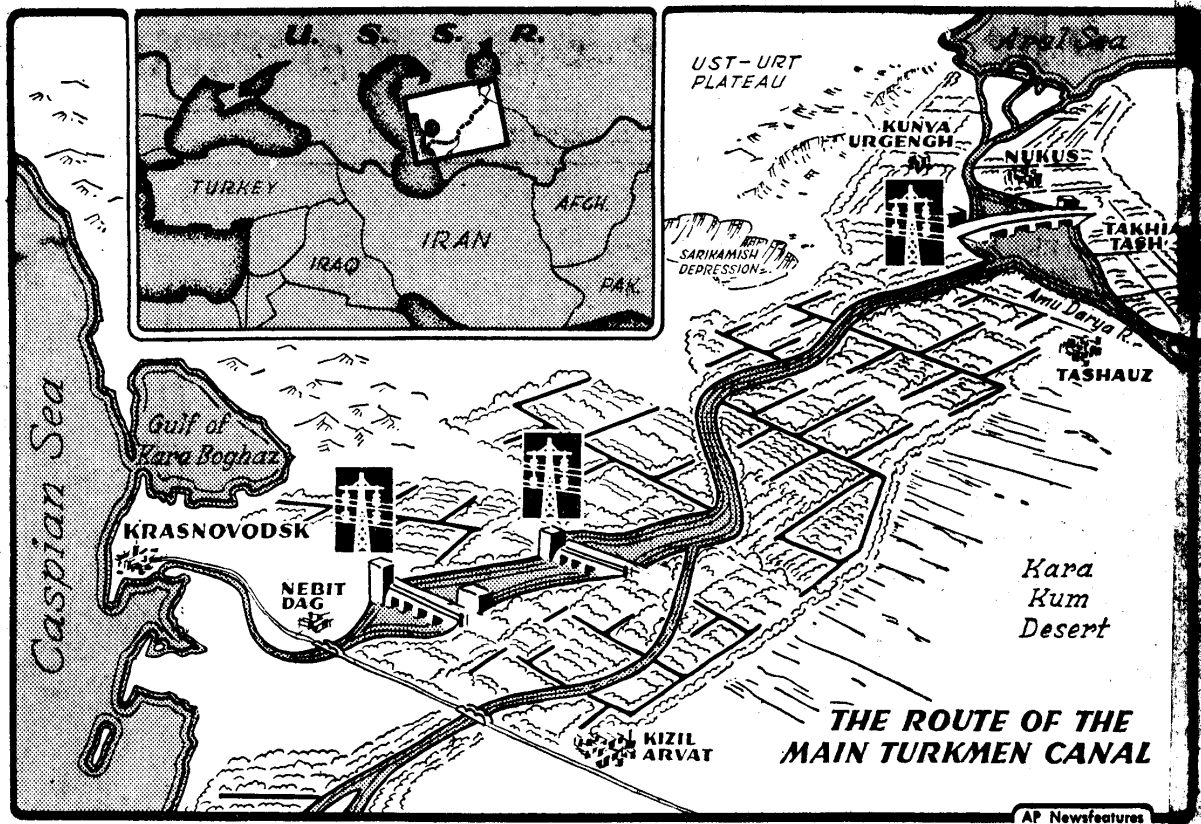


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Russians Cutting a 700-Mile Canal Through a Desert

By EDDY GILMORE

MOSCOW—(AP)—Far away in distant central Asia, engineers are building a 700-mile long canal through the fiery sands and blistering suns of the Kara Kum desert. You can get a fairly good idea of how huge the project is when you remember that the Suez Canal is only 103 miles long and the Panama but slightly more than 50.

The complete name of the new canal is the Main Turkmen Canal, running from Takhia Tash, near the sprawling foot of the Aral Sea to Krasnovodsk on the Caspian Sea.

Thousands of people have been at work on it for months now, and since the Volga-Don Canal was finished, more engineers and workers have been shifted to the Turkmen.

S. Kalizhniuk, construction director of the huge project, reported the labor tempo is being stepped up. Last year, he said, the output per worker constituted 140 per cent of the norm—this year it has reached 161 per cent.

A worker's norm—what he is expected to accomplish in a regular working day—is established beforehand. He is encouraged to better this if he can and never to fall behind it. The norm is considered 100, so if workers are now doing 161, that's quite a labor speedup.

The new canal has several objectives, all sweeping in scope and imagination:

- Taming of the treacherous waters of the Amu Darya River.
- Opening of new lands to agricultural use.

Irrigation of thousands of square miles of desert land.

Electrification of large Asian areas.

Installation of a great transportation system whereby freight can be brought to and from these remote areas with comparative ease.

When diverted toward the Caspian, the Amu Darya, only one-fifth of whose waters are now used for irrigation purposes, will irrigate 3-120,000 acres of the desert and the Caspian plain and will bring water to more than 16 million acres of land in this area.

With its innumerable lateral ir-

rigation installations, with its spreading branches, it will total more than 30,000 miles in length.

Several large hydroelectric stations at the various dams along the canal will generate enough power to make it cheaper to plough by electricity in this part of Asia than by tractor.

When the canal is completed and the irrigation system is at work, the Soviet Union's annual cotton production is expected to expand to a great degree.

The Main Turkmen Canal is a center link in the USSR's big irrigation campaign.

Laurentiy. Beria, deputy chair-

man of the Council of Ministers said that the irrigation of 6 million acres should bring about some five years time the doubling of the raw cotton output, an increase of 8,000,000 tons in the grain of 480,000 tons of rice and of 1,000 tons of sugar beets.

When the Soviets get the and the connection irrigation projects working they estimate three million acres of desert turned into cotton country about 16 million will be good culture.

The Kara Kum is one of the deserts in the world and has so for a long time.

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A Move to New Areas

By a Student of Eastern Europe

The power stations to be built under what is described in the Soviet press as "The Projects of Communism" are seven in number: two on the Volga, near Kuibyshev and Stalingrad, with a capacity of 2,000,000kw. and 1,700,000kw. respectively; one each on the Dnieper at Kakhovka and on the Don at Tsimlyansk (250,000kw. and 160,000kw.); and one on the Amu-Darya and two on the Turkmenian Canal, in Central Asia, with a total capacity of 100,000kw. According to Soviet estimates the combined annual output of the two Volga power stations will, at approximately 20,000 million kilowatt hours, equal that of France and exceed that of Italy.

How does this fit into what is known about Soviet plans for industrial expansion? In 1946 Mr Stalin said in an election speech in his Moscow constituency that Soviet industry should aim within the next fifteen years or so at an annual production of 50,000,000 tons of iron, 60,000,000 tons of steel, 500 million tons of coal, and 60,000,000 tons of oil. The most recent Soviet production figures suggest that Soviet industry has now gone about half of the way towards attaining these goals. To reach them, that is to double the production of these materials within the next ten years, would require as momentous an industrial revolution as any the world has known.

SIBERIA'S SHARE

The basis of this revolution—rather of the "qualitative change" in the Soviet economy, since the word "revolution" must no longer be used by Soviet economists with reference to future developments in their own country—is to be electric power. The amount of electric power which would be required by an industrial organisation capable of producing these vast masses of raw materials is estimated to be in the region of 250,000 million kilowatt hours per annum. Against this the Soviet Union produced in 1951 about 100,000 million kilowatt hours, while the new power stations which are part of the projects, and others which are being built independently, can be expected to yield about 50,000 million kilowatt hours after 1957, when the projects are to be completed. This still leaves Soviet industry about 100,000 million kilowatt hours short of its estimated requirements at the end of the next ten years, and it is to be expected that before long new hydro-electric schemes on a scale even greater than those already announced will be made public. The Soviet Ministry of Power Stations is, in fact, now studying a plan for the diversion southward of two of Siberia's largest rivers, the Ob and the Yenisei, which would bring much-needed water to the deserts of Central Asia and provide "white coal" for more and bigger hydro-electric stations in a region of vast and unexplored industrial opportunity.

The more immediate industrial significance of the projects is evident from the fact that, in addition to directing 50 per cent of their joint output to the Central (Moscow) Region, the Kuibyshev and Stalingrad stations will supply respectively 24 and 28 per cent of their power to industrial objects in the Volga region. This huge accretion of power to these areas (whose industry in 1940 consumed over 20 per cent of all coal produced in the Soviet Union, and probably more since then) is bound to have far-reaching effects on the geographical distribution of Soviet industry. About 25 per cent of the Soviet Union's population of some two hundred millions now lives in the Volga basin. The economic

be made possible by the energy generated by the new power stations, whose output will be five to seven times cheaper than that of stations working on coal or oil.

The benefits to be derived from the projects by agriculture are perhaps even more imposing than those which will accrue to industry. A network of irrigation canals, more than 2,800 miles in length, will bring water to drought afflicted or desert lands in the Ukraine, the Crimea, between the Volga and the Ural rivers in Kazakhstan, and in Turkmenistan. In many of these networks the electric power from the new stations will be used to pump water into the new canals. The total area to be thus irrigated or otherwise supplied with water will, according to Soviet estimates, exceed 69,000,000 acres, as compared with nearly 200,000,000 acres similarly brought under cultivation by the human race in the whole of recorded history. It is estimated that when these plans have been carried out 35 per cent of the world's irrigated lands—an area roughly equal to that covered by Britain, Belgium, Holland, Switzerland, and Denmark—will be in the Soviet Union.

IRRIGATION

Soviet economists claim that the newly irrigated lands will provide food, clothing, and living facilities for 100 million people—and still have something to spare. The major part of this area, particularly in European Russia, has hitherto been used for the cultivation of grain crops. This was not economical from the point of view of an enlightened agricultural policy, because the climatic conditions in the area, such as the abundance of sunlight and warmth, were more suitable for the cultivation of industrial crops yielding a higher cash return, such as cotton and sugar beet. This, however, was prevented by the lack of water. It is now proposed to reduce the area under grain crops in the Russian and Ukrainian irrigated lands from 75 per cent to about 40 per cent of the total, increasing at the same time their average yield to 39 bushels per acre. The reduction of the area under grain, combined with irrigation and the introduction of new agricultural techniques, is expected to result in the doubling of the total grain yield in the lands affected.

At the same time, over 3,500,000 acres, both in Europe and in Central Asia, are to be put under cotton, bringing the Soviet Union's total cotton yield to about 7,500,000 tons, which would double the figures for 1950.

It should, perhaps, be emphasised that the information on which this article is based comes from Russian publications, many of them of a propaganda nature, and that in many cases the figures quoted here are hopeful estimates made by Soviet economists. While there is no reason to doubt that the scope of the projects is truly gigantic, their economic effects may fall somewhat short of expectations. However, the change in the distribution of Soviet industry and agriculture, which will be among the most important consequences of the projects, will not be affected by small failures here and there.

For the next few years Soviet industrial resources will be strained to the utmost—as they have been since the Revolution—in manufacturing supplies for the projects and for other purposes. To say this, however, is not to support the argument that because Russia is building these two huge power stations on the Volga and several smaller stations elsewhere she might not be able to devote a great deal of her resources to the expansion of her heavy and armaments industries. The construction of the Kuibyshev power station—the