

1.1 million metric tons, the lowest since 1948. The exportable surplus this year is a little better, it is officially estimated at 1.3 million metric tons. The gradual decline of Thailand as an exporter of rice has been attributed to faulty price policies; she has often been accused of pricing herself out from the world market.

### Letter to the Editor

#### **Mr Chou's Visit—and After**

YOUR "Very Occasional Washington Correspondent", whom I shall refer to as VOWC to economise on your space, is evidently "annoyed no end" at your editorial on the above subject. He accuses you of trying to outdo "the daily papers in exhibiting runaway zealotry" because you express your disappointment at the outcome of Nehru-Chou talks. I think you were perfectly right in arguing that from India's point of view the agreement to have fact finding consultations at the official level "implies that the Chinese might really have a case in the dispute . . ." This certainly does not mean saying that "since we regard the territory as ours it is ours; so why must we look into their documents?". This, to use VOWC's own words, is "a grotesque misrepresentation of your argument". What your argument clearly conveyed was that on the basis of the existing

documents (either in our possession or in the possession of the Chinese) the territory belongs to us and therefore the agreement to consult mutual documents creates the erroneous impression that there might be documents which really go in China's favour. Read thus, your logic or anyone else's, who agrees with you, is much less open to criticism than VOWC's as exhibited all through his letter,

I am sorry to note that in your short editorial rejoinder to VOWC you do not take him to task for this misrepresentation.

Regarding your emphasis on the vacation of aggression at any cost, VOWC accuses you of sabre-rattling. It is really shocking how people like VOWC convince themselves of their logic. A country's territory has been violated and taken over by force. Now if the aggrieved country insists on vacation of aggression and professes to see it vacated *at any cost* can anyone accuse it of sabre-rattling?

VOWC asks you to define "at any cost". Does it mean *even by war*? Why not? If we are not prepared to fight in defence of our rights no amount of negotiations or diplomatic pressure either from the West or from Russia (if at all the latter agrees to exercise it on your own behalf) will secure us our objective

viz., the vacation of aggression by the Chinese. Unless the Chinese are told *firmly* that we would not shirk a fight if it came to that in getting back our territory and unless we take adequate steps to show that we mean what we say, there is little hope. Incidentally, the Russians could not possibly advise us to negotiate with the Chinese when they are themselves so sensitive about territorial violation even when it is a temporary one.

VOWC knows that Pandit Nehru himself does not expect much out of the official consultations, [I would be interesting to know what VOWC's next step would be in (the event of failure. Judging by the manner of his references to the whole dispute as one of "border delimitation", one wonders if at all he would be interested in pursuing the matter any further. The worst that seems to have occurred so far, according to VOWC, was "the Chinese act of killing a dozen of our compatriots". What a compatriot!

I would conclude by saying that a journal of your stature owes it to itself and its readers to correctly interpret the feelings in the country on important issues like this fearless of accusations.

YOUR VERY REGULAR READER

Baroda  
May 23.

### Our Delhi Letter

CRYSTAL gazing has become one of India's major pastimes and no week passes without somebody of importance trying to peep into the future. The National Council of Applied Economic Research has done some considerable research regarding energy consumption in India and has already published two important papers on the subject. The other day the Council released yet another document and estimated in it the demand and consumption pattern for energy in the 15 years, 1960 to 1975.

A decade and a half is a short span in a community's life—short indeed even in an individual's reckoning. Yet, according to the Council, the next 15 years in the career of Indian planning will sway so uncertainly that nothing more defi-

## *Crystal Gazing*

nite than a few broad estimates of energy consumption pattern are possible. "The subject is complex and the future is uncertain. . . The actual requirements may vary from the estimates projected. This report is by no means the last word<sup>1</sup>". With a few observations such as these, the Director General of the Council has provided the appropriate setting for crystal gazing in the best manner.

#### **FROM 70 TO 260 MILLION TONS**

According to the Council, energy requirements of India in the next 15 years will grow from 70 million tons to 260 million tons of coal equivalent. This is the maximum plausible demand for different types of fuel that the Indian economy may require in order to maintain a certain pace of growth. This pace has

been taken to be such as would double the per capita income from Rs 281 in 1955-56 to Rs 564 in 1975-76. In other words, the Council accepts the line of development visualised in the Second Five Year Plan, with a slight modification towards the end of the 20 year period.

