THE SEFID RUD DAM
The Plan Organization

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The mighty Sefid Rud Dam, built at the confluence of the Sefid Rud Ghezel Ozan rivers in Northern Iran, is the highest buttressed dam in the world and among the top twenty in terms of reservoir capacity. Construction began in 1957, and in 1963 it was inaugurated by His Imperial Majasty the Shah, attended by Empress Farah.

The Sefid Rud is one of the largest rivers of Iran, others being the Karun Dez, and Karkheh Rivers. Even before the dam was built, its waters were used for irrigation purposes, mostly for the cultivation of rice. Each year 1,700 million cubic meters of water were used for irrigation while 2,300 million cubic meters would flow into the Caspien Sea. This meant that in summer, when, water was most needed, farmers were faced with a shortage of water, and even on occasion droughts. Water shortages in the immediate Sefid Rud area were causing estimated losses of $4.7 million per year to rice-fields alone, not to mention losses in the adjacent Foumen area.

Today about 120,000 hectares (464 square miles) of land are irrigated by the Sefid Rud Dam and produce an annual income of $4.8 million.

With the completion of the dam, the water shortage problem has been solved and a considerable increase in agricultural products is expected. Full utilization of the scheme will be made possible by the construction of an irrigation network, which is scheduled for completion in 1967. The useful life of the dam will be at least 100 years and the capital expenditure will be amortized over a period of fifty years. On account of the heavy initial capital and the 13 year period needed for the complete development of the irrigation and power network, the project will not start to show a profit from a strictly commercial point of view until the second half of its life. For the last 33 years, the annual net revenue of the dam is estimated to be about $2.6 million per year.

Actual cost of construction of the Sefid Rud Dam, including the purchase of land and payments to consultants, will amount to more than $61 million. The total amount budgeted for the Sefid Rud project by the Plan Organization is $151 million, including $72.3 million for the irrigation network and $17.6 million for hydro-electric installations.

The economic effects of this great dam are such that with full development of the water and power systems, the Sefid Rud region will become one of the country's main economic centers.

Representatives of the consulting and contracting engineers and the Plan Organization took part in a special ceremony held on 12 December 1963 at which the dam was formally handed over to the Sefid Rud Water and Power Authority. Since then Iranians have been responsible for the operating of the dam and its affiliated units. The efficient management of the dam by Iranians is an example of their capabilities in running complex, large scale establishments to the benefit of their country.

The total number of people employed at the Authority is currently 302, of whom 51 are engineers, technicians, and office staff.

SEFID RUD IRRIGATION NETWORK

The construction of the dam will not only prevent losses from floods and droughts, but will also make an efficient water distribution system and hence increase the area of land under cultivation. Rice fields are expected to increase from 120,000 hectares (464 square miles) to 180,000 hectares (696 square miles) while a further 59,000 hectares (228 square miles) of virgin land will be cultivated for other crops. These new lands will bring the farmers an annual income of $22 million.

Such an ambitious scheme is only possible if the dam reservoir is properly utilized, and this was the object of the Sefid Rud irrigation network. The completion and expansion of water and power systems will take 13 years and cost about $90 million. Part of this sum has already been approved by the Plan Organization and the remainder will be allocated as work proce

The irrigation network, which is scheduled for completion in 1967, is to consist of the Sangar and Tarik diversion dams, the Foumen tunnel and irrigation canals. The Sangar diversion dam will irrigate lands on both banks of the Sefid Rud, but not the Foumen area. It will have two main abutments and 13 sluices with a capacity of 5200 cubic meters of water per second. The length of the sluice section will be one kilometer, while the height of the dam from the foundations will be 10.65 meters and its overall length 1500 meters.

The Foumen tunnel will be used to irrigate the Foumen area, which at preser has no regular supply of water. It will be 17 kilometers long and have a rate flow of 32 cubic meters per second.

The Tarik diversion dam will be built further up the Sangar dam at the confluence of the Tarik Rud and the Sefid Rud. Its purpose will be to divert water to the Foumen tunnel. Its capacity will be 4,9 million cubic meters, 1.5 million of which will be dead water. The difference in water levels from the reservoir level to the tunnel will be between eight and nine mete

The dam will have three sluice gates for the passage of debris, and 12 flo gates for overflow, with a total capacity of 6000 cubic meters per second. The width of the valley at the dam site is 350 meters and the length of the dam will be 250 meters.

Construction on the Sangar Diversion dam and the left bank canal was finished in 1964 and that of the right bank canal in 1965. Exploitation of the dam will start in 1967 when the No Rud canal and Pesi Khan diversion dam are completed.

When the Sangar and Tarik diversion dams, the Foumen tunnel, and the irrigation network are completed, surplus water from the dam will be used to irrigate an additional 30,000 hectares (110 square miles) of land in upper Gilan and these will be used for the cultivation of rice.

The capital expenditure on this project will thus not only be of great immediate benefit to the Iranian people, but because of the soundness of the plan, it will also be a success commercially as the revenue from the dam will be sufficient to amortize the capital expenditure.

"THE WATERMELONS SAT IN THE SUN"

The watermelons sat in the sun
Baking their pot-bellies.
And a dog - if dogs there are
Under an Asian sky - sniffed and
Stood on three legs.

A Brynner not yet ten hopped by on one leg
And kicked a fat green melon with a second.
It belched in the sun,
Rolled over on its side,
And belly-flopped into the jube.

Meanwhile.....

I sat under the bough
With a jug of wine,
A loaf of bread,
And thou.
And I thought
~~How nice~~
To eat
a
Watermelon.

But no...no I sighed.....
For had I tasted but a morsel,
I had been infected by the East;
The inshallahs would get me....they'd get me -
You can't escape those godly wills
That scurry round the Orient
Picking their teeth on street corners
And squinting at chadors.

(To John with love and thanks for lunch.)

Agha-ye Gomnam