

Politicians have messed up CEB

by Eng. M.V.R.Perera

This refers to the article which appeared in the Financial Review of The Island, dated 30/05/09, with the above caption. It is regretted that the above was not stated by the Minister P. Dayaratne in 2006 when our President decided to kick start the much delayed Norochocholai coal power project almost immediately he was elected President. Although at that time the Hon Minister had not joined the government, for this would have prevented the power ministry from being mislead by Environmentalists, BOI, Renewable Energy Authority and others not to follow our President and go for accelerated BOT or BOO coal power projects which would have brought in Boilers and Turbines working under Super Critical Temperatures and Pressures if they are found economical. The Hon Minister would have had the best knowledge in the cabinet on these matters as he is a professional qualified electrical Engineer having worked as a Engineer in the Dept of Government Electrical Undertakings (DGEU) and was in charge of the Ampara Power Station and resign from his post to contest the 1970 general elections. These Boilers are 30% more efficient and therefore carbon emission is 30% less, but these Environmentalists and others have done is to make the power Ministry to hijack the statutory duties of the CEB and to go for three times more expensive oil fueled electricity than coal fueled electricity.

All these authorities should have known that in the mid-eighties the CEB Engineers, predicting the high price of oil that will occur in the future, adopted the concept that by the mid-nineties, when our economical Hydro Power potential will be over, then our base load should be from coal and the economical hydro should be peaking power. If this was permitted to be implemented by the politicians and environmentalists we would have had one of the lowest cost electricity in the world instead at present one of the highest cost electricity in the world. This was similar to the concept adopted in most countries at that time, going for the least cost electricity after the first oil shock in 1973 and the second oil shock in 1979 when a barrel of oil went up from 1.8\$ to 10\$ and from 10\$ to 20\$ respectively. As such the USA has 50% from coal and 20% from nuclear electricity generated, and they have exceeded their green house gas emission level. Similar is the UK and most developed and developing countries like China and India. As in all these countries, the politicians do politics and the engineers are allowed to do engineering, unlike in our country.

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The colossal loss to our country can be gauged if a rough estimate is made for the year 2008 due to not having coal powered electricity. If it is assumed in 2008 the total generated units is 10 billion units it should be more and if the oil fueled units is assumed to be 6 billion units as

ists and should carry out their statutory duties as given in section 11 and section 38 of the CEB Act which are also given in www.ceb.lk.

The following are the benefits we would have received if we had very cheap coal power instead of three times more expensive oil

The benefits derived from very cheap electricity from coal are by using this very cheap electricity for almost all our transport, by having electrified trains,

is produce from carbon emission very expensive oil. What is the mystery in objecting to very cheap coal to replace the very expensive oil and to provide for future growth of electricity from very cheap coal. On the 5th of May 2009, Bangladesh signed a agreement with Russia for a 1000 Mw Nuclear Power Plant, while even Bangladesh is going for Nuclear Power we find our Politicians and Environmentalists opposing very cheap coal power but wel-

in the present of sunlight to give ground level ozone. Ground level ozone affects humans animals and plants. Refineries are known to have the single largest source of benzene emissions which is carcinogen, neutrotoxicity and reproductive toxicity. Refineries emits xylenes which damages the kidneys and irritates the respiratory system. They also emits sulphur dioxide and nitrogen oxides which gives acid rain. (this information is taken from the internet from oil refineries fail to report)

The information herewith gives what is meant by green house gasses and action of pollutants from oil refineries,

Ozone Layer Protection

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Pollutants

Ozone. Ozone serves 2 functions in the stratosphere (uppermost atmosphere) it protects us from UV radiation in the troposphere (lowermost atmosphere) it provides us with heat together with other green house gasses. But however ozone produced by the action of human beings has adverse affects on humans, animals and plants as ground level ozone is unstable and reacts with adverse affects on tissue of humans animals and plants

Methane. Methane is a potential green house gas which has a global warming potential 21 times that of carbon dioxide

Nitrogen Oxides These gasses can contribute to acid rain

Sulphur Oxides These gasses also can cause acid rain

From the above it could be concluded that there has been colossal losses cause to our country due to coal not being the base load and Hydro the peaking power and it will be continuing year by year due to a combination of environmentalists politicians and others who appear to have competed with each other from early nineties to prevent least cost electricity to our country, which also contravenes the statutory duties of the CEB but foisting on us the people the highest cost electricity in the world with more pollution than coal, thus giving us a unbearable cost of living and also effecting our country's economic growth. The only remedy is as stated above but will take 5 to 6 years to realize. But will the politicians say mea culpa mea maxima culpa and permit the CEB to go for the only remedy available so that we the people can enjoy a much better standard of living at least in 6 years time.



President Mahinda Rajapaksa paid a visit to inspect the construction of the coal power plant at Norochocholai.

the economical hydro in a normal hydro year gives about 4 billion units, the difference in the price of a coal unit and a oil unit is estimated to be Rs. 15 the colossal loss to our country due to no coal powered electricity is 6x15=90 billion rupees. This type of colossal losses will be taking place year after year, even when Norochocholai is fully commissioned in 2015 as Norochocholai can give about 7 billion units per year. If our electricity has grown at the rate of 8% which would have been more if there was plenty of coal powered electricity instead of oil powered electricity then the total generation in 2015 could be estimated to be 18.5 billion units. As such there will about 7 billion very expensive oil fueled units even in 2015. The colossal loss to our country by not having all our thermal units through coal even in 2015 will be well over Rupees 100 billion. These figures would be more if the CEB Engineers make these computations with the accurate information they have. Should not the remedy be to go for two BOO or BOT coal powered projects and to invalidate all the oil powered projects as they are not in accordance to the statutory duties of the CEB. Why should we the people and our country suffer because of environmentalists and others who have hijack the statutory duties of the CEB. The CEB should plan for a nuclear power station depending on the economics. France has 80 % of its electricity from nuclear and are building more and more nuclear power stations. The UK is building 10 more nuclear power stations. India is planning to obtain 25% of its power from nuclear. Even Iran is going for nuclear power on the 5th of this month, Bangladesh signed a agreement with Russia for a 1000Mw nuclear power station as reported in the Asian Tribune. Our engineers should not take any notice of these environmental-

electric trolley buses, electrified buses, electrified cars which can go a distance of 250 Km with a single charge (these cars are in the design stage and would be available in a few years), hydrogen driven vehicles. It should be noted that out country is small and 250 Km is a very big distance. Also locally manufactured goods will become very cheap and would be very competitive with goods from other countries who all have least cost electricity unlike Sri Lanka at present. With cheap electricity, all our frozen goods will come down in price. Cooking by electricity will also be much cheaper than by gas and gas companies may have to close down. The rupee value would have been high and the Central Bank would not have had to run down our foreign reserves to maintain the rupee. There would have being more foreign investors investing in the manufacture of items where cheap electricity is necessary. The reasons that our environmentalists are not protesting against oil but protesting against coal is a big mystery. It may be even a conspiracy to sabotage our economic growth as is obvious from the estimated colossal losses to our country due to having oil powered electricity instead of coal powered as planned by our engineers over 25 years ago. The other benefits are very similar to that of China who are said to be putting up a coal power station every 4th day, although she is known to have a green house gas emission level more than permitted and her economy is booming with cheap electrical power from coal. Also like India whose economy is also booming with cheap electricity from coal. India also is supposed to have exceeded her allowable level of hot gas emissions while our country's hot gas emission level is less than 10% of the permitted limits as stated by the environment authority although more than 60% of our electricity

coming very expensive oil power and welcoming increasing the capacity of highly polluting oil refinery at enormous expense to our country. Should not our Politicians listen to the Engineers and minimize the colossal losses to our country by not having very cheap electricity from coal by immediately negotiating for two BOT coal projects which may bring in super critical temperature and pressure boilers and turbines which are about 30% more efficient and as such carbon emission is 30 % less. Also we should now plan for a nuclear power station.

The following are the dangerous pollutants from oil refineries which our Environmentalists are encouraging.

Oil refineries are the largest source of air pollutants in most countries and also in the U.S.A., and there is no reason it is not so in our country, but our Politicians are planning to increase the oil refining capacity to increase the use of very expensive oil instead of reducing the use of oil to very negligible levels by the use of coal for base load electricity generation which is a third cheaper than oil and using this very cheap electricity for benefits stated above. The reasons that our environmentalists are not protesting against the use of very expensive oil is a very big mystery. They will only protest against the use of very cheap coal but not against very expensive oil which is equally or more polluting when considering also the pollutants from oil refineries. Are they involved in a conspiracy to damaged the economy of our country?

In the U.S.A. oil refineries are known to have the single largest stationary source of volatile organic compound emissions (VOCs), the 4th largest source of toxic emissions and the single largest source of Benzene emissions. VOCs reacts with nitrous oxide