The energy consumption estimated in the report represents the demand for coal, hydro-electricity, petroleum and nuclear power. It also represents the demand for industrial energy, transportation and domestic requirements.

The demand for industrial energy is estimated to grow more than five-fold within the period and the requirements of transportation about three-fold. This will alter the balance between the consumption of primary and secondary energy by

1975, The domestic requirements of energy which are at present largely met by secondary fuels will be met 15 years hence by primary energy substitutes like coal or petroleum based fuels to the extent of 40 per cent.

**SHARE OF PETROLEUM STEADY**

Granting the over-all increase in energy consumption and granting also the pace of industrial and other general growth in the economy, it is interesting to note yet another observation by the Council, viz, that the energy pattern of the Indian economy in 1975 will still be substantially coal based and that—this is still more interesting—even by 2000 AD the energy economy will have a high proportion of coal, about 55 to 60 per cent. There will no doubt be a gradual fall in the coal component but this will be taken up by hydro-power and not by petroleum. The share of petroleum in the next 15 years will be more or less steady at about 13 to 14 per cent.

Crystal gazing will lose half its charm if forebodings are not enlivened by hopeful anticipations. If the Indian economic growth is likely to be only just moderate in the next 15 years and if Indian energy consumption is also by and large from conventional sources and if there are problems too in the development and utility of these sources, there is an outlet which, however uncertain, the Council is keen to keep before itself and the country. It is the possibility of using nuclear power in a commercial manner.

**NUCLEAR POWER**

Technical difficulties apart, what is the other hindrance to nuclear power becoming popular? The Council states that its 'economics' are also a hindrance. They are far more complex than those of conventional power sources and, in any case, the capital cost of nuclear power is definitely higher. As it is, nuclear power compares unfavourably with coal both with regard to capital as well as unit costs. But in about a decade, when the economics of coal power alters unfavourably, nuclear cost promises to come down. Even so, in absolute terms, the cost of setting up nuclear stations may remain prohibitively high. The Atomic Energy Commission has estimated that if India is to take advantage of this source in some 10 to 15 years hence, an investment in

a million kilowatts of nuclear power has to be made within the next seven years,

Neither the Planning Commission nor, the Government of India *can* be persuaded to a venture of this size when especially enormous technical developments in the field are expected from experience in countries other than India.

The Council, therefore, has come to the conclusion that even on the most optimistic assumption the contribution of nuclear power is unlikely to be more than a small fraction of the total by 1975. The following is the estimated output from nuclear stations, 1960-1975:

**Estimated Output from Nuclear Stations, 1960-75**

Year	Net requirements (million kWh)	Percentage of nuclear power	Total nuclear power (million kWh)
1960	19,215	nil	nil
1965	36,020	3	1,080
1970	63,120	6	3,790
1975	105,800	9	9,520

The rest of the demand will then have to be met mainly by coal and hydro power. There will be a favour-

able shift towards the latter in due course but between the two, they will be called upon to meet almost all consumption requirements.

The over all percentage distribution of gross energy consumption by source is calculated in the Table below,

**NON-ECONOMIC FACTORS**

The biggest imponderable factor against the country assuming the energy consumption pattern of the type visualised here is that it may be decided, at least in the initial stages, "by considerations not limited to purely economic." The application of economic criteria in such a situation is, therefore, largely a matter of guess and by the very exactitude of the methodology adopted here, the result may be completely different. In other words, in spite of the efforts by the Council and others, in 1975 and thereafter we may still be 'burning 12 Sindris' by way of meeting domestic energy and may still be lighting shy of using coal or electricity. For a remedy the situation may call for determined official directions. But here, again they may be only indirectly influenced by economic considerations. And it is at this juncture of outlook that economic forecasting becomes sheer crystal gazing.

**Percentage Distribution of Energy Consumption 1956-1975**

Year	Coal	Hydro	Petroleum	Nuclear	Total
1950	82.4	6.6	11.0	—	100.0
1955	79.5	6.8	13.7	—	100.0
1960	76.5	10.6	12.9	—	100.0
1965	74.5	11.9	13.0	0.6	100.0
1970	72.5	12.6	13.2	1.7	100.0
1975	71.2	12.6	13.9	2.3	100.0

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