - it is more so in the twenty-first.