



HYDROPOWER DEVELOPMENT IN CHINA

中国水电

Department of Hydroelectric Power Development, MOE

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FOREWORD

In China's vast territory there are a large number of rivers, of which the majority has abundant runoff and big hydraulic drops and is rich in hydropower resources. The theoretical hydropower potential in China is 676 GW, corresponding to a yearly energy output of 5922.2 TWh, of which the exploitable capacity is 379 GW with a yearly energy output of 1923.3 TWh, ranking first in the world.

China has a long history in making use of water resources. Eighty years ago in 1912 the country's first hydropower station by the name of Shilongba with a capacity of 480 kW was built in the vicinity of Kunming City, Yunnan Province. However, in old China before liberation the hydropower construction made very slow advance. By 1949, the hydroelectric installed capacity was only 360 MW with a yearly energy output of 1.2 TWh.

Since the founding of the People's Republic of China, the people's government has paid great attention to the development of hydropower resources. By the end of 1991 three hundred and four hydropower stations, including large, medium- and small-sized ones each with a capacity of over 15 MW, had been completed and the total installed capacity amounted to 37,883.5 MW, constituting nearly one fourth of the country's total electric power capacity and ranking sixth in the world. The annual production of hydroelectricity was equal to 124.845 TWh, almost accounting for one fifth of the country's total power output and ranking fifth in the world. Over the past forty

years, China relying on its own efforts has built 26 large hydropower stations. At present 20 large ones are under construction, such as the Ertan (3300MW), Lijiaxia (2000MW) and Manwan (1500MW). Their construction marks the beginning of a new era in the hydropower development in China.

To meet the increasing need for electricity, China will further pay greater attention to the hydropower development, guided by the open door policy. The Chinese government has decided to place the hydropower construction in the list of priority basic industries. For the whole country twelve principal hydropower bases have been planned. According to the Eighth Five-Year Plan (1991-1995) for national economic and social development and the National Ten-Year Program, by 2000 A.D. the country's total electric installed capacity will amount to 240 GW, of which the hydroelectric installed capacity will be 80 GW. In the course of launching a large-scale hydropower development China will continue its policy of reform and opening to the outside world, carrying out extensive international cooperation and technical interchange and importing capital and technology. For this reason the book of "Hydropower Development in China" has been compiled for the organizations and departments concerned and for hydro engineers and technicians to consult. It can also serve as a reference book for foreign friends engaged in hydropower to

